Attachment No. 8 Tully and Young Peer Review Report, December 1, 2014

Please see attached document



Tully & Young, Inc. 3600 American River Drive, Suite 260 Sacramento, CA 95864



December 1, 2014

Final Summary Analysis and Conclusions for the Peer Review of *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry* (prepared by EMKO, February 26, 2014)

Prepared for: County of Tulare Resource Management Agency

Synthesizing Hydrology, Engineering, Law & Policy Final Summary Analysis and Conclusions for the Peer Review of Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry

> Prepared for: County of Tulare Resource Management Agency

> > December 1, 2014





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Tully & Young, Inc. 3600 American River Drive, Suite 260 Sacramento, CA 95864

MEMORANDUM

То:	Michael C. Spata, Director Tulare County Resource Management Agency
From:	Greg Young, P.E.
Date:	December 1, 2014
Subject:	Final Summary, Analysis and Conclusions

The purposes of this memorandum are as follows:

(1) Analyze additional materials provided to Tulare County's Resource Management Agency ("RMA") during October 2014 from CEMEX Construction Materials Pacific, LLC ("CEMEX"), operator of the Stillwell Mine Project ("Quarry");

(2) Provide responses to certain public comments to the August 25, 2014 *Peer Review Report of Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry* and the *Addendum* (collectively the "Peer Review Memo");

(3) Submit findings and conclusions of the overall review and evaluation effort; and

(4) Provide recommendations to RMA.

Summary of Prior Tully & Young Memoranda

In July 2014, Tully & Young was contacted by the RMA to evaluate the findings from the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"), and present conclusions of the review.

In late August 2014, Tully & Young provided RMA with the Peer Review Memo detailing the requested analysis and conclusions. The Peer Review Memo was made publically available shortly thereafter with a request for public comments to be submitted to the RMA by the end of September.

Several public comment letters were received by RMA, three of which included direct comments on the Peer Review Memo and warranted responses from Tully & Young. A *Response to Comments Memorandum* ("Response Memo") was prepared by Tully &

Young to address these specific comments. The Response Memo, along with the associated marked public comment submittals, is included as **Appendix A** to this memorandum.

The original Peer Review Memo (including the Addendum and all attachments) is provided in its entirety in **Appendix B** to this memorandum.

Organization of Memorandum

This memorandum -- the *Final Summary, Analysis and Conclusions Memorandum* ("Final Memo") -- is organized to provide the results of analysis of information provided since the Peer Review Memo was published and to provide final summary conclusions for consideration by the RMA.

This Final Memo is organized as follows:

Section 1 – Final Summary, Analysis and Conclusions

Part 1: December 1, 2014 Final Summary, Analysis and Conclusions Memorandum from Tully & Young to Tulare County RMA

Part 2: Attachments

- August 26, 2014 letters from Mitchell Chadwick to Mr. Morton, Mr. Cloud, Mr. Packard, and Mr. and Mrs. Rodriguez offering data loggers for resident wells
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Final Summary Analysis and Conclusions Memo December 1, 2014

Section 1 – Part 1

Summary, Analysis and Conclusions

Subsequent to the Peer Review Memo, CEMEX and its representatives provided several additional data sets, analyses, and conclusions. Many of these related directly to the placement of data loggers¹ into several adjacent wells and on-site monitoring wells in at the end of August 2014.

As stated in letters provided by CEMEX to adjacent residents, data loggers will "provide an accurate analysis of the effects of dewatering and filling the V-ditch on groundwater levels surrounding the Stillwell property." See opening paragraphs in letters included as Attachment 1.

This equipment was to begin collecting more frequent well elevation data than the previously recorded once-per-month reading by DellaValle Laboratory, Inc. ("DellaValle"). As of this memorandum, data logger readings have recorded groundwater elevations from August 28, 2014 through October 21, 2014.

The additional materials provided also included three memoranda from EMKO Environmental, Inc. ("EMKO") providing analysis of data and conclusions (the "EMKO Memos"). These additional materials included:

- October 7, 2014 Status of Water Level Monitoring: Data Collected Through September 16, 2014 Stillwell Mine Project (included as Attachment 2);
- October 29, 2014 Effects of Mining Activities on Groundwater CEMEX Stillwell Mine (included as Attachment 3); and
- October 30, 2014 Comparison of Groundwater Elevations and Dewatering Volumes – Stillwell Mine Project (included as Attachment 4)

Finally, on November 26, 2014, the most recent once-per-month groundwater elevation readings from DellaValle were forwarded by RMA to Tully & Young. These readings appear to have been taken on or about November 19, 2014, and, although not continuous readings as taken by the data loggers, they provide a set of single-point extensions of the August 28 through October 21 data logger readings.

¹ A data logger is an electronic instrument that can measure the depth to groundwater in a well. When calibrated and related to the ground surface elevation at the particular site, the information collected by the data logger provides an accurate representation of depth to groundwater (in relation to mean seal level) that can be used to compare groundwater conditions among and between well locations.

This section of the Final Memo provides analysis of the EMKO Memos and independent analysis of the groundwater level information collected by the data loggers and as provided by DellaValle.

Key Findings

As detailed in this Final Memo, changes in groundwater elevation appear to have a direct correlation to discharge of water to the "V" ditch. Thus, as evident by the relationship between the restarting of water discharged to the "V" ditch and the concurrent rise in groundwater elevations in monitoring wells and adjacent private wells, discharge to the "V" ditch to "maintain water levels in neighboring wells" (Conditions of Approval #55) appears to be a vital function of mining activities.

This Final Memo's assessment of the facts appears to directly contradict the repeated statements in the original February 2014 Report and subsequent conclusions provided in the recent EMKO Memos that the "mining activities cannot be responsible for the changes in yield or water levels observed in the private wells." (October 29, 2014 EMKO Memo, p. 4), and "[t]herefore, the only scientifically supportable conclusion is that mining activities have not affected the private wells." (October 29, 2014 EMKO Memo, p. 5).

The most recent EMKO Memos do not discuss the positive response in groundwater elevations demonstrated by the data loggers upon restarting discharge to the "V" ditch from September 2 through October 21, 2014, nor do they provide any discussion or analysis to disprove the apparent direct relationship between this "mining activity" and groundwater elevations in the adjacent private wells.

Finally, the EMKO Memos misstates data or provides factually inconsistent data when compared to prior provided materials and analysis, which collectively significantly affects the usefulness and factual merit of the EMKO Memos altogether.

Detailed Review of EMKO Memos

The following details the assessment and findings resulting from reviewing the three EMKO Memos.

October 7, 2014 Memo

[Note to reader: This first memorandum ("Oct 7 Memo") was provided to Tully & Young in early November in draft form with some edits by CEMEX representatives still embedded (see Attachment 2). It accompanied the other two memoranda.] The Oct 7 Memo presents initial data from the data loggers for the period of August 28, 2014 through September 16, 2014 coupled with factual explanation of the "V" ditch's segmented configuration and operations.

The Oct 7 Memo provides a map identifying the various monitored well locations and hydrographs showing the monitored groundwater elevation. The Oct 7 Memo also provides a conceptual hydrogeological cross section and accompanying explanation regarding the interpretation of conditions "during the period of initial pumping from the mine excavation." (Oct 7 Memo, p. 3).

Finally, the Oct 7 Memo concludes by stating: "The water levels from the nine wells currently being monitored with dataloggers will be downloaded approximately every six weeks. The data will be evaluated and discussed in a technical memorandum similar to this document after each download. It is expected that monitoring using the dataloggers will continue at least until equilibrium conditions develop in each well." (Oct 7 Memo, p. 4).

Assessment: The Oct 7 Memo assessed groundwater level information collected through September 16, 2014. Subsequently, groundwater level information has been provided through the morning of October 21, 2014, though not assessed in the remaining two EMKO Memos.

As discussed later in this Final Memo at pages 18 through 22, this additional information is very informative in assessing the relationships between discharges to the "V" ditch and groundwater levels in the private wells, essentially making any analysis provided by the Oct 7 Memo irrelevant.

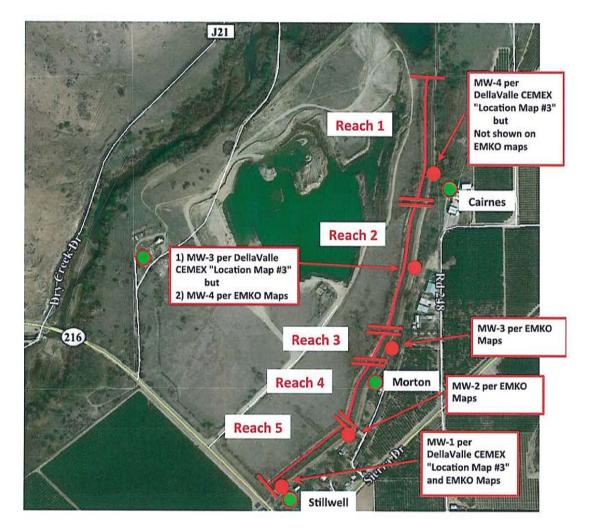
Importantly, though, the Oct 7 Memo does not attempt to conclude that there is no relationship between the mining activities and groundwater elevations in the adjacent private wells – recognizing that such a conclusion would be premature.

One major concern regarding factual information, however, was highlighted by the map accompanying the Oct 7 Memo. Specifically, there appears to be potential inconsistencies in the naming of monitoring wells, and thus, the location of monitoring wells and use of their data for comparative analysis. This has the potential to create significant issues with interpretation of data.

The figure that follows illustrates these variations, especially with regard to the naming/location of MW-2, MW-3 and MW-4. The referenced DelleValle monitoring well locations are based upon a map from DellaValle, included as **Attachment 5**.

The figure shows the "V" ditch reaches as described in the Oct 7 Memo and as validated through inspection of aerial imagery. Of importance to the interpretation and analysis of

data is the location of the monitoring wells in relation to the reach of "V" ditch and the related fill-and-spill operations of the "V" ditch as described in the Oct 7 Memo.



As described in the Oct 7 Memo, Reach 1 of the "V" ditch must fill before water begins to flow into Reach 2. Reach 2 must fill prior to spilling into Reach 3, while Reach 3 and 4 fill simultaneously. Thus, the location of MW-4 in the Oct 7 Memo is in Reach 2, while the DellaValle map shows MW-4 in Reach 1. The Oct 7 Memo indicates MW-3 within Reach 3, which wouldn't see water until both Reach1 and Reach 2 fill.

As shown in the hydrographs accompanying the Oct 7 Memo, groundwater levels in MW-4 and MW-3 both begin to rise within a day of each other, which would indicate that the first two reaches filled almost immediately.

Otherwise, one would expect a delayed reaction in MW-3 groundwater elevations, given the high seepage rate described on page 2 of the Oct 7 Memo.

Further adding to the confusion is the Oct 7 Memo's statement: "In MW-4, which is located near the south end of the northern segment of the V-ditch, water levels increased almost 10 feet from September 3, 2014 to September 16, 2014. In MW-3, which is located near the middle of the second segment of the V-ditch, water levels increased more than 11 feet from September 4, 2014 to September 16, 2014." (Oct 7 Memo, p. 2/3).

On the Oct 7 Memo's map with the hydrographs, MW-3 is shown in Reach 3 and MW-4 is shown in Reach 2. This contradicts the text description of their respective locations.

From analysis of subsequent provided groundwater level data (discussed later in this Final Memo), it seems readily apparent that MW-4 and MW-3 are very closely related, both in response to future temporary pumping shutdowns and in apparent equilibrium groundwater elevations as water is reintroduced into the "V" ditch.

Finally, this apparent discrepancy raises questions about the use of the historic groundwater elevation data when comparing to the data logger's information. For instance, if, as referenced by the Oct 7 Memo, prior efforts to prepare groundwater contours also are misrepresenting the location of these wells, then those contours are incorrect and resulting assessment in the Oct 7 Memo unreliable.

Conclusions: While the Oct 7 Memo did not intend to make conclusions, its representation of factual information in a manner differently within the same document and differently than DellaValle clouds the analysis of data and, thus the usefulness of the Oct 7 Memo's own analysis.

However, since significantly more groundwater level information was provided with subsequent memoranda, the primary conclusion of this Final Memo's assessment is that the factual data regarding the locations of monitoring wells must be double-checked and corrected in either the EMKO Memos or the DellaValle maps before being used to represent findings.

October 29, 2014 Memo

The October 29, 2014 memorandum (Oct 29 Memo) lists the subject as *Effects of Mining* Activities on Groundwater – CEMEX Stillwell Mine. The memorandum begins by conclusively listing the "only plausible hydrologic mechanisms by which mining activities could affect water level or well yield in neighboring private wells:" (Oct 29 Memo, p. 1) followed by a list of three mechanisms.

The Oct 29 Memo then proceeds to address each mechanism concluding "Therefore, this data proves that mechanisms 1 and 2 are not occurring," and "Therefore, mechanism #3 is not occurring." (Oct 29 Memo, p. 3 and p. 4). These two conclusions lead to the final conclusion "Therefore, the only scientifically supportable conclusion is that mining activities have not affected the private wells." (Oct 29 Memo, p. 5).

Final Summary Analysis and Conclusions Memo December 1, 2014 Assessment: The Oct 29 Memo aggressively concludes that since the three "only plausible mechanisms" are not occurring, mining activities are not the cause of groundwater level declines. However, investigating the Oct 29 Memo's approach and basis uncovers other considerations disregarded by the analysis that could affect its conclusions.

Mechanism 1 is described as: "[p]umping to dewater the mine could lower the water table between the excavation and the neighboring private wells, drawing water into the mine and away from the private wells" while Mechanism 2 states: "[t]he open quarry excavation, even in the absence of dewatering, could alter the groundwater contours and pull water away from the neighboring private wells and into the mine excavation." (Oct 29 Memo, p. 1).

The Oct 29 Memo states that for either mechanism to occur, groundwater surface must slope downward from the private wells to the excavation and continues by comparing the Morton well elevations to those in MW-3. The Oct 29 Memo asserts that MW-3 must be "consistently lower than the level in the Morton well" (Oct 29 Memo, p. 2) for either mechanism to occur, then demonstrates that groundwater elevations in MW-3 are consistently higher than the Morton well (with a few noted exceptions) – thus the mechanisms do not occur. The following explains the inaccuracies in this analysis.

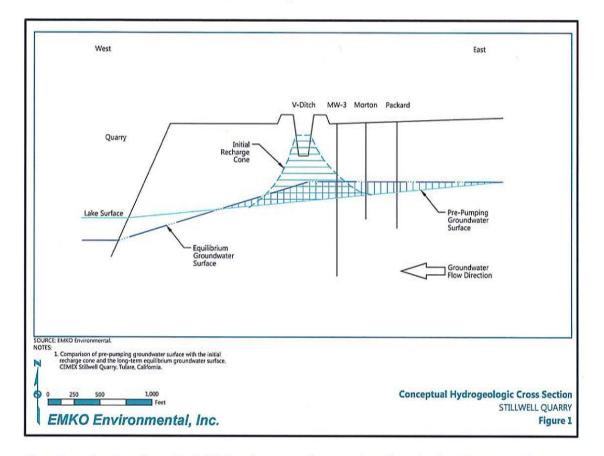
As required by the Conditions of Approval (Conditions), the Quarry shall construct a "V" ditch that "shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells." (Condition #55). As illustrated by EMKO in Figure 1 accompanying the Oct 7 Memo (see below, and Attachment 2), the water discharged to the "V" ditch creates a mound.

Because of the immediate proximity of the monitoring wells to the "V" ditch, the elevations in the monitoring wells will reflect the fact that water is percolating into the ground from the "V" ditch – as defined by the soil's characteristics between the "V" ditch and the monitoring well.

As shown in the figure, the "recharge cone" will affect the measured elevation of groundwater in the monitoring wells. Thus, it is expected that groundwater elevations in the monitoring wells are likely higher than levels in the adjacent private wells as they would reflect the presence of water in the "V" ditch and the resulting recharge cone – and not just during "initial recharge," but consistently when sufficient water is being supplied to the "V" ditch.

The historic groundwater elevation data supports this by the fact that all of the monitoring wells are routinely higher than the adjacent, upgradient private wells in nearly all of the once-per-month readings dating back to 2006. When pumping to the "V" ditch ceased in September 2013, groundwater levels in the monitoring wells dropped below the values in

the private wells – especially when comparing MW-3 to the Morton well, as was the focus of the Oct 29 Memo's analysis to disprove mechanism #1 and #2.



Based on the data from DellaValle, the groundwater elevations in the Morton well were routinely lower than MW-3 until September 2013, when MW-3 became lower than the Morton well, likely as a direct result of the stoppage of discharge to the "V" ditch. This trend continued until discharges to the "V" ditch began again in September 2014, at which time MW-3 groundwater levels again became higher than those in the Morton well (though both began to rise as a result of the restart of discharge)².

The Oct 29 Memo's assertion that mining activities are not affecting the Morton well because groundwater elevations are routinely higher in MW-3 than the Morton well fails to recognize the mounding affect and associated higher readings in the monitoring wells from influence of the consistent "recharge cone." Thus the Oct 29 Memo's conclusion that mechanism #1 and #2 are not occurring is not proven by the presented analysis.

² DellaValle did not provide readings for any of the monitoring wells from December 2013 through February 2014 due to "no key." No readings were provided for the Morton well during May 2014, July 2014 and August 2014 for unstated reasons.

As an added concern, the discussion for the Oct 7 Memo indicated an apparent disagreement on the location of MW-3, thus the relationship between the location and associated groundwater elevations in the Morton well and MW-3 may not be as presented by the Oct 29 Memo.

Mechanism #3 states: "The mine pit, even in the absence of dewatering, could alter the groundwater contours such that flow of water from the area upgradient of the private wells is diverted into the excavation and away from the private wells." (Oct 29 Memo, p. 1). The analysis uses water quality to test for the occurrence of this mechanism, specifically providing nitrate data for the Stillwell Mine Pit and the Morton and Cairns wells for only two selected sample events: June 2006 and September 2014. As documented in the Oct 29 Memo, nitrate values were significantly higher during these two periods in the private wells than in the mine pit.

Thus, the Oct 29 Memo states: "after more than seven years of dewatering of the mine, and an additional year where the excavation was re-filling with groundwater after dewatering ceased in September 2013, nitrate is not present in the water within the excavation. Therefore, mechanism #3 is not occurring." (Oct 29 Memo, p. 4).

Water quality reports provided by EMKO in August 25, 2014 were inspected to evaluate the Oct 29 Memo's assertion (see Attachment 6). As detailed in several of the DellaValle water quality reports (see specifically pages 60-113 of Attachment 6), water quality tests were performed annually for the monitoring wells and several of the private wells throughout 2005 to 2013.

Neither the mine pit nor the "V" ditch were sampled other than the single June 2006 mine pit sampling event used by the Oct 29 Memo. However, as asserted and supported by data, the water in the "V" ditch percolates into the groundwater, with the "recharge cone" resulting in some of the recharged water being present in the monitoring wells.

As such, it would seem plausible that the water quality information from the monitoring wells would provide a proxy for water quality of the "V" ditch, and since the water is pumped into the "V" ditch from the mine pit, then a proxy also for the water quality of the mine pit.

This is likely true especially for MW-3 and MW-4, as they show immediate reaction in groundwater level when discharge to the "V" ditch occurs, as evidenced by the figures and data presented in Oct 7 Memo, and data logger readings provided subsequent to the Oct 7 Memo's analysis period.

Based upon examining the water quality of MW-3 and MW-4 it is apparent that there are at least wide fluctuations in the nitrate results from sample to sample, leading to uncertainty regarding the usefulness of this particular water quality constituent to test the validity of mechanism #3. For instance, as shown in the excerpt from Attachment 6 (included below), nitrate in MW-3 (listed as NO₃) ranged from 6.78 mg/l to 59.8 mg/l over just three samples. In August of 2008, the sample for MW-3 was <0.045 mg/l, while MW-4 was 304 mg/l – in the same sampling event.

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Lab No.	Date	тіме	pН	Total Alkalinity as CaCO ₃	OH as CaCO ₃	CO3 as CaCO ₃	HCO3 as CaCO3	CI	-mg/l-	NO3-N	NO3	TDS	Ca	Mg	Na	к	Total Fe
MW - 1																	
85263	5/19/05	11:08 AM	7.0	101	<1	<1	101	17.6	43.5	3.9	17.1	206	33.3	6.4	29.1	2.5	0.9
93772	5/11/08	5:00 PM	7.2	126	23	<1	126	15.8	<0.2	5.1	22.6	263	45.0	8.5	28.4	3.2	0.2
104616	6/14/07	2:10 PM	7.6	141	<1	<1	141	12.4	37.2	0.4	1.59	248	40.4	7.1	24.0	2.0	1.7
MW - 2																	
85263	5/19/05	12:24 PM	7.9	179		<1	179	24.8	127	15.3	67.7	489	55.3	30.2	60.6	6.1	4.3
93772	5/11/06	4:24 PM	7.8	259		<1	259	20.5	<0.2	11.9	52.5	613	61.8	30.2	48.8	6.3	3.1
104816	6/14/07	1:43 PM	8.1	228	<1	<1	228	21.7	107	14.8	65.5	515	60.4	29.1	49.0	5.6	15.4
MW - 3																	
85263	5/19/05	12:48 PM	7.5	293		<1	293	46.1	143	10.0	44.3	652	92.3	25.4	90.2	5,0	0.5
93772	5/11/06	3:00 PM	7.3	285		<1	285	33.5	<0.2	13.5	59.8	660	90	25.2	76.7	6.3	0.3
104616	6/14/07	12:45 PM	7.7	109	<1	<1	109	13.4	27.1	1.5	6.78	205	30.4	8.6	17.0	1.6	0.5
MW - 4																	
85263	5/19/05	1:20 PM	7.6	233		<1	233	34.9	108	18.8	83.5	559	81.2	21.5	74.0	3.5	2.4
93772	5/11/06	2:05 PM	7.5	286		<1	286	32.8	<0.2	17.9	79.1	605	78.2	21.7	65.9	4.6	1.6
104616	6/14/07	12:20 PM	8.0	234	<1	<1	234	38.7	79.4	12.3	54.6	512	59.5	19.3	63.0	2.8	2.0

Additional sample-specific results in Attachment 6 further show variations in nitrate at MW-3 include: 79.5 mg/l in July 2011, 11.9 mg/l in April 2012 and <2 mg/l in June 2013. At these same instances, nitrate results in MW-4 were 67.4 mg/l, 67.3 mg/l and 75 mg/l for the same sample events. So, in June of 2013, MW-3 read <2 mg/l while MW-4 read 75 mg/l.

During this same period – though taken in a different month, which affects the comparability, the Morton well was measured at 48.9 in January 2011 (compared to higher values at the two monitoring wells), 86.9 in May 2012, and 78.8 in April 2013.

Notably, many factors can affect the magnitude of nitrate as measured at a particular location. But the above example indicates that variations occur from sample to sample, often significantly. As such, using the monitoring well data as a proxy in the absence of mine pit water quality data, there does not appear to be conclusive evidence to evaluate whether mechanism #3 is occurring.

Specifically, using nitrate readings from only two sampling events, June 2006 and September 2014, to conclude that mechanism #3 is not occurring seems arbitrary and not supportable when evaluating a broader set of evidence.

Conclusions: The Oct 29 Memo makes specific conclusions based upon a pre-defined set of mechanisms and analysis to prove the mechanisms are not occurring and thus mining activities are not affecting the private wells.

However, the defined "only plausible hydrologic mechanisms" (Oct 29 Memo, p. 1) do not reflect the physical circumstances associated with recharge from the "V" ditch.

Further, the use of a limited water quality data set to derive the conclusions about mechanism #3 appears arbitrary and not rigorous. Therefore, the Oct 29 Memo does not provide the "only scientifically supportable conclusions." (Oct 29 Memo, p. 5) and the conclusions should not be viewed as appropriately conclusive.

October 30, 2014 Memo

The October 30, 2014 memorandum (Oct 30 Memo) lists the subject as Comparison of Groundwater Elevations and Dewatering Volumes – Stillwell Mine Project (see Attachment 4).

This two-page memorandum and associated graphic does not present any formal conclusions but states in its last sentence: "The data on the attached figure and the discussion above demonstrate that pumping to the V-ditch has not historically maintained the water levels in wells to the east of the V-ditch during multi-year periods of reduced rainfall." (Oct 30 Memo, p. 2).

The Oct 30 Memo presents data regarding aggregate production, rainfall, volume of annual pumping to the "V" ditch, and groundwater elevations for MW-2, MW-3 and the Morton Well, and provides some comparative analysis.

Assessment: First, the Oct 30 Memo's last statement appears to admit that the Quarry is not in compliance with Condition #55 where that condition states: "[t]he proposed "V" ditch...shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells." (Condition #55).

Specifically, assessment of the Oct 30 Memo finds the following:

1. The aggregate production data for 2012 appears to be misstated. According to the records submitted by CEMEX to the California Office of Mine Reclamation (OMR), the governing division within the Department of Conservation, the following is the aggregate production data for 2006 through 2013. The Oct 30

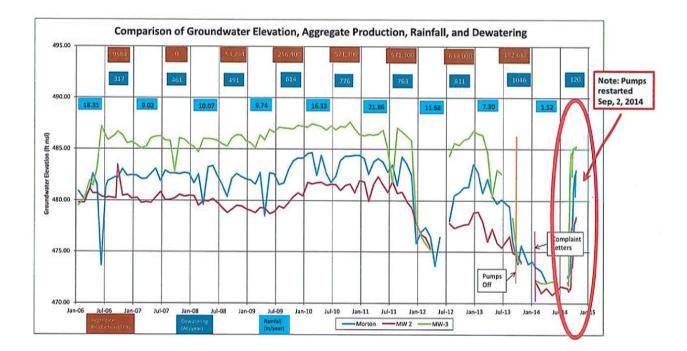
Report Year	Reported Production (tons)
2006	9,584
2007	0
2008	53,744
2009	256,400
2010	571,300
2011	571,300
2012	638
2013	152,687

Memo's graphic indicates 2012 aggregate production to be 638,000 tons. The official submitted report shows only 638 tons.

2. According to data provided by EMKO and documented in the original Peer Review Memo, the volume of water pumped to the "V" ditch in 2013 was only 774 acre-feet, not 1,046 acre-feet. As a result, the Oct 30 Memo's discussion comparing 2013 mine pit dewatering to other years is inaccurate. The Oct 30 Memo's statement "despite the substantial increase in water volume being pumped to the V-ditch compared to prior years, the groundwater levels persistently declined from January 2013 through September 2013," is misleading as there was not a substantial increase – there was a decrease.

Year	Reported Dewatering (acre-feet)
2006	421
2007	490
2008	494
2009	652
2010	795
2011	828
2012	812
2013	774

3. The Oct 30 Memo does not discuss the immediate recovery of groundwater elevations that are evident on the right-hand side of the graph. These elevation increases are directly related to restarting discharges to the "V" ditch on September 2, 2014. The figure below is from the Oct 30 Memo, with the right-hand data circled. The relevance of the immediate recovery of groundwater elevations in the monitoring wells and private wells appears to indicate an important correlation between pumping to the "V" ditch and the ability to "maintain water levels in neighboring wells." (Condition #55).



- 4. The Oct 30 Memo appears to assert there is a correlation among the volume of dewatering, aggregate production, rainfall and groundwater elevations, yet none are defined nor are any readily drawn from the presented data. For instance, the volume of dewatering does not relate to the volume of aggregate production or rainfall quantities. In another example, groundwater elevations remain relatively stable from 2006 through 2011 even with significant variations in rainfall (e.g. 2007 had 9 inches and 2011 had nearly 22 inches while groundwater elevations only appear to vary by a few feet). The purpose of including some of this data is unclear.
- 5. As presented in the Peer Review Memo: "...the current unprecedented drought condition is a primary contributing factor to current degraded groundwater conditions at the subject properties. But absent an understanding of the relationship of groundwater mounding to the upgradient groundwater elevations, CEMEX cannot be summarily excused from fault." (Peer Review Memo, p. 11). The drought is recognized to likely have an impact on local groundwater conditions, resulting in "the groundwater levels persistently declined from January 2013 through September 2013." (Oct 30 Memo, p. 2). However, as amply evident with the data logger readings for the past two months, providing sufficient water to the "V" ditch does have a direct impact on groundwater elevations in the private wells and it is plausible that sufficient water was not being discharged to the "V" ditch during these months of 2013 regardless of the drought conditions at that time.

Conclusions: The Oct 30 Memo attempts to demonstrate that groundwater levels declined significantly in 2013 regardless of a substantial increase in water being pumped to the "V" ditch. However, the basis for this assertion is data that is inconsistent with data provided by EMKO in August.

Furthermore, the graphic accompanying the memorandum provides several additional types of data with no discussion on their relevance or value to the analysis.

Finally, the memorandum does not discuss the apparent direct correlation between water discharged to the "V" ditch and the rapid recovery of groundwater elevations, as evidenced by the data included on the far right-hand side of the graphic. The most recent data logger readings add significantly to the overall assessment of relationships, as discussed more thoroughly later in this Final Memo.

Statewide Drought Context

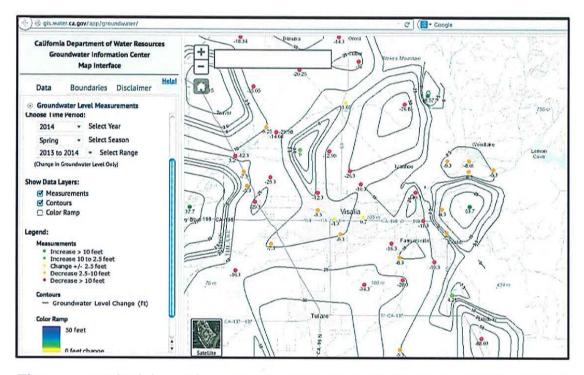
In several of the CEMEX documents and during discussions with the RMA, the unprecedented drought affecting all portions of California was referred to as a partial if not sole cause of the lowering of groundwater elevations in the private wells. For instance, CEMEX representatives have made reference to statements from state and local leaders about significant drops in groundwater elevations throughout the Central Valley.

While it is true that the current drought is unprecedented and causing hardship across California, the shallow groundwater conditions from which the private wells draw are isolated from the broader groundwater elevation concerns elsewhere in the Central Valley, and in particular, Tulare County.

In fact, as shown in the figure below copied from the Department of Water Resources Groundwater Information Center's Interactive Map,³ the groundwater conditions near Lemon Cove have seen both increases and minor decreases in groundwater elevations between spring 2013 and spring 2014 (the most recent information available). In contrast, areas near Visalia and Tulare have seen more dramatic lowering in groundwater elevations over the past year.

As illustrated in the original 2002 technical report used to support the Quarry's EIR, "[t]his information demonstrates that the groundwater within the shallow alluvial sediments is not in hydraulic communication with the bedrock aquifer and that the proposed project should not have any measurable impact on the deeper wells." (Hydrogeologic Data Evaluation Report, p. 14, EMKO, June 10, 2002).

³ Accessed on November 26, 2014 at http://gis.water.ca.gov/app/groundwater/



Thus, as recognized then and as apparent with the historic and current groundwater level data, the adjacent shallow wells are not affected by the conditions occurring in the deeper aquifers, especially portions of deep aquifers located well to the west of the Quarry.

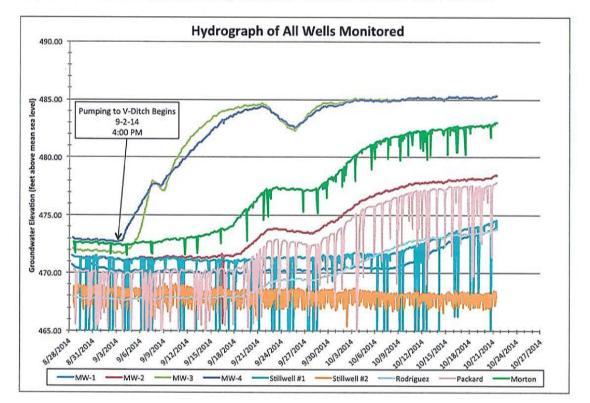
Though this figure places the regional picture in context, this or other broader representations of the drought conditions do not represent the isolated shallow groundwater affected by the mining operations. Thus, while the drought is a very likely contributing factor to the localized conditions, the absence of water in the "V" ditch appears to also be a contributory cause of the adverse groundwater conditions experienced by the adjacent private wells over the past year.

Final Summary Analysis and Conclusions Memo December 1, 2014

Independent Analysis of Groundwater Elevation Data

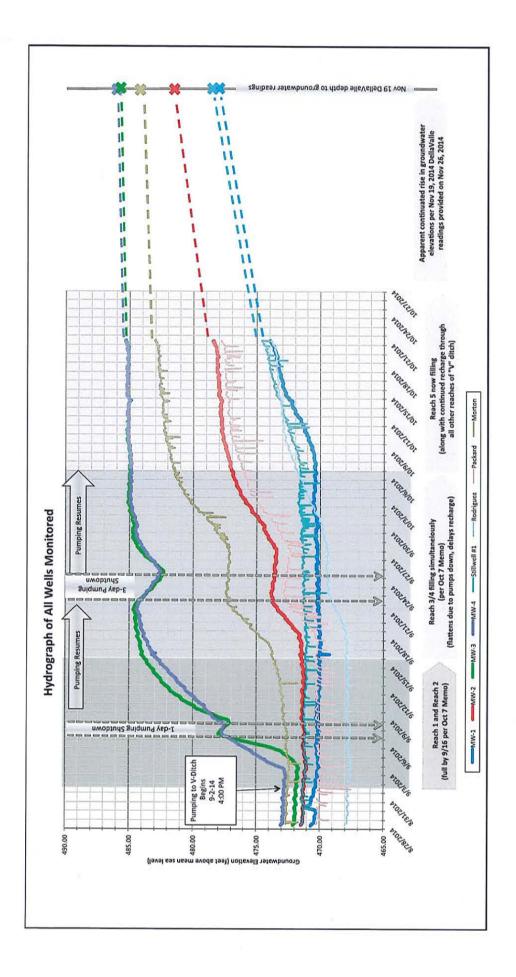
This portion of the Final Memo provides an independent analysis of the representative groundwater elevation data collected since CEMEX began discharging water to the "V" ditch again on September 2, 2014. This analysis is based upon data logger readings and once-per-month readings from DellaValle for November.

To begin, the data and charts provided by CEMEX were analyzed. The figure below was submitted by CEMEX representatives in late October 2014 as part of an Excel file documenting and graphing hourly data logger readings from August 28 through October 21, 2014. This data updated the hydrographs included with the Oct 7 Memo.



To make the data more understandable and to graphically demonstrate the timing of recharge in the "V" ditch reaches in relation to the steady rise in groundwater elevations, this Final Memo prepared a modified version of this hourly data (see following page).

Other than adding some additional graphics to accompany the Final Memo's analysis and discussion, hourly data logger readings for the majority of "low" conditions were removed for several private wells as these values represent when the well was operating and are not relevant to the overall understanding of the groundwater elevation on a daily basis.



Final Summary Analysis and Conclusions Memo December 1, 2014

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These low readings only occurred once or twice daily, with recovery to the "high" value for the day within an hour or more of the low reading. Removing these values helps reduce the clutter and improves the reader's ability to review the steady upward trend in all groundwater elevations.

The Final Memo's graphic can be used to identify several key relationships between pumping to the "V" ditch and the rise in groundwater elevations. These are detailed as follows:

- MW-4 shows an immediate response to the re-introduction of water into the "V" ditch, rising nearly one-foot per day between September 2 and September 16 (the Oct 7 Memo indicated Reach 1 and 2 of the "V" ditch were full as of this date). As indicated in the Oct 7 Memo (bottom of p. 2) "MW-4, ... is located near the south end of the northern segment of the V-ditch." As further described in the Oct 7 Memo, "[f]or most segments of the V-ditch, the water must rise to a depth of approximately 10 feet before entering a pipe that allows the water to flow to the next segment. The third and fourth segments, however, are connected by a pipe near the bottom of the V-ditch. Therefore, these two segments fill simultaneously." (Oct 7 Memo, p. 2). The segments are further described by length in the Oct 7 Memo and confirmed via visual inspection of aerial photographs (see earlier figure associated with the assessment of the Oct 7 Memo showing the reaches).
- 2. MW-3 shows similar response as MW-4, but with an initial delay in response of about 1 day. As described by EMKO: "MW-3...is located near the middle of the second segment of the V-ditch..." (Oct 7 Memo, p. 2/3). It would seem appropriate that a monitoring well associated with the second reach of the "V" ditch would see a similar response to a monitoring well in the first reach, once water fills the first reach and spills into the second.
- 3. As evident between September 7 and 8, pumping into the "V" ditch ceased for about 28 hours. The data logger readings show an immediate drop in the groundwater elevations in MW-3 and MW-4 in reaction to the stoppage of discharge. Beginning September 22 and lasting until the morning of September 25, a second stoppage in discharge occurred. MW-3 and MW-4 again showed a near immediate and very similar pattern in response. This response is indicative of the recharge benefits of the "V" ditch, as it demonstrates that water in the "V" ditch quickly absorbs into the soil and recharges the underlying groundwater.
- 4. Given the nearly immediate response in groundwater elevations in MW-4 and the above information, it seems readily apparent that MW-4 is located adjacent to the first reach of the "V" ditch. Likewise, the location of MW-3 appears to be within the second reach of the "V" ditch. This is contrary to the analysis provided in the

Oct 29 Memo, which indicates MW-3 is within the third reach of the "V" ditch, and much closer to the Morton well.

- 5. MW-2 appears to be located in the upper section of reach 5 of the "V" ditch. At this location, it would be expected to begin showing signs of recovery soon after reach three and reach four begin to fill as it would likely reflect recharge from reach 4. When inspecting the start of MW-2's recovery, it is apparent that groundwater levels begin to rise within three to five days of water flowing into reach three and four (the timing of flow into reach three and four is based upon the Oct 7 Memo's statement that reach 1 and 2 were full as of September 16, thus would be spilling over into reach 3, which fills simultaneously with reach 4).
- 6. The Morton well is located near the upper end of reach four of the "V" ditch. This fourth reach fills simultaneously with the third reach, as presented by the Oct 7 Memo. The Morton well begins to show recovery around the time water was flowing into reach three and four, and several days prior to indications of recovery in MW-2.
- 7. The stoppage of discharge to the "V" ditch between September 22 and September 25 shows as a flattening of the groundwater elevations at the Morton well and MW-2 for several days. Within a few days of the restart, these wells again continued an upward trend in groundwater elevations. This reaction to the stoppage and related delay helps confirm the relationship between groundwater elevations and the presence of "sufficient" amounts of water in the "V" ditch, as required by Condition 55.
- 8. MW-3 and MW-4 begin to indicate an equilibrium condition has occurred just prior to the September 22 stoppage. After restarting, these monitoring wells continue to maintain an equilibrium through the last available data logger reading on October 21. The November 19 DellaValle measurements can be plotted to demonstrate that these wells continue to maintain a state of equilibrium.
- MW-1 is located at the very end of the "V" ditch, and understandably is the last to see a response in groundwater elevations. This appears to occur around October 9, after reach three and four appear to see groundwater elevations flattening out which indicates the groundwater in those reaches are nearing equilibrium.
- 10. Plotting the November DellaValle readings shows both MW-1 and MW-2 continuing to rise.
- 11. Plotting the November DellaValle readings shows the Morton well was nearly at an equilibrium as of the last available data logger reading on October 21. This "equilibrium" elevation is about 483 to 484 feet mean sea level (msl). This is

comparative to historic data for the Morton well that indicates the well routinely was between 480 feet msl and 485 feet msl for the period of 2006 through 2011.

- 12. The Packard well, indicated in the Oct 7 Memo to be adjacent to MW-2, tracks the recovery pattern of MW-2 nearly perfectly further demonstrating a direct correlation between water discharged into the "V" ditch and resulting groundwater elevation conditions in both monitoring wells and private wells.
- 13. The Morton well, although located several hundred feet north of MW-2, also shows remarkable similarities to the recovery pattern in MW-2. As described earlier, this is likely due to the response in MW-2 from recharge occurring in reach 3 and 4 of the "V" ditch.

As seems readily apparent by the available 78 days of data logger and associated DellaValle groundwater elevation readings, there is a definitive relationship between the presences of sufficient water in the "V" ditch and the maintenance of groundwater elevations in neighboring wells.

As such, discharge to the "V" ditch - a required part of mining activities at the Quarry - has a direct influence on the conditions of groundwater in adjacent private wells.

The stoppage of discharge that began in September 2013 and continued for a year absolutely had an adverse effect on groundwater elevations in adjacent private wells and very likely exacerbated the affects of the current drought on local groundwater conditions. The Quarry cannot excuse itself from fault or factually conclude "*mining activities have not affect the private wells.*" (Oct 29 Memo, p. 5).

Conclusions

As detailed in the sections above, a direct correlation exists between the discharge of water into the "V" ditch and the maintenance of groundwater elevations in neighboring wells. Lack of "a sufficient amount of water in order to establish a groundwater mound to maintain water levels" (Condition 55), beginning in September 2013 and lasting until September 2014, had a primary adverse impact on groundwater elevations at neighboring wells.

As stated in the original Report prepared by EMKO "[t]he available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities." (Report, p. 8). The original Peer Review Memo concluded "[t]hough the conclusion may still be accurate if it were to be reassessed with all relevant facts available, making such conclusions absent them is without merit." (Peer Review Memo, p. 11).

As illustrated with the extensive data logger readings, a reassessment with the relevant facts supports the findings of the Peer Review Memo and reasserts that CEMEX mining activities definitely are a cause of the concerns identified in the letters.

Recommendations

To help assure CEMEX mining activities do not cause additional problems with groundwater elevations in the neighboring private wells, RMA could consider the following recommendations:

- As directed by Condition 46 and Condition 48, require full compliance with the reporting detailed in the 2002 RMC Pacific Materials Stillwell Project Groundwater Monitoring Program (GMP), prepared by EMKO. Compliance would include preparing all necessary reports and analyses and submitting to the RMA on a timely and routine basis.
- 2. Add a meter on the discharge line that fills the "V" ditch so that accurate information regarding the destination of mine dewatering is understood and verifiable. As discussed in the Peer Review Memo and the Response Memo (see Appendix A), simply using the power records cannot be relied upon as proving only flow to the "V" ditch as other use of power and other destinations for water are plausible, yet never explained. [As an added example, Condition 16 requires all loads to be covered or wet down to minimize dust. Condition 6 requires haul roads to be watered regularly. Is water from the mine pit used to satisfy this requirement and, if so, is pumping for these accounted for separately than the provided power records (e.g. is a water truck routinely filled with an on-site pump)?]
- Clarify the locations of all monitoring wells and private wells associated with this effort and correct all maps as necessary.
- 4. Evaluate overall operation of the Quarry with regard to Condition 3 to determine if reclamation actions should be undertaken for any completed phases of the Quarry.
- 5. Modify Condition 55 to clarify that water placed into the "V" ditch can be provided from sources other than mine pit dewatering. As stated in the concluding paragraph of Section 4.4.2 of the Quarry EIR, "[a]lternatively, water from another source will be pumped to the trench."
- 6. Using the recently proven relationships between water discharged to the "V" ditch and related responses in groundwater elevations, re-evaluate the current reclamation plan to assure continued maintenance of groundwater elevations, as required by Condition 52. The current reclamation plan identifies two lakes with

a connecting channel and associated weir structures designed to maintain natural groundwater elevations. As presented in the 2002 Hydrogeologic Data Evaluation Report, prepared by EMKO, the "east lake" would have a water elevation of 483.5 feet msl and the "west lake" would have a water elevation of 481.5 feet msl. For comparison, as presented in the graphic representation of data logger and DellaValle readings, the Morton well is at 483.95 feet msl as of November 19, 2014.

Section 1 – Part 2

Attachments

- 1. August 26, 2014 letters from Mitchell Chadwick to Mr. Morton, Mr. Cloud, Mr. Packard, and Mr. and Mrs. Rodriguez offering data loggers for resident wells
- October 7, 2014, EMKO Memorandum Status of Water Level Monitoring: Data Collected Through September 16, 2014 – Stillwell Mine Project
- 3. October 29, 2014, EMKO Memorandum Effects of Mining Activities on Groundwater CEMEX Stillwell Mine
- October 30, 2014, EMKO Memorandum Comparison of Groundwater Elevations and Dewatering Volumes – Stillwell Mine Project
- DellaValle Laboratory, Inc. CEMEX Location Map #3 (MW1, MW2, MW3, MW4, Stillwell, Mills, Morton, Cairnes)
- 6. August 25 ,2014, EMKO Memorandum Water Quality Data CEMEX Stillwell Mine

Attachment 1

[August 26, 2014 letters from Mitchell Chadwick to Mr. Morton, Mr. Cloud, Mr. Packard, and Mr. and Mrs. Rodriguez offering data loggers for resident wells]



Patrick G. Mitchell pmitchell@mitchellchadwick.com 916-462-8887 916-788-0290 Fax

August 26, 2014

VIA FEDEX

Robert Morton 33511 Sierra Drive Lemon Cove, CA 93244

Re: Installation of Pressure Transducers and Dataloggers for Well Monitoring

Dear Mr. Morton:

My client Cemex Construction Materials Pacific LLC ("CEMEX") has notified Tulare County Resource Management Agency ("RMA") that it intends to begin dewatering the Stillwell mine beginning on or around September 2, 2014 and discharge the pumped water to the adjacent Vditch. To provide an accurate analysis of the effects of dewatering and filling the V-ditch on groundwater levels surrounding the Stillwell property, CEMEX will be installing downhole pressure transducers and dataloggers in its four monitoring wells adjacent to the V-ditch.

CEMEX is also willing to install a downhole pressure transducer and datalogger in the four private wells for which complaints alleging reduced water levels were received by RMA in January 2014. If installed, this downhole pressure transducer and datalogger will monitor the effects of filling the V-ditch on the water levels in your well. This will be done at CEMEX's expense and at no cost to you. Collection of this information will assist County RMA staff in further evaluating groundwater conditions in the Stillwell mine area and the potential influences of the V-ditch on neighboring wells.

The downhole pressure transducer and datalogger that would be installed is a 7/8 inch-diameter metal rod with pressure ports on the end and internal electronic components to measure and record water levels. It is suspended in a well using a stainless steel wire and a nylon rope to recover the device. The photographs in the attached Exhibit A show examples of the type of pressure transducer and datalogger to be installed in the wells. The water level data will be downloaded from the datalogger onto a portable computer. When the water levels are downloaded, they will be immediately provided to you as the well owner, RMA staff, and the County's peer review consultant on compact disk. The pressure transducer and datalogger will not interfere with any well pump or its operation.

CEMEX plans to install the pressure transducers and dataloggers in its own monitoring wells on Thursday, August 28, 2014. Because the equipment must be installed in your well prior to placing water in the V-ditch to ensure scientifically meaningful readings, **CEMEX must receive permission from you by no later than 5:00 PM on Friday August 29, 2014.** If we receive notice from you prior to 9:00 AM on Thursday August 28th, CEMEX will install the equipment that same day when it installs the CEMEX monitoring well equipment.

Please notify my associate Allison Reynolds regarding your willingness to have a pressure transducer and datalogger installed in your well as soon as possible. Ms. Reynolds can be reached by phone at (916) 462-8801 or by email at areynolds@mitchellchadwick.com and is available to answer any questions you may have.

Thank you for your consideration of this request.

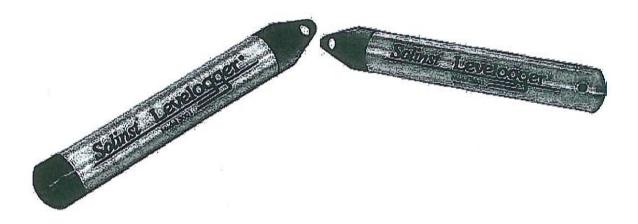
Best regards,

MITCHELL CHADWICK LLP

PGM:de

cc: Chuck Przybylski, Tulare County RMA Michael Spata, Tulare County RMA Tom Cairns, Sierra Chief Quality Western Products

Exhibit A



Pressure transducer and datalogger examples

{00016555;1 }



Patrick G. Mitchell pmitchell@mitchellchadwick.com 916-462-8887 916-788-0290 Fax

August 26, 2014

VIA FEDEX

Orville Cloud 33481 Sierra Drive Lemon Cove, CA 93244

Re: Installation of Pressure Transducers and Dataloggers for Well Monitoring

Dear Mr. Cloud:

My client Cemex Construction Materials Pacific LLC ("CEMEX") has notified Tulare County Resource Management Agency ("RMA") that it intends to begin dewatering the Stillwell mine beginning on or around September 2, 2014 and discharge the pumped water to the adjacent Vditch. To provide an accurate analysis of the effects of dewatering and filling the V-ditch on groundwater levels surrounding the Stillwell property, CEMEX will be installing downhole pressure transducers and dataloggers in its four monitoring wells adjacent to the V-ditch.

CEMEX is also willing to install a downhole pressure transducer and datalogger in the four private wells for which complaints alleging reduced water levels were received by RMA in January 2014. If installed, this downhole pressure transducer and datalogger will monitor the effects of filling the V-ditch on the water levels in your well. This will be done at CEMEX's expense and at no cost to you. Collection of this information will assist County RMA staff in further evaluating groundwater conditions in the Stillwell mine area and the potential influences of the V-ditch on neighboring wells.

The downhole pressure transducer and datalogger that would be installed is a 7/8 inch-diameter metal rod with pressure ports on the end and internal electronic components to measure and record water levels. It is suspended in a well using a stainless steel wire and a nylon rope to recover the device. The photographs in the attached Exhibit A show examples of the type of pressure transducer and datalogger to be installed in the wells. The water level data will be downloaded from the datalogger onto a portable computer. When the water levels are downloaded, they will be immediately provided to you as the well owner, RMA staff, and the County's peer review consultant on compact disk. The pressure transducer and datalogger will not interfere with any well pump or its operation.

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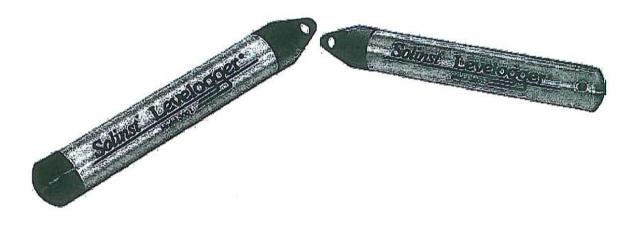
Best regards,

Patrick G.Mitchell

PGM:de

cc: Chuck Przybylski, Tulare County RMA Michael Spata, Tulare County RMA Tom Cairns, Sierra Chief Quality Western Products

Exhibit A



Pressure transducer and datalogger examples

{00016556;1 }



Patrick G. Mitchell pmitchell@mitchellchadwick.com 916-462-8887 916-788-0290 Fax

August 26, 2014

VIA FEDEX

Joshua Packard 33511 ½ Sierra Drive Lemon Cove, CA 93244

Re: Installation of Pressure Transducers and Dataloggers for Well Monitoring

Dear Mr. Packard:

My client Cemex Construction Materials Pacific LLC ("CEMEX") has notified Tulare County Resource Management Agency ("RMA") that it intends to begin dewatering the Stillwell mine beginning on or around September 2, 2014 and discharge the pumped water to the adjacent Vditch. To provide an accurate analysis of the effects of dewatering and filling the V-ditch on groundwater levels surrounding the Stillwell property, CEMEX will be installing downhole pressure transducers and dataloggers in its four monitoring wells adjacent to the V-ditch.

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The downhole pressure transducer and datalogger that would be installed is a 7/8 inch-diameter metal rod with pressure ports on the end and internal electronic components to measure and record water levels. It is suspended in a well using a stainless steel wire and a nylon rope to recover the device. The photographs in the attached Exhibit A show examples of the type of pressure transducer and datalogger to be installed in the wells. The water level data will be downloaded from the datalogger onto a portable computer. When the water levels are downloaded, they will be immediately provided to you as the well owner, RMA staff, and the County's peer review consultant on compact disk. The pressure transducer and datalogger will not interfere with any well pump or its operation.

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Thank you for your consideration of this request.

Best regards,

MITCHELL CHADWICK LLP

PGM:de

cc: Chuck Przybylski, Tulare County RMA Michael Spata, Tulare County RMA Tom Cairns, Sierra Chief Quality Western Products

Exhibit A



Pressure transducer and datalogger examples



Patrick G. Mitchell pmitchell@mitchellchadwick.com 916-462-8887 916-788-0290 Fax

August 26, 2014

VIA FEDEX

4

Maria and Elias Rodriguez 33513 Sierra Drive #A Lemon Cove, CA 93244

Re: Installation of Pressure Transducers and Dataloggers for Well Monitoring

Dear Mr. and Mrs. Rodriguez:

My client Cemex Construction Materials Pacific LLC ("CEMEX") has notified Tulare County Resource Management Agency ("RMA") that it intends to begin dewatering the Stillwell mine beginning on or around September 2, 2014 and discharge the pumped water to the adjacent Vditch. To provide an accurate analysis of the effects of dewatering and filling the V-ditch on groundwater levels surrounding the Stillwell property, CEMEX will be installing downhole pressure transducers and dataloggers in its four monitoring wells adjacent to the V-ditch.

CEMEX is also willing to install a downhole pressure transducer and datalogger in the four private wells for which complaints alleging reduced water levels were received by RMA in January 2014. If installed, this downhole pressure transducer and datalogger will monitor the effects of filling the V-ditch on the water levels in your well. This will be done at CEMEX's expense and at no cost to you. Collection of this information will assist County RMA staff in further evaluating groundwater conditions in the Stillwell mine area and the potential influences of the V-ditch on neighboring wells.

The downhole pressure transducer and datalogger that would be installed is a 7/8 inch-diameter metal rod with pressure ports on the end and internal electronic components to measure and record water levels. It is suspended in a well using a stainless steel wire and a nylon rope to recover the device. The photographs in the attached Exhibit A show examples of the type of pressure transducer and datalogger to be installed in the wells. The water level data will be downloaded from the datalogger onto a portable computer. When the water levels are downloaded, they will be immediately provided to you as the well owner, RMA staff, and the County's peer review consultant on compact disk. The pressure transducer and datalogger will not interfere with any well pump or its operation.

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Thank you for your consideration of this request.

Best regards,

MITCHELL CHADWICK LLP

Patrick G. Mitchell

PGM:de

cc: Chuck Przybylski, Tulare County RMA Michael Spata, Tulare County RMA Tom Cairns, Sierra Chief Quality Western Products

Exhibit A



Pressure transducer and datalogger examples

Attachment 2

[October 7, 2014, EMKO Memorandum - Status of Water Level Monitoring: Data Collected Through September 16, 2014 – Stillwell Mine Project]

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)718-5511 akopania@sbcglobal.net

MEMORANDUM

October 7, 2014

To: Gordon Brown Ron Wilson Pete LoCastro

CC: Pat Mitchell Allison Reynolds

From: Andy Kopania

Subject: Status of Water Level Monitoring: Data Collected Through September 16,

2014

Stillwell Mine Project

This Technical Memorandum provides a summary and brief interpretation of the current status of the water level monitoring occurring at the Stillwell Mine Project Site based on well monitoring data collected from August 28, 2014 to September 16, 2014.

On August 28, 2014, dataloggers were installed in nine wells in the vicinity of the Stillwell Mine. These wells include the four CEMEX monitoring wells located along the V-ditch (MW-1 through MW-4), a shallow livestock watering well on the Stillwell property located to the southwest of the current mine excavation (Stillwell #2), the well located at the rental house owned by Dave Stillwell (Stillwell #1), and the Rodriguez, Packard, and Morton domestic wells¹. The well locations are shown on the attached *Map 1. Stillwell Quarry Area with Hydrographs from Wells Equipped with Dataloggers – August 28, 2014 to September 16, 2014.*

Pumping from the mine excavation began at approximately 4 PM on September 2, 2014, with the water being piped to the northern part of the V-ditch. According to Pete LoCastro<u>of CEMEX</u>, the pump shut down on Sunday, September 7 due to problems with the float switches. Based on the water level data, the pump was off for approximately 24 hours. A meter installed on the discharge pipe by CEMEX indicates

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¹ Although dataloggers were also initially programmed for installation in the Cloud and Cairns wells, the instruments were not installed in these two wells. Mr. Cloud informed us that he was now being supplied by a deep well and no longer had water issues. An extra datalogger was brought to the site during the field mobilization in case a last-minute request was made by Mr. Cairns to install a datalogger in his well. No such request was made.

that the pumping rate has consistently averaged about 990 gallons per minute when the pump is operating. This pumping rate is equivalent to about 4.4 acre-feet of water per day.

The V-ditch has five segments that are separated by soil berms within the ditch. The northern segment is approximately 1,050 feet long, the second segment is approximately 1,100 feet long, the third segment is approximately 275 feet long, the fourth segment is approximately 550 feet long, and the fifth segment, at the south end of the V-ditch, is approximately 825 feet long. For most segments of the V-ditch, the water must rise to a depth of approximately 10 feet before entering a pipe that allows the water to flow to the next segment. The third and fourth segments, however, are connected by a pipe near the bottom of the V-ditch. Therefore, these two segments fill simultaneously.

At a height of 10 feet above the bottom, the V-ditch is approximately 25 feet wide. Given these dimensions and the segment lengths described above, the actual volumes of water that can be held in each segment are approximately:

- Segment 1 (north end): 3.0 acre-feet;
- Segment 2: 3.2 acre-feet;
- Segment 3: 0.8 acre-feet;
- · Segment 4: 1.6 acre-feet; and
- · Segment 5 (south end): 2.4 acre-feet.

At these volumes and the measured pumping rate of about 4.4 acre-feet per day, the entire V-ditch would fill with water in 2.5 days if there was no percolation to the subsurface. However, on September 16, 2014, only the first two segments of the V-ditch were full. At the time of this observation, approximately 35 acre-feet of water had been pumped into the V-ditch, while only 6.2 acre-feet were stored in the ditch. These values indicate that approximately 29 acre-feet of water had percolated from the V-ditch to the shallow aquifer during that two-week period. The average percolation rate during this period was approximately one acre-foot per day per 1,000 linear feet of ditch.

Map 1 shows the hydrographs from the <u>above referenced</u> wells that are currently being monitored with dataloggers. The data are for the period from August 28, 2014 to September 16, 2014. The water levels for six of the nine wells monitored with dataloggers were very stable during this time. In three of the wells, however, water levels increased.², In MW-4, which is located near the south end of the northern segment of the V-ditch, water levels increased almost 10 feet from September 3, 2014 to September 16, 2014. In MW-3, which is located near the middle of the second segment

2 According to monthly measurements made by Dellavalle Laboratory, Inc. on September 16, 2014, the water level in the Cairns well had increased approximately 4.3 feet since August 2014. The Cairns well is located near the south end of the northern segment of the V-ditch, as shown on *Map1*.

Allison Reynolds 10/31/2014 12:31 PM Deleted: . of the V-ditch, water levels increased <u>more than 11 feet from September 4, 2014 to</u> September 16, 2014. The 24-hour period where the pumping to the V-ditch was not occurring is readily apparent on the hydrographs for MW-4 and MW-3. In the Morton well, which is located approximately 250 feet south of the south end of the second segment of the V-ditch, water levels increased by slightly more than one foot from September 8, 2014 to September 16, 2014.

The attached *Figure 8 Groundwater Contours – September 2014* shows the effect of the large amount of recharge that occurred from the first two segments of the V-ditch during the first two weeks of pumping. A large groundwater mound has formed under the V-ditch, extending from the Cairns well to MW-3. The steep groundwater gradient between MW-3 and the Morton well, shown by the tight spacing of the contours between these two well locations, indicates the presence of a large recharge cone beneath the first two segments of the V-ditch.

The attached *Figure 1 Conceptual Hydrogeologic Cross Section* presents a generalized interpretation of the conditions in the area of the V-ditch during this period of initial pumping from the mine excavation. During the initial pumping period, hydrogeologic conditions are very transient because of the time it takes to fill each segment of the V-ditch, the time required to drawdown and fully dewater the mine excavation, and the resulting variations that occur in the groundwater gradient. For example, during the initial pumping period, the recharge rate in the segment(s) of the V-ditch that contain water is very high because all of the water pumped from the mine excavation is percolating into the subsurface from only part of the V-ditch. As shown in *Figure 1 Conceptual Hydrogeologic Cross Section*, the initial recharge cone has relatively steep boundaries, consistent with the steep gradient shown between MW-3 and the Morton well on *Figure 8 Groundwater Contours – September 2014*.

Over time, the recharge rate per length along the V-ditch will decrease as water enters each additional segment of the ditch. Based on the dimensions and pumping rate discussed above, once all four segments of the V-ditch are filled, the recharge rate per length of ditch will decrease by 35 percent, to about 0.95 acre-feet per day per 1,000 linear feet of ditch.

In addition, the horizontal hydraulic gradient (i.e. the slope of the groundwater surface) between the area of the V-ditch and the mine excavation will become steeper in comparison to the pre-pumping groundwater surface, for two reasons. The first reason is that the water levels under the V-ditch are rising due to the recharge. The second reason is that the water level within the mine excavation is being lowered due to the dewatering. Once all of the segments of the V-ditch are filled with water, and the water level in the mine approaches the bottom of the excavation, then the hydraulic gradient will stabilize. The equilibrium groundwater surface, as shown on *Figure 1 Conceptual Hydrogeologic Cross Section*, will be steeper in the area between the V-ditch and the mine excavation. The steeper groundwater surface will cause water to flow away from

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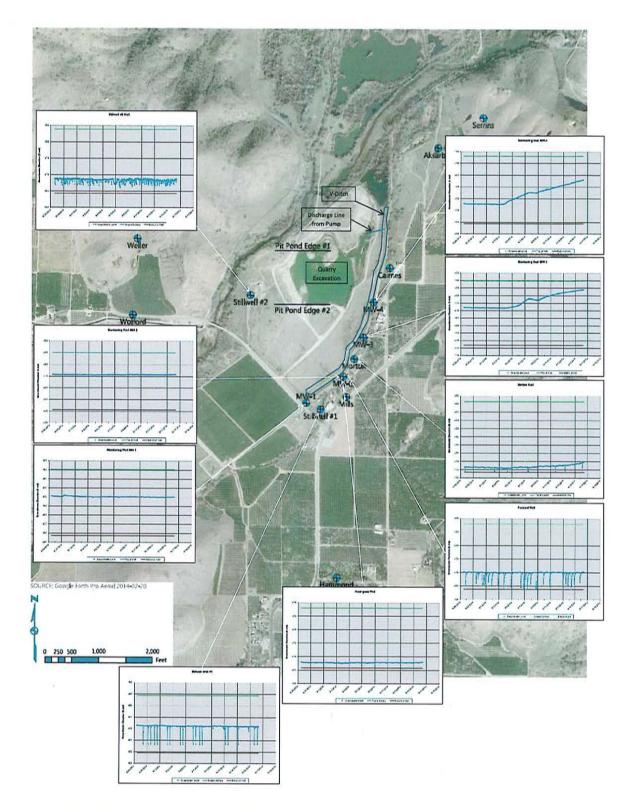
the area of the V-ditch at a faster rate than it was prior to the restart of pumping. On the opposite side of the V-ditch, however, the gradient should become flatter due to the mounding effect of the recharge from the V-ditch.

As illustrated on *Figure 1 Conceptual Hydrogeologic Cross Section*, the decrease in unit recharge rate along the V-ditch and the steeper horizontal hydraulic gradient along the equilibrium groundwater surface could result in a decline in water levels, compared to those observed in mid-September 2014, in the wells located closest to the V-ditch, such as CEMEX monitoring wells MW-3 and MW-4, while potentially causing a small increase in the water levels in the private wells located slightly farther from the V-ditch.

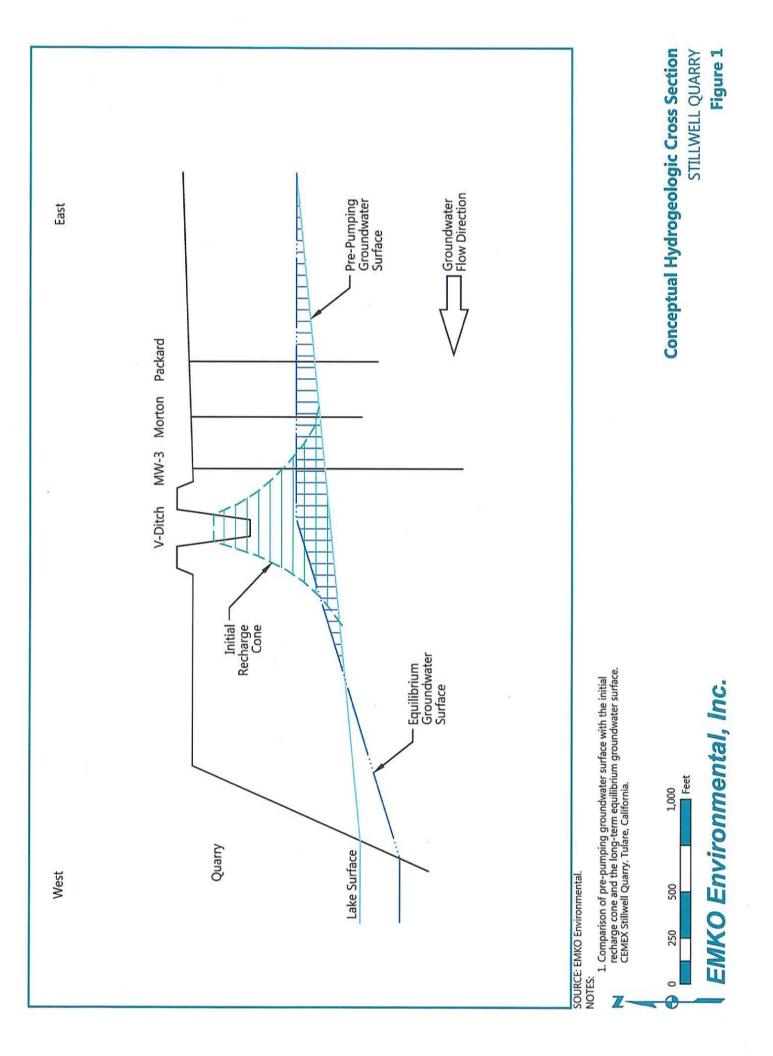
Over time, the initial recharge cone will likely flatten, or deflate, as the equilibrium groundwater surface shown on *Figure 1 Conceptual Hydrogeologic Cross Section* develops. The groundwater contour maps previously prepared for the Stillwell Mine and discussed in my August 22, 2014 Groundwater Elevation Data, Hydrographs, and Contour Maps Memorandum show that from July 2006 through at least January 2013, pumping to the V-ditch did not create a groundwater mound³ similar to that observed on *Figure 8 Groundwater Contours – September 2014*. Thus, it is likely that the mound observed in the September 2014 data is a result of the transient conditions <u>during this initial pumping period</u> discussed above and will attenuate over time. It is uncertain how long it will take for each segment of the V-ditch to fill and to reach equilibrium conditions in the subsurface. However, the data from the seven-plus year period when the mine was being dewatered support the interpretation presented above.

The water levels from the nine wells currently being monitored with dataloggers will be downloaded approximately every six weeks. The data will be evaluated and discussed in a technical memorandum similar to this document after each download. It is expected that monitoring using the dataloggers will continue at least until equilibrium conditions develop in each well. In addition, monthly measurement of water levels and annual water-quality testing by Dellavalle Laboratory, Inc. should continue in accordance with the Conditions of Approval.

³ While the data indicate that a classic "mound" did not develop between 2006 and 2013, it is likely that the recharge from the V-ditch modified the groundwater surface by creating a small "bulge" similar to that shown on *Figure 1 Conceptual Hydrogeologic Cross Section* between the pre-pumping groundwater surface and the equilibrium groundwater surface beneath the V-ditch. While this "bulge" does not result in a reversal of the groundwater flow toward the east (as it does on *Figure 8 Groundwater Contours – September 2014*), it does flatten the gradient and allow water from upgradient (east) of the private wells to be retained on the east side of the V-ditch. This behavior is supported by the groundwater chemistry data, which show that the upgradient private wells contain high levels of nitrate but the water pumped from the mine to the V-ditch contains little or no nitrate. Thus, the water that percolates to the shallow aquifer from the V-ditch does not reach the private wells.



Map 1. Stillwell Quarry area with hydrographs from wells equipped with dataloggers – August 28, 2014 to September 16, 2014. Dewatering of the Quarry began September 2, 2014 at 4:00 PM.



Attachment 3

[October 29, 2014, EMKO Memorandum – Effects of Mining Activities on Groundwater – CEMEX Stillwell Mine]

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)718-5511 akopania@sbcglobal.net

TECHNICAL MEMORANDUM

October 29, 2014

- To: Gordon Brown Ronald Wilson Pete LoCastro
- Cc: Pat Mitchell Allison Reynolds

From: Andy Kopania

Subject: Effects of Mining Activities on Groundwater CEMEX Stillwell Mine

As stated in Condition of Approval No. 49 for the CEMEX Stillwell Mine, if a complaint from a well owner is received by the Tulare County Resource Management Agency (RMA) regarding the water level, yield, or water quality in an existing well, the RMA shall request a report from a licensed hydrogeologist. Such report is to evaluate whether "a significant problem... [is] ...caused by *mining activities*..." (emphasis added). For wells adjacent to the CEMEX Stillwell mine, the following are the only plausible hydrologic mechanisms by which mining activities could affect water level or well yield¹ in neighboring private wells:

- Pumping to dewater the mine could lower the water table between the excavation and the neighboring private wells, drawing water into the mine and away from the private wells;
- 2. The open quarry excavation, even in the absence of dewatering, could alter the groundwater contours and pull water away from the neighboring private wells and into the mine excavation²; or
- 3. The mine pit, even in the absence of dewatering, could alter the groundwater contours such that flow of water from the area upgradient of the private wells is diverted into the excavation and away from the private wells.

Each of these potential mechanisms can be evaluated based on the available water-level and water-quality data that have been collected over the past decade or

¹ The January 31, 2014 complaints from the neighbors do not allege any water quality issues related to the mine.

² This is sometimes referred to as "lake leveling", as discussed in Impact 4.4-5 of the 2002 EIR.

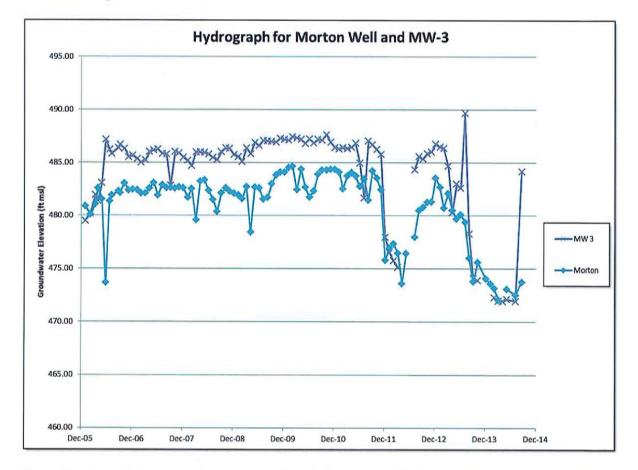
more at the Stillwell site.

For mechanism #1 or #2 to occur, the groundwater surface must slope downward from the private wells to the excavation. The four wells for which a complaint regarding water level or yield has been received (Morton, Packard, Rodriguez, and Cloud) are all located along the groundwater flow gradient, which trends from northeast to southwest. Of these four wells, the closest to the existing mine excavation is the Morton well. The location of the Morton well relative to the mine is shown on the map below. For groundwater to flow from the area of the Morton well to the mine excavation, the water level in the Morton well must be consistently higher than the water level in any wells located between the mine excavation and the Morton well. As shown on the map below, CEMEX monitoring well MW-3 is located between the Morton well and the existing mine. Thus, for the mine to be drawing water away from the area of the Morton well, the groundwater elevation in monitoring well MW-3 would need to be consistently *lower* than the water level in the Morton well.



The hydrograph below shows the groundwater elevation in the Morton well and MW-3 since 2006. With only a few short-term exceptions, the water level in MW-3 is consistently *higher* than the water level in the Morton well, typically by several feet. When the water level in MW-3 is lower than that in the Morton well, the difference is

typically less than one to two feet and this condition only occurs for periods of two to three months.³ Based on the aquifer parameters and groundwater conditions identified in Appendix C of the 2002 EIR, groundwater in the vicinity of the Stillwell mine moves approximately 20 feet per month under average conditions. The distance between the Morton well and the mine excavation is more than 1,000 feet. Therefore, it would take over 50 months for groundwater to flow from the Morton well to the mine excavation if the water levels in the Morton well were consistently higher than the water levels in MW-3. As shown on the hydrograph below, however, the predominant groundwater conditions prevent this from occurring. Therefore, this data proves that mechanisms 1 and 2 are not occurring.



If mechanism #3 is occurring, the quality of the water within the mine excavation should be similar to that in upgradient wells, such as the Cairns well, as shown on the map above. Although the complaints received by RMA do not allege any water quality impacts, specific water quality parameters can be used as "tracers" to identify

³ It is also important to note that periods when the water level in MW-3 is lower than that in the Morton well occurred both during and after dewatering ceased in September 2013. Thus, these short-term events are not correlated to mining activities such as dewatering.

groundwater flow paths and, just as importantly, areas that are not connected on a common groundwater flow path. In that regard, there happen to be substantial water quality differences between the groundwater at the Stillwell Mine site and the groundwater at the neighboring well locations, especially with regard to nitrate. These differences are shown in the table below. Groundwater samples collected in 1999 from a well on the Stillwell property located to the south of the current mine excavation had an average of 8.6 milligrams per liter (mg/L)⁴ of nitrate (EIR, Table 4.4-3, Page 4-53). Groundwater samples collected from the mining excavation in 2006 and 2014 did not contain detectable concentrations of nitrate. Thus, groundwater at and near the mine excavation contains little, if any, nitrate. In comparison, the Cairns well, located northeast of the mine excavation and upgradient of the Morton well, had nitrate concentrations in 2006 and 2014 of 82 mg/L and 84 mg/L⁵, respectively. The Morton well had nitrate concentrations in 2006 and 2014 of 76 mg/L and 105 mg/L, respectively.

If dewatering of the Stillwell Mine excavation, or any other mining activity, was drawing water from the area of the private wells and into the mining excavation consistent with mechanism #3, the water quality within the mine excavation would be affected. However, after more than seven years of dewatering of the mine, and an additional year where the excavation was re-filling with groundwater after dewatering ceased in September 2013, nitrate is not present in the water within the excavation. Therefore, mechanism #3 is not occurring.

Location	Date	Nitrate (mg/L)
Stillwell Well T-3	1999 (average of 5 samples)	8.6
Stillwell Mine Pit	June 2006	<0.40
Stillwell Mine Pit	Sept 2014	<2.00
Cairns	June 2006	82
Cairns	Sept 2014	84
Morton	June 2006	76
Morton	Sept 2014	105

Under all three potential mechanisms described above, nitrate-impacted groundwater from the area of the private wells would be drawn into the mine excavation. The disparity in the nitrate levels in the water samples from the private wells and the mine excavation provides strong evidence that mining activities have not pulled water away from the area around or upgradient of the private wells. Consequently, the mining activities cannot be responsible for the changes in yield or water levels observed in the private wells.

⁴ Milligrams per liter in water is equivalent to parts per million (ppm).

⁵ For comparison purposes, the state and federal drinking water maximum contaminant level for nitrate is 45 mg/L.

In summary, the available data demonstrate that the potential mechanisms by which mining activities at the Stillwell Mine could affect yields or water levels at the neighboring private wells have not occurred. Therefore, the only scientifically supportable conclusion is that mining activities have not affected the private wells.

Attachment 4

[October 30, 2014, EMKO Memorandum – Comparison of Groundwater Elevations and Dewatering Volumes – Stillwell Mine Project]

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)718-5511 akopania@sbcglobal.net

MEMORANDUM

October 30, 2014

- To: Gordon Brown Ron Wilson Pete LoCastro
- CC: Pat Mitchell Allison Reynolds

From: Andy Kopania

Subject: Comparison of Groundwater Elevations and Dewatering Volumes Stillwell Mine Project

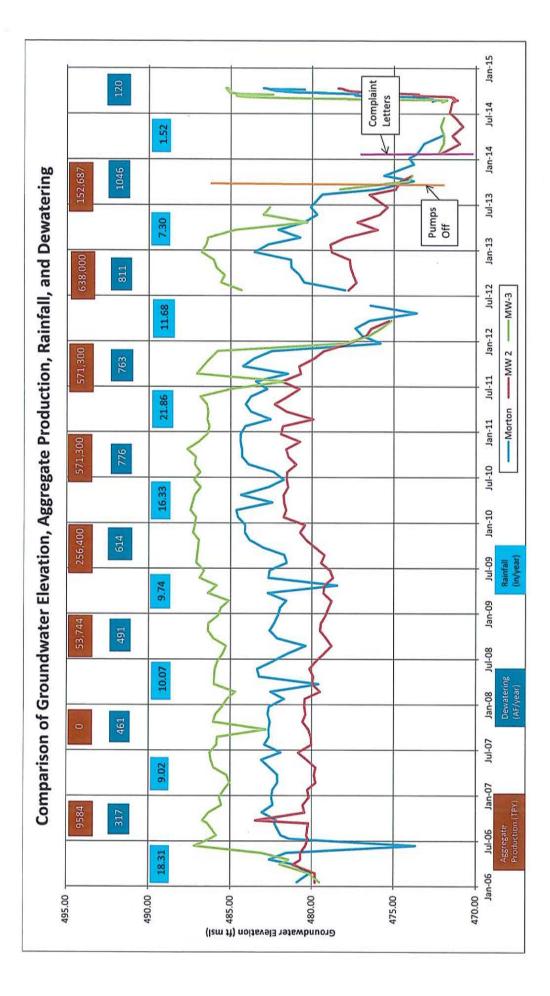
This Technical Memorandum presents a comparison of groundwater elevations in several wells near the Stillwell Mine with the volume of water pumped to the V-ditch as a result of dewatering of the mine excavation.

The figure below shows the groundwater elevations measured in CEMEX monitoring wells MW-2 and MW-3 and in the Morton well from 2006 to 2014. These three wells are located on the east side of the V-ditch. The Morton well is located approximately 1,000 feet south of the mine excavation. MW-3 is located approximately 350 feet north of the Morton well and MW-2 is located approximately 350 feet south of the Morton well. Please note that the annual volume of water pumped to the V-ditch as a result of dewatering of the Stillwell Mine is included at the top of this figure.

From 2006 through 2011, the volume of water pumped to the V-ditch increased from 317 acre-feet per year to 763 acre-feet per year. During this same period, the groundwater elevations in MW-2, MW-3, and the Morton well remained relatively constant, with only minor short-term fluctuations.

In 2012, the volume of water pumped to the V-ditch increased to 811 acre-feet per year. However, from January to February 2012, the water levels dropped seven to eight feet in MW-3 and the Morton well. The water level decline in these two wells continued through May 2012. In MW-2, a decline began in September 2011 and continued until after April 2012. Water levels recovered in all three wells during the second half of 2012. From January 2013 to September 2013, 1,046 acre-feet of water was pumped to the V-ditch. In September 2013, the pumping ceased due to the second theft of the electrical wiring. In the less than nine months of 2013 during which pumping occurred, the total volume of water pumped to the V-ditch was almost 30 percent greater than the volume of water pumped to the V-ditch in twelve months in 2012, and was 35 percent to 230 percent greater than the volume of water pumped to the V-ditch in twelve months in 2012, and was 35 percent to 230 percent greater than the volume of water pumped to the V-ditch in any year from 2006 to 2011. As shown on the figure below, despite the substantial increase in water volume being pumped to the V-ditch compared to prior years, the groundwater levels persistently declined from January 2013 through September 2013. The water level declines in MW-3, the Morton well, and MW-2 from January to September 2013 were approximately 12 feet, eight feet, and 3.5 feet, respectively. The decline in MW-2 was less than that in the other wells because MW-2 did not recover by the same magnitude as the other two wells at the end of 2012.

The data on the attached figure and the discussion above demonstrate that pumping to the V-ditch has not historically maintained the water levels in wells to the east of the V-ditch during multi-year periods of reduced rainfall.

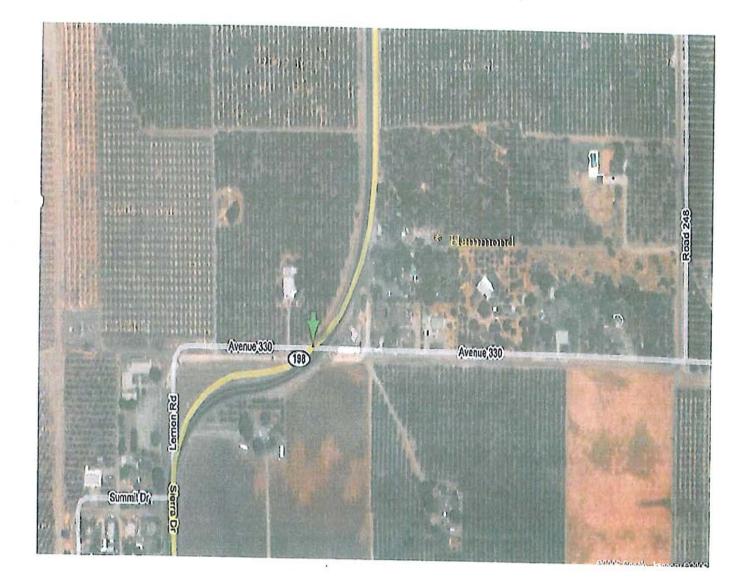


Attachment 5

[DellaValle Laboratory, Inc. – CEMEX Location Map #3 (MW1, MW2, MW3, MW4, Stillwell, Mills, Morton, Cairnes)]



Cemex Well Location Map #1 (Hammond)





Cemex Well Location Map #2 (Wolford, Weller)





Cemex Location Map #3 (MW1, MW2, MW3, MW4, Stillwell, Mills, Morton, Carnes)





Cemex

Location Map #4 (Aksarban, Serrins)



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Attachment 6

[August 25 ,2014, EMKO Memorandum - Water Quality Data - CEMEX Stillwell Mine]

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)939-0133 akopania@sbcglobal.net

MEMORANDUM

August 25, 2014

- To: Michael Spata, Tulare County RMA Greg Young, Tully and Young
- Cc: Aaron Bock, Tulare County RMA Charles Przybylski, Tulare County RMA Gordon Brown, CEMEX Ronald Wilson, CEMEX Pete LoCastro, CEMEX Pat Mitchell, Mitchell Chadwick

From: Andy Kopania

Subject: Water Quality Data CEMEX Stillwell Mine

This memorandum provides a brief discussion of water quality data obtained as part of monitoring conducted in relation to the CEMEX Stillwell Mine. Transmitted with this memorandum are the following:

- Excel Spreadsheet entitled "Water Quality Summary with Plots"; containing Table
 1 showing the available water quality data and various water-quality analysis
 plots.
- Word file entitled "RMC Water Sampling and Sounding Procedures", describing the methods used to obtain samples.
- PDF file entitled "Wellhead photos", showing the wellhead for each well sampled, except for Morton. The Morton well was not accessible on the date the photographs were taken due to a dog in the yard.
- Nine PDF files with titles beginning with "DELLAVALLE- -CEMEX QUARRY <DATE>", providing the field records of well purging and sampling for the monitoring wells. The indicator <DATE> represents the date of the sampling event.
- Nine PDF files with titles "CEMEX 2005" through "CEMEX 2014" presenting the laboratory analytical reports summarized in the Excel Spreadsheet file referenced in the first bullet, above.

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Of particular concern in the results are the nitrate levels in the Cairns, Morton, and Stillwell domestic wells. The nitrate levels routinely exceed the maximum contaminant level (MCL) for drinking water of 45 milligrams per liter (mg/L).

Due to an apparent miscommunication in the field, the mine pit (referred to as the "Pump Basin" on Table 1 and the lab sheets) and v-ditch were only sampled in 2006. Nitrate was not detected in the sample from the mine pit and was present at less than one-tenth of the MCL in the v-ditch sample. Comparison of the 2006 data from the v-ditch and the three domestic wells also indicates additional water quality differences, such as much higher total dissolved solids (TDS) in the domestic wells and differences in the proportion of various anions and cations (see Table 1 and the water quality plots in the Excel spreadsheet file).

Based on the groundwater flow direction (see August 22, 2014 memorandum *Groundwater Elevation Data, Hydrographs, and Contour Maps*), the elevated nitrate and TDS in the domestic wells is most likely a result of local septic systems clustered near the domestic wells and/or the orchards upgradient to the northeast of the domestic wells. The elevated nitrate and TDS are not sourced from the mine site or the v-ditch.

It is anticipated that all wells, the mine pit, and the v-ditch trench will be sampled shortly after pumping begins early next month to dewater the mine pit to prepare for the resumption of aggregate extraction.



1910 W. McKinley, Ste 110, Fresno, CA 93728, (559) 233-6129 FAX (559) 268-8174

3. METHODS

Monitoring Well Water Quality Sampling

A qualified subcontractor will be employed to sample the groundwater monitoring wells.

Before each sampling event, measurements of static water level will be taken from the north side of the top of each casing and recorded to the nearest 0.01 foot with respect to the established casing elevation. After collecting static water level measurements, the monitoring wells will be purged of at least three well volumes and sampled. During purging, temperature, pH, and specific conductance parameters of the return water will be periodically measured until the parameters stabilize.

Water samples will be collected from each well into laboratory prepared containers, sealed with tight fitting caps, labeled, and logged into a sample chain-of-custody. Samples will then be stored in a cool ice chest while awaiting delivery to Dellavalle Laboratory, Inc. Dellavalle Laboratory is a California Certified Environmental Laboratory Accreditation Program (ELAP) laboratory.

3.2 Domestic Well Water Quality Sampling

Domestic water samples will be collected from the tap hydraulically nearest each domestic well. The tap will be run for an amount of time sufficient to purge any water standing the pipes.

Water samples will be collected from each well into laboratory prepared containers, sealed with tight fitting caps, labeled, and logged into a sample chainof-custody. Samples will then be stored in a cool ice chest while awaiting delivery to Dellavalle Laboratory, Inc. Dellavalle Laboratory is a California Certified Environmental Laboratory Accreditation Program (ELAP) laboratory.

3.3 Storage Basin Water Quality Sampling

Grab samples will be collected from four to six locations in each storage basin. The samples will be obtained from a depth of approximately one foot or greater from below the waters surface. These samples will be combined, thoroughly mixed, and the resulting sample will be placed in a laboratory



prepared container, sealed, labeled, and stored in an ice chest while awaiting delivery to Dellavalle Laboratory. Dellavalle Laboratory, Inc is a California Certified ELAP laboratory and will perform sample analyses by appropriate analytical methods.

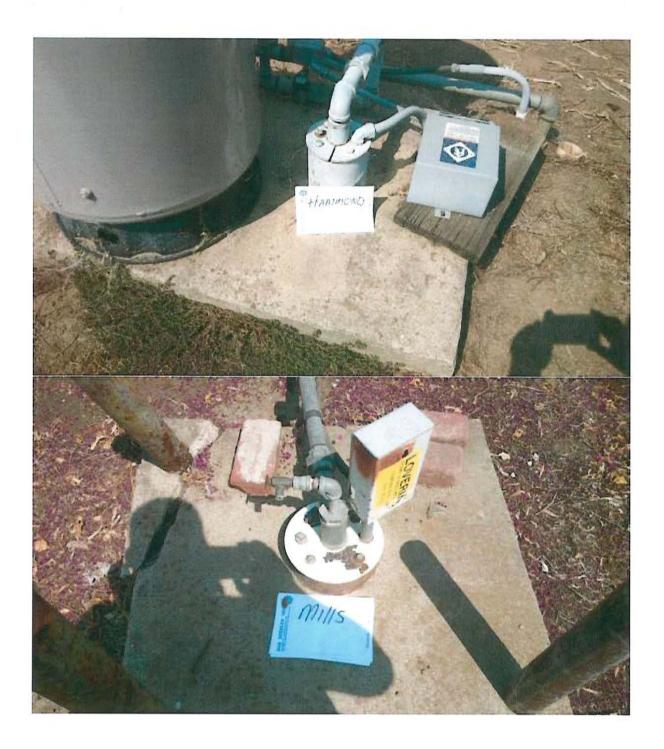
3.4 Groundwater Level Measurement

The groundwater monitoring well static water level measurements will be taken from the north side of the top of each casing and recorded to the nearest 0.01 foot with respect to the established casing elevation.

The domestic well static water level measurements will be taken from a hole at the top of each well casing, (provided that a sounding hole is present). A measurement reference point will be established and recorded for each well. Sounding equipment will be sanitized prior to being placed into the well. Water level measurements will be recorded to the nearest 0.01 foot with respect to the established reference point.



















2006 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. May 11, 2006

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

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MONITORING WELL FIELD LOG 2006

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DATE:

5/11/2006

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CONSULTANT:				LAB. ANALYSIS BY:	DELLAVALLE	ELABS.			
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DEPTH TO WATER:	(feet.100th's)	9.21	FEET	CALC. PURGE VOL.:	25.60	GAL.			
	(feet.100th's)	48.42	FEET	TOTAL VOLUME PURGED:	76.79	GAL.			
STANDING WATER CO	OLUMN:	39.21	FEET	DEPTH OF PUMP:	47	FEET			

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C. (UmMHOS)	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	7.44	665	21.0	50.2	0.83	183
	25.60	,	"	7.63	692	21.6	49	1.2	112
	51.19		"	7.59	750	21.2	49	1.0	43
	76.79	"	"	7.53	759	21.1	42	1.1	27
	E METHOD:		CENTRIFUG	AL PUMI	Ρ.				
SAMP	LE METHOD:		CENTRIFUGA	AL PUM	P.				
	V. AFTER PURGE:					T SAMPL	E TIME:	18.90'	
	INTEGRITY:		CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:		SEE SITE MA	P.			_		
REMA	RKS:		LOCK IS MI	SSING.			_		
WEAT	HER:		CLEAR / HOT	.1		WIND:		NONE	
QUAL	ITY CONTROL:		ALL PURGING	G EQUIP	MENT AND S	AMPLING I	QUIPMENT	WAS CLEANED IN	THE
			FIELD WITH	A STEAM	CLEANER &	ALCONOX	SOAP. NEW	NITRILE GLOVES.	
CONT	AINMENT:		D.O.T. 17 55 (GAL. STE	EL DRUM OI	R 60 GAL. P	OLY DRUM.		
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYGI	EN METER	
			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.D	÷	
		_	KECK INTERF	ACE MEI	ER	TURBIDITY	METER		
				_					



MONITORING WELL FIELD LOG 2006

SAM	PLE LOCATIO	ON / MW -	3		DATE:			5/11/2006				
PROD	ECT NAME:	(CEMEX	_	ANAL VS	S DEDEC	PMED.	SEE CHAIN OF	CUSTODY			
ADDR	The second se		OMITAS DE	2	ANALYSIS PERFORMED: SEE CHAIN OF CUSTOD SAMPLE TIME: 15:00							
	STATE:		NCOVE, CA		SAMPLE CONTAINERS: 2 - LITER PLASTICS							
and the second se	CONTACT:		LD COBURN			VATIVES	And the second se	NEAT / HNO3	51105			
the second s	ULTANT:				LAB. AN	the local data and the second s		DELLAVALLE	LABS.			
PROI	ECT MANAGER:	BE	NYDAM		MONUM	ENT.		POST				
SAMP	and the second se		H / DON LIC	HT		and the second se	ATERIAL					
SIGNE	and the second se		Dan zight			ASING MI	and a second	2" /	0 1 622			
	LE MEDIA:		JNDWATER		and the second sec	ADING / O	and the second		0.1632 NONE			
	OF CASING ELEV		SILL WITTER	MSL	COLOR:	deline and a second	the second s	T BROWN TO C	and a second state of the			
		feet.100th's)	6.63	FEET	CALC. P			5.88	GAL.			
of the Arrest of		feet.100th's)	42.65	FEET			PURGED:	17.64	GAL.			
And in case of the local division of the loc	DING WATER CO		36.02	FEET	DEPTH C			41	FEET			
			50102		1 001 111 0			-11	1 201			
			FIEL	D PA	RAMETE	RS						
ГІМЕ	CUMULATIVE CASING VOLUME	DRAW DOWN	PUMPING RATE	pН	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN	TURBIDIT COLOR			
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)			
_	0	N/A	0.5 GPM	7.45	934	22.1	49.5	0.71	48			
	5.88			7.34	906	21.5	49	0.36	36			
	11.76 17.64			7.20	899	21.2	51	0.37	26			
	17.04			7.11	894	21.0	51	0.34	20			
PUPCI	E METHOD:		CENTRIFUGA	I DIDA	0							
_	LE METHOD:		CENTRIFUGA				_					
	V. AFTER PURGE:		CENTRIFUGA	L PUM		T SAMPLI	TIME.	6.68'				
	INTEGRITY:		CAP & SEAL	ADE SE	and the second se	I SAMPLI		0.08				
Contraction of the local division of	LOCATION:		SEE SITE MA	A REAL PROPERTY AND ADDRESS OF	CUKE.							
REMA	And the second se		SEE SITE MIT									
WEAT	HER:		CLEAR / HOT	T		WIND:		NONE				
QUAL	TY CONTROL:			and an a state of the state of	and the second se	the second s		WAS CLEANED IN	and the second se			
CONT	AINMENT:		FIELD WITH A	and the state of t	the second s	and the second second second		NITRILE GLOVES.				
								w.c				
INSTR	IMENTATION-		VCI 2660 TTO									
INSTR	UMENTATION:		Y.S.I. 3560 FLO SOLINIST SLOI		7. S		LVED OXYGE NE 580B P.I.D	and the second				

KECK INTERFACE METER

TURBIDITY METER



SAM	PLE LOCATIO	DN / MW -	4		DATE:			5/11/2006			
PROT	ECT NAME:		CEMEX	_	ANATVO	C DEDEC	DMED.	SEE CHAIN OF	CUSTODY		
ADDR			OMITAS DI	R	ANALYS SAMPLE		KWED;	SEE CHAIN OF 14:05	CUSIODI		
	STATE:		NCOVE, CA		SAMPLE		NERS	2 - LITER PLA	STICS		
	CONTACT:		LD COBURN		PRESER			NEAT / HNO3	51105		
State of Lot of	ULTANT:		0000010		LAB. AN			DELLAVALLE	LABS		
								DUBLITITUDE	Lando.		
PROT	ECT MANAGER:	BEI	N NYDAM	_	MONUM	ENT:		FLUSH			
SAMP		the second se	H / DON LIC	THT		TO A CARD AND A	ATERIAL :				
SIGNI	and the second state		Jon zig		WELL C.	and the second	and the second	4" /	0.6528		
	LE MEDIA:		JNDWATER		P.J.D. RE	Not the state of the second second second second	And the second se	N/A	NONE		
	OF CASING ELEV	ATION:		MSL	COLOR:			RUST TO CLEA			
DEPT	H TO WATER:	(feet.100th's)	8.51	FEET	CALC. PI	URGE VO		13.13	GAL.		
		(feet.100th's)	28.63	FEET	TOTAL V	OLUME	PURGED:	39.40	GAL.		
STAN	DING WATER CO	OLUMN:	20.12	FEET							
			FIEI	D PAI	RAMETE	RS					
TIME	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
	CASING VOLUME	DOWN	RATE	Par	2.0.		U IAKIA I	OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	7.73	600	22.5	49.8	1.7	147		
	13.13	"	"	7.18	797	20.2	55.3	1.7	33		
	26.27	"		7.17	793	19.8	55.4	1.06	17		
	39.40		"	6.68	791	19.7	56	1.4	12		
_											
PURG	E METHOD:		CENTRIFUG.		0						
	LE METHOD:		CENTRIFUG.	And the owner of the owner	1.h.						
	V. AFTER PURGE:		CLATITAL CO.		15.0	T SAMPL	E TIME:	8.55'			
And the second second	INTEGRITY:		CAP & SEAL	ARE SE	Carbon and C						
WELL	LOCATION:		SEE SITE MA								
REMA	RKS:		LOCK IS MI	SSING !							
WEAT	UED.		CLEAD / HOY	F 1		WIND:		NONE			
	ITY CONTROL:		CLEAR / HO		AFAT AND C		COLUDIAENT	NONE WAS CLEANED IN	THE		
	ITT CONTROL:		the birth of the birth of the state of the s	and the second se	and the second	and the second se	and the second se	NITRILE GLOVES	And a state of the		
QUAL	AINMENT:		D.O.T. 17 55					MINULE OLOVES			
CONT				WCELL		Y.S.I. DISSO	LVED OXYGE	EN METER			
CONT	UMENTATION:		Y.S.I. 3560 FLO			Card and the second	NE COOD DID				
CONT	UMENTATION:		SOLINIST SLO KECK INTERF	PE METE	R	Card and the second	NE 580B P.I.D	6			



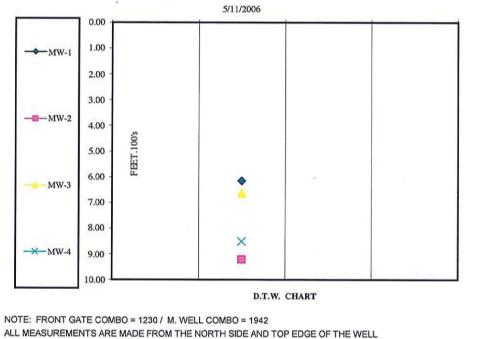
DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA.

MONITORING WELL FIELD SUMMARY LOG 2006 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR.3	QTR.4	TOTAL
DATE		5/11/06			DEPTH
LOCATION					
MW-1		6.15			35.89'
MW-2		9.21			48.42'
MW-3		6.63			42.65'
MW-4		8.51			28.63'



CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE

CONDITION IS APPROPRIATE.



2007 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 14, 2007

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

SAM	PLE LOCATIO	ON / MW -	1		DATE:			6/14/2007				
The second s	ECT NAME:		CEMEX		ANALYS	and the second se	ORMED:	SEE CHAIN OI	F CUSTODY			
ADDR	and a state of the second s		LOMITAS DI		SAMPLE TIME: 14:10							
and the second se	STATE:		NCOVE, CA		-0	SAMPLE CONTAINERS: 2 - LITER PLASTICS						
the second se	CONTACT:	GERA	LD COBURN	V	PRESER	the second state of the se		NEAT / HNO3				
CONS	ULTANT:				LAB. AN	ALYSIS B	SY:	DELLAVALLE	LABS.			
PRO.IJ	ECT MANAGER:	BEI	N NYDAM		MONUMENT: POST							
SAMP	and the second se		H / DON LIC	GHT			ATERIAL :	a state of a				
SIGNE	ED:		pon Size		WELL C.	Are 1997		2" /	0.1632			
	LE MEDIA:	GROU	UNDWATER		P.I.D. RE			N/A	NONE			
TOP C	F CASING ELEV			MSL	COLOR:	the second s		LIGHT BROWN				
the second statement of the	H TO WATER:	the second second	7.13	FEET	CALC. P		and the second se	4.69	GAL.			
	and the second second second second	(feet.100th's)	35.89	FEET	-	Contract of the local distance of the local	PURGED:	14.08	GAL.			
	DING WATER CO	the second se	28.76	FEET	DEPTH O			34	FEET			
			FIEI	LD PAI	RAMETE	RS						
TIME	CUMULATIVE CASING VOLUME	DRAW DOWN	PUMPING RATE	pH	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN	TURBIDIT			
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)			
	0	N/A	0.5 GPM	8.37	386	20.5	202	4.5	206			
	4.69	"	"	7.88	292	18.0	214	4.0	123			
	9.39	"	"	7.69	277	17.6	201	3.7	89			
_	14.08	"	"	7.45	266	16.5	178	3.3	77			
PURG	E METHOD:		CENTRIFUG	AL PUMI	Ρ.							
SAMP	LE METHOD:		CENTRIFUG	AL PUMI	P							
	AFTER PURGE:				and the second s	T SAMPL	E TIME:	7.17'				
WELL	INTEGRITY:		CAP & SEAL	ARE SEC	CURE.							
The local division of	LOCATION:		SEE SITE MA	P.								
REMA	RKS:			_	_	_						
WEAT	HER:		CLEAR / HOT	F!		WIND:		NONE				
QUAL	TY CONTROL:		ALL PURGIN	G EQUIP	MENT AND S	AMPLING I	EQUIPMENT	WAS CLEANED IN	THE			
102 10	FIELD WITH A STE					ALCONOX	SOAP. NEW	NITRILE GLOVES				
CONT	AINMENT:		D.O.T. 17 55	GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.					
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYGE	N METER				
			SOLINIST SLO	PE METE		the surger of the second s	NE 580B P.I.D.	A REAL PROPERTY AND ADDRESS OF A DREAM PROPERTY AND ADDRESS OF A DREAM PROPERTY ADDREAM PROPERT				
			KECK INTERF			TURBIDITY	a provide the second					
	RUMS ON SIGH		WATER:	0		SOIL:	0					



SAM	PLE LOCATIO	DN / MW -	2		DATE:			6/14/2007			
	ECT NAME:		CEMEX		ANALYS	and the second state of th	RMED:	SEE CHAIN OF	F CUSTODY		
ADDR	The second statement of the se		OMITAS DI		SAMPLE TIME: 13:43						
the second s	STATE:	Contraction of the Association of the Association	NCOVE, CA		SAMPLE CONTAINERS: 2 - LITER PLASTICS						
Contraction of the second second second	CONTACT:	GERAI	LD COBURN	1	PRESERVATIVES: NEAT / HNO3						
CONS	ULTANT:			-	LAB. AN	ALYSIS B	<u>Y:</u>	DELLAVALLE	LABS.		
PROJ	ECT MANAGER:	BEN	NYDAM		MONUMENT: POST						
SAMP	the second s		H / DON LIC	HT	Contraction of the local division of the loc	and the state of the	ATERIAL :				
SIGNE	A CONTRACTOR OF		Jon Sigh		WELL C			4" /	0.6528		
SAMP	LE MEDIA:	GROU	INDWATER		P.I.D. READING / ODOR: N/A NONE						
TOP C	F CASING ELEV	ATION:		MSL	COLOR:			LIGHT BROWN			
DEPT	H TO WATER:	(feet.100th's)	9.62	FEET	CALC. PI	JRGE VO		25.33	GAL.		
		(feet.100th's)	48.42	FEET	TOTAL V	OLUME	PURGED:	75.99	GAL.		
STAN	DING WATER CO	OLUMN:	38.80	FEET	DEPTH C	F PUMP:		47	FEET		
			FIEI	D PAI	RAMETE	RS					
IME	CUMULATIVE	DRAW	PUMPING	рН	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
10-11-00	CASING VOLUME	DOWN	RATE	Pre	2.0.		U MANA I	OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	7.64	444	20.8	50	3.7	238		
	25.33	"	"	7.74	451	20.6	50	3.4	304		
	50.66	"	"	7.76	451	20.6	51	3.4	351		
	75.99	"	"	7.75	450	20.5	52	3.3	226		
	E METHOD:		CENTRIFUG.	the second s							
	LE METHOD:		CENTRIFUG.	AL PUMI				Canado T Servicio.			
	V. AFTER PURGE:		CAD & OFAT	ADE OF	A REAL PROPERTY OF A REAL PROPER	T SAMPLI	E TIME:	19.02'			
	INTEGRITY:		CAP & SEAL	AND DESCRIPTION OF TAXABLE PARTY.	CURE,						
REMA	LOCATION:		SEE SITE MA	AND DESCRIPTION OF TAXABLE PARTY.							
REMIA	KN3;		LOCK IS MI	SSING.							
WEAT	HER:	34	CLEAR / HOT	F1		WIND:		NONE			
QUAL	ITY CONTROL:		ALL PURGIN	G EQUIP	MENT AND S	AMPLING E	QUIPMENT	WAS CLEANED IN	THE		
encon-mar			FIELD WITH	A STEAM	CLEANER &	ALCONOX .	SOAP. NEW	NITRILE GLOVES.			
CONT	AINMENT:		D.O.T. 17 55	GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.				
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYGE	EN METER			
			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.D				
			KECK INTERF	ACE MET	ER	TURBIDITY	METER				



SAM	PLE LOCATIO	DN / MW -	3		DATE:			6/14/2007			
nn o n											
ADDR	ECT NAME:	242251	CEMEX LOMITAS DI	0	ANALYS	and the second se	ORMED:	SEE CHAIN OF 12:45	CUSTODY		
	STATE:		NCOVE, CA		SAMPLE TIME: 12:45 SAMPLE CONTAINERS: 2 - LITER PLASTICS						
	CONTACT:		LD COBURN		PRESERVATIVES: 2 - LITER PLASTICS						
	ULTANT:	GDIGT	DD CODOR		LAB. AN	NAME AND ADDRESS OF TAXABLE PARTY OF		DELLAVALLE	LARS		
00110	CERTIFIC					1010 0		DEBERVALEE	LADO.		
PROI	ECT MANAGER:	BEI	NYDAM	_	MONUM	ENT:		POST			
	LER:		H / DON LIC	HT			ATERIAL :				
SIGNI	And the second se		Don Figh		Contraction of the local division of the loc	Contraction of the local distance of the loc	the state of the second s	2" /	0.1632		
	LE MEDIA:		JNDWATER		WELL CASING DIA.: 2" / 0.1632 P.J.D. READING / ODOR: N/A NONE						
	OF CASING ELEV			MSL	COLOR:		LIGH	T BROWN TO C	THE R. P. LEWIS CO., LANSING MICH.		
	H TO WATER:	(feet.100th's)	3.41	FEET	CALC. P			6.40	GAL.		
		(feet.100th's)	42.65	FEET			PURGED:	19.21	GAL.		
STAN	DING WATER CO	DLUMN:	39.24	FEET	DEPTH C	OF PUMP:		41	FEET		
			FIFI	D DAI	RAMETE	DC					
			FILL	DIA		N.S					
TIME	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
	CASING VOLUME	DOWN	RATE	-	12000389780	1.28.575996-7225102		OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	7.77	272	19.8	60	5.1	488		
	6.40	"	"	7.71	222	18.1	64	5	81		
	12.81	"	"	7.64	216	17.5	67	4.8	50		
	19.21	U	"	7.56	222	17.6	69	4.7	27		
PURG	E METHOD:		CENTRIFUG	AL PUMI	P.						
SAMP	LE METHOD:		CENTRIFUG	AL PUM	Ρ.						
D. T. V	V. AFTER PURGE:				D. T. W. A	T SAMPL	E TIME:	3.44'			
WELL	INTEGRITY:		CAP & SEAL	ARE SE	CURE.						
	LOCATION:		SEE SITE MA	P.			_				
REMA	RKS:	_		_							
WEAT	HER:		CLEAR / HOT	F!		WIND:		NONE			
QUAL	ITY CONTROL:		ALL PURGIN	G EQUIP	MENT AND S	AMPLING I	EQUIPMENT	WAS CLEANED IN	THE		
								NITRILE GLOVES			
CONT	AINMENT:		D.O.T. 17 55	GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.				
_	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYGE	N METER	_		
INSTR			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.D.				
INSTR			o can not one		and so the second s	Charles and the second s	and the second division of the second divisio				



SAM	PLE LOCATIO	DN/MW-	4		DATE:			6/14/2007				
PROJI	ECT NAME:	0	EMEX	-	ANALYS	IS PERFO	RMED:	SEE CHAIN OF	CUSTODY			
ADDR			OMITAS DI	R.	SAMPLE TIME: 12:20							
CITY.	STATE:		NCOVE, CA		SAMPLE CONTAINERS: 2 - LITER PLASTICS							
	CONTACT:	GERAI	D COBURN	V	PRESER			NEAT / HNO3				
CONS	ULTANT:				LAB. AN	ALYSIS B	Y:	DELLAVALLE	LABS.			
PROJI	ECT MANAGER:	BEN	NYDAM	_	MONUM	ENT:		FLUSH				
SAMP	LER:	DEL-TEC	H / DON LIC	GHT	WELL C.	ASING M.	ATERIAL :	PVC				
SIGNE			San zign	×	WELL C	ASING DI	A.:	4" /	0.6528			
	LE MEDIA:		JNDWATER		P.I.D. RE	ADING / O	DDOR:	N/A	NONE			
	F CASING ELEV			MSL	COLOR:	Contraction of the local division of the loc		LIGHT BROWN	N TO CLEAR			
the set work of the party of the set	H TO WATER:	dente and the second	6.12	FEET	CALC. P	and the second se		14.69	GAL.			
		(feet.100th's)	28.63	FEET			PURGED:	44.08	GAL.			
STAN	DING WATER CO	DLUMN:	22.51	FEET	DEPTH C	OF PUMP:	_	27	FEET			
_			EXEX			0.0						
			FIEI	D PAI	RAMETE	RS						
IME	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT			
	CASING VOLUME	DOWN	RATE	pm	1.0.	LISIVIL .	O.K.I .	OXYGEN	COLOR			
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)			
	0	N/A	0.5 GPM	8.45	590	21.0	72	11	1012			
	14.69	"	"	8.10	498	20.1	84	9.4	149			
	29.39	"		7.78	534	19.7	87	7.5	67			
	44.08	"	"	7.66	561	19.7	84	6.6	44			
PUPCI	E METHOD:		CENTRIFUG									
	LE METHOD:		CENTRIFUG									
a product a state of the state of the	V. AFTER PURGE:		CENTRIFUG	AL FOWI		T SAMPLI	TIME	6.15'				
	INTEGRITY:		CAP & SEAL	ARE SE	and the second se	A OTRIVER LO	S A RIVERSI	0.15				
	LOCATION:		SEE SITE MA	the second s	o o rus.							
REMA	RKS:		LOCK IS MI									
WEAT	HER:		CLEAR / HOT	F1		WIND:		NONE				
QUAL	TY CONTROL:						and a second	WAS CLEANED IN	and the second se			
			and the second se	The second second second second	Contract of a fight of the second	and the second se	COLUMN STREET, STRE	NITRILE GLOVES.				
CONT	AINMENT:		D.O.T. 17 55	GAL. STE	EL DRUM OI	R 60 GAL. P	OLY DRUM.					
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYGE	IN METER				
			SOLINIST SLO		192		NE 580B P.I.D.					
			KECK INTERF	ACE MET	1943-19 19	TURBIDITY						



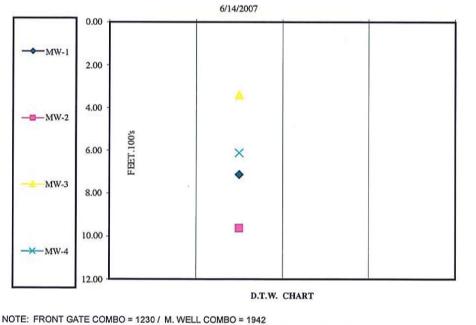
DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA.

MONITORING WELL FIELD SUMMARY LOG 2007 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR. 2	QTR. 3	QTR.4	TOTAL
DATE		6/14/07			DEPTH
LOCATION					
MW-1		7.13			35.89'
MW-2		9.62			48.42'
MW-3		3.41			42.65'
MW-4		6.12			28.63'



ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



2008 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. August 28, 2008

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

SAM	PLE LOCATION	N/MW -		1		DATE:			8/28/2008	
PROJ	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OI	FCUSTODY
ADDR	ESS:		24325 I	OMITAS DE	ι.	SAMPLE	14:47			
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAIN	2 - LITER PLA	STICS	
SITE (CONTACT:		GERAI	LD COBURN	l.	PRESERV			NEAT / HNO3	
CONS	ULTANT:					LAB. ANA	LYSIS BY	Y:	DELLAVALLE	LABS.
								1549		an
PROJ	ECT MANAGER:		BEN	NYDAM		MONUME	ENT:		POST	
SAMP	LER:		DEL-TECH	/ ASHLEY L	IGHT	WELL CA	SING MA	TERIAL		
SIGNE	ED:		3	Jan Sige	c	WELL CA	and a second		2" /	0.1632
SAMP	LE MEDIA:			UNDWATER		P.I.D. REA	DING / C	DOR:	N/A	NONE
TOP C	OF CASING ELEVA	TION:			MSL	COLOR:		BI	ROWN TO CLE	Contract of the second second second
DEPT	H TO WATER:		(feet.100th's)	7.90	FEET	CALC. PU	RGE VO		4.57	GAL.
DEPT	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	OLUME I	URGED:	13.5	GAL.
STAN	DING WATER COI	LUMN:		27.99	FEET	DEPTH O	out of the local division of the local division of the		34	FEET
_				FIEI	LD PA	RAMETE	RS			
ТІМЕ	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TUDDID
	CASING VOLUME	VOLUME	DOWN	RATE	pir	D.C.	I L'IVII .	O.A.I.	OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	
_	0	0	N/A	0.5 GPM	6.70	A REAL PROPERTY AND A REAL				(N.T.U.)
	4.57	4.5	IN/A	0.5 GPM	6.14	187 172	22.1	53	2.7	745
	9.14	9		"	6.07	193	23.8 23.9	61	2.2	193
	13.70	13.5			6.07	208	23.9	<u>61</u> 59	2.2	112 73
	15.70	15.5			0.02	208	24.1	39	2.2	15
								6		
PURG	E METHOD:			CENTRIFUG)				
the second s	LE METHOD:			CENTRIFUG	the state of the s					
D. T. W	V. AFTER PURGE:					D. T. W. A.	SAMPLE	TIME-	8.00'	
	INTEGRITY:			CAP & SEAL	ARE SEC	the second s	CONTRACT LAL		0.00	
	LOCATION:			SEE SITE MA						
REMA				0.000 0110 110						
WEAT	HER:			CLEAR / HOT	[]		WIND:		NONE	
QUAL	ITY CONTROL:			ALL PURGIN	G AND M	ONITORING I	EOUIPMEN	T WAS CLE	ANED AS NECES	SARY.
						the state of the second se	and the second second second second	and the second second second second	LL. NEW NITRILI	
an a	AINMENT:					PURGE WATE	where the product of the state	Contraction of the Contraction o		
CONTA								AND		
CONT								NUMBER OF STREET		
	UMENTATION:	1		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSC	LVED OXYO	GEN METER	
	UMENTATION:	- 4		Y.S.I. 3560 FLC SOLINIST SLO		S2	Y.S.I. DISSC TURBIDITY	the state of the local division of the local	GEN METER	_
	UMENTATION:	1				S2	the second s	the state of the local division of the local	GEN METER	

DEL-TECH geotechnical support services

SAM	PLE LOCATIO	N/MW-		2		DATE:			8/28/2008		
PROJI	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OI	FCUSTODY	
ADDR	ESS:		24325 L	OMITAS DE	ξ.	SAMPLE'	гіме:		14:21		
	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAIN	ERS:	2 - LITER PLA	STICS	
	CONTACT:		GERAI	LD COBURN	1	PRESERV	ATIVES:		NEAT / HNO3		
CONS	ULTANT:					LAB. ANA	LYSIS BY	¥:	DELLAVALLE	LABS.	
PROJI	ECT MANAGER:		BEN	NYDAM		MONUMENT: POST					
SAMP			DEL-TECH	/ ASHLEY L	IGHT	WELL CA	SING MA	TERIAL	: PVC		
SIGNE	ED:		Ochler	t dight		WELL CA	SING DL	A. :	4" /	0.6528	
	LE MEDIA:		GROL	JNDWATER		P.I.D. REA			N/A	NONE	
	F CASING ELEVA	TION:			MSL	COLOR:			LIGHT BROWN	N TO CLEA	
	H TO WATER:		(feet.100th's)	10.54	FEET	CALC. PU			24.73	GAL.	
	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V		PURGED:	75	GAL.	
STAN	DING WATER COI	LUMN:		37.88	FEET	DEPTH O	F PUMP:		47	FEET	
				FIEI	D PA	RAMETEI	RS				
гіме	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	0.5 GPM	6.57	591	21.4	58	3.2	165	
	24.73	25	"	"	6.95	615	21.4	55	2.5	99	
	49.46	50	-1-2	"	6.94	644	21.4	55	2.5	72	
	74.18	75	"	"	6.93	683	21.4	56	2.6	59	
PURGE	E METHOD:			CENTRIFUG	AL PUMI	»,					
the second s	LE METHOD:			CENTRIFUG	AL PUMI	».					
and the second se	AFTER PURGE:					D. T. W. A7	SAMPLE	TIME:	18.13'		
	INTEGRITY:			CAP & SEAL	ARE SE	CURE.	_				
REMA	LOCATION: RKS:			SEE SITE MA	P.	_					
WEAT	HED.			CLEAR / HOT	C1		WIND:		NONE		
	TY CONTROL:			the second s		ONITORING I		TWASCIE	ANED AS NECES:	CARV	
20.110	CONTROL	_						and the second se			
CONTA	CONTAINMENT:			DEDICATED PURGE TUBING IS INSTALLED IN EACH WE NO CONTAINMENT / PURGE WATER TO THE GROUND					CE. NEW MIRIE	COLOVES.	
Thioms	UMENTATION:			Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSC	LVED OXYO	JEN METER		
INSTR				Contraction of the second s			and the second se	the second s			
INSTR				SOLINIST SLO	PE METEI	2	TURBIDITY	METER			



SAM	PLE LOCATIO	N / MW -		3		DATE:			8/28/2008		
PROJE	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTODY	
ADDR	ESS:			OMITAS DR	ι.	SAMPLE			13:30		
CITY.	STATE:			NCOVE, CA		SAMPLE		2 - LITER PLA			
SITE C	CONTACT:			D COBURN		PRESERV		NEAT / HNO3			
CONS	ULTANT:					LAB. ANA	A DESCRIPTION OF A DESC	DELLAVALLI			
PROI	ECT MANAGER:		DEN	NYDAM		MONUME	NUT-	DOPT			
SAMP				ASHLEY L	CUT	and the second se	Tot be a charge of the second s	TEDIAT	POST		
SIGNE	Contract of the Contract of th			Holight	IGHT	WELL CA			A REAL PROPERTY AND ADDRESS OF THE PARTY ADDRESS OF	0.1.60.0	
	LE MEDIA:		and the second se	and the second se	15-1-1	WELL CA			2" /	0.1632	
		mon	GROU	INDWATER	1.001	P.J.D. REA	DING / O	DOR:	N/A	NONE	
	F CASING ELEVA	TION:			MSL	COLOR:			CLEAR		
	H TO WATER:		(feet.100th's)	4.11	FEET	CALC. PU			6.29	GAL.	
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V		PURGED:		GAL.	
STANI	DING WATER COI	LUMN:		38.54	FEET	DEPTH O	F PUMP:		41	FEET	
				FIEI	D PA	RAMETE	RS				
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
ABROSING A	CASING VOLUME	VOLUME	DOWN	RATE		1.		U LALIA I	OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	0.5 GPM	6.55	316	20.9	58	3.3		
	6.29	6	N/A	0.5 GFM	6.43	243	19.5	63	2.7	25	
	12.58	12	"	"	6.38	240	19.5	64			
	18.87	12	n		6.23	240	19.5	67	2.4	11 10	
PURGE	E METHOD:			CENTRIFUG	AL PUMP	P.				-	
SAMPI	LE METHOD:			CENTRIFUGA	AL PUME	».					
D. T. W	. AFTER PURGE:					D. T. W. A.	F SAMPLE	TIME:	13.40'		
WELL	INTEGRITY:			CAP & SEAL	ARE SE	CURE.					
WELL	LOCATION:			SEE SITE MA	P.						
REMAI	RKS:										
WEATI	HER:			CLEAR / HOT	1		WIND:		NONE		
QUALI	TY CONTROL:			ALL PURGING	G AND M	ONITORING I	EQUIPMEN	T WAS CLE	ANED AS NECES	SARY.	
1925.56923 - AM									LL. NEW NITRIL		
CONTA	INMENT:			NO CONTAIN	MENT / I	PURGE WATE	R TO THE G	ROUND			
INSTRU	UMENTATION:			Y.S.I. 3560 FLO	WCELL		Y.S.I. DISSO	LVED OXY	GEN METER		
				SOLINIST SLOI	PE METER		TURBIDITY				



SAM	PLE LOCATION	V/MW		4		DATE:			8/28/2008	
SAW	FLE LOCATIO	V / IVI VV -		4		DATE.			0/20/2000	
PROJE	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OI	FCUSTODY
ADDR	ESS: .		24325 L	OMITAS DR		SAMPLE'	гіме:		13:00	
CITY,	STATE:		LEMO	NCOVE, CA.		SAMPLE	STICS			
SITE C	CONTACT:		GERAI	LD COBURN		PRESERV	NEAT / HNO3			
CONST	ULTANT:					LAB. ANA	LYSIS BY	ť:	DELLAVALLE	LABS.
					_					
PROJE	ECT MANAGER:		BEN	NYDAM		MONUME	NT:		FLUSH	
SAMP	LER:			/ ASHLEY L	IGHT	WELL CA	SING MA	TERIAL	PVC	
SIGNE	A PARTY OF A			t olight		WELL CA	SING DIA	\. :	4" /	0.6528
SAMP	LE MEDIA:		GROU	JNDWATER	_	P.I.D. REA	and the second se	Contraction of the local division of the loc	N/A	NONE
and the second se	F CASING ELEVA	TION:			MSL	COLOR:			LIGHT BROWN	the second s
and the second se	H TO WATER:		(feet.100th's)	8.50	FEET	CALC. PU	the second se	A NUMBER OF TAXABLE PARTY OF TAXABLE PARTY.	13.14	GAL.
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V	and the second data was a second data w	PURGED:	39	GAL.
STANI	DING WATER COI	LUMN:		20.13	FEET	DEPTH O	F PUMP:		27	FEET
				FIEI	DPA	RAMETE	RS			
_							nouries.		· · · · · · · · · · · · · · · · · · ·	1
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	
	CASING VOLUME	VOLUME	DOWN	RATE			1100-1100-100-1		OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	Contraction of the second	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	0.5 GPM	7.00	887	23.1	54	5.2	1000
	13.14	13			6.75	913	21.2	59	3.9	128
	26.28	26	"		6.63	963	21.0	59	3.4	49
	39.42	39			6.55	976	20.7	60	3.4	30
PURCE	E METHOD:	_		CENTRIFUG		, ,				
	LE METHOD:			CENTRIFUG						
and the family state of the same first	AFTER PURGE:			00011110001		D. T. W. A'	SAMPLE	TIME:	19.17'	
WELL	INTEGRITY:			CAP & SEAL	ARE SE	and the state of the second				
WELL	LOCATION:	_		SEE SITE MA	P.					
REMAI	RKS:									
WEATI	HER:			CLEAR / HOT	[]		WIND:		NONE	
QUALI	TY CONTROL:								ANED AS NECES.	
		-		And the second se		and the second se			LL. NEW NITRIL	E GLOVES.
CONTA	AINMENT:			NO CONTAIN	MENT / I	PURGE WATE	R TO THE C	GROUND		(4)
INSTR	UMENTATION:			Y.S.I. 3560 FLC			and a second second second second second		GEN METER	
				SOLINIST SLOP	PE METE	R	TURBIDITY	METER		_



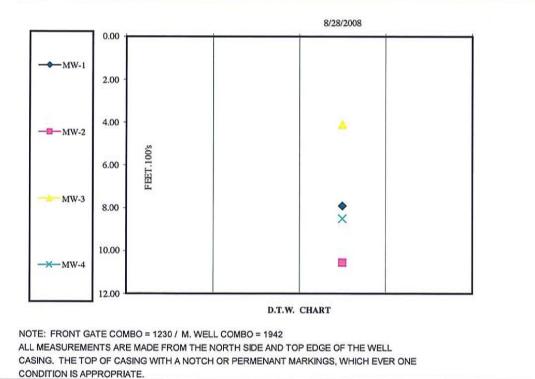
DEL-TECH GEOTECHNICAL SUPPORT

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CEMEX 24325 LOMITAS DR. / LEMON COVE, CA. MONITORING WELL FIELD SUMMARY LOG 2008

DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR. 2	QTR.3	QTR.4	TOTAL
DATE			8/28/08		DEPTH
LOCATION					
MW-1		_	7.90		35.89'
MW-2			10.54		48.42'
MW-3			4.11		42.65'
MW-4			8.50		28.63'





2010 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 23, 2010

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



CAR	DIFLOCATIO					DATE						
SAM	PLE LOCATIO	PN/MW		1		DATE:			6/23/2010			
1		1.2.1	170910157				1	1 Section	1	R. R. R.		
	ECT NAME:			CEMEX		ANALYSI		ORMED:	SEE CHAIN O	F CUSTOI		
ADDR	and the second se			OMITAS DI		SAMPLE	and the second se		10:25			
	STATE:			NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS						
and the local division of the second s	CONTACT:		GERA	LD COBURN	1	PRESERVATIVES: NEAT / HNO3 / HCL						
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.		
	The second s									La de -		
and the state of the second	ECT MANAGER:			N NYDAM		MONUMI			POST			
SAMP			DEL-TECH /		and the second se	WELL CA	1 10 10 10 10 10 10 10 10 10 10					
SIGNE				y and		WELL CA	and the second se	and the second se	2" /	0.1632		
Contractor of the local division of the loca	LE MEDIA:		GROU	JNDWATER		P.J.D. REA	ADING / O		N/A	NONE		
	OF CASING ELEVA	ATION:			MSL	COLOR:			LACK TO CLE			
	H TO WATER:		(feet.100th's)	5.80	FEET	CALC. PU	CONTRACTOR OF THE OWNER	the second s	4.91	GAL.		
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V			and a second	GAL.		
STAN	DING WATER CO	LUMN:		30.09	FEET	DEPTH O	F PUMP:		34	FEET		
				RIE	D PA	RAMETE	RS	TO LA SA ALL		100000		
			Academic and									
ГІМЕ	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBID		
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLO		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.		
	0	0	N/A	3.0 GPM	7.11	407	23.9	155	N/A	1000+		
	4.91	5	"	"	7.01	394	21.8	166	"	373		
_	9.82	10	"	11	6.99	392	20.7	164		111		
	14.73	15	"		7.04	392	20.9	163	"	23		
					_				i			
		and the second			al autility of the	and the second		Survey and	A State State			
PURG	E METHOD:			CENTRIFUG	AL PUM	P.						
SAMP	LE METHOD:			CENTRIFUG	AL PUM	P.						
D.T.V	V. AFTER PURGE:					D. T. W. A'	FSAMPLI	E TIME:	10.13'			
WELL	INTEGRITY:			CAP & SEAL	ARE SE	CURE.						
WELL	LOCATION:			SEE SITE MA	AP.							
REMA	RKS:			INSTALLEI	TUBIN	G.						
WEAT				CLEAR / HO			WIND:		NONE	A SALATAR MARK		
QUAL	ITY CONTROL:				Manual Contractor of Contractor				LEANED AS NEC	NAMES OF TAXABLE PARTY OF TAXABLE PARTY.		
001				DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE NO CONTAINMENT / PURGE WATER TO THE GROUND						ILE GLOVI		
CONT	AINMENT:			NO CONTAII	MENT /	PURGE WAT	ER TO THE	C GROUND				
INCOM	TIN TENTO A TOPONI			VOLOTOF			V 0 1 516-			_		
INSTR	UMENTATION:			Y.S.I. 3560 FL					GEN METER			
				SOLINIST SLO	PE METI	sR	TURBIDITY	METER		_		
# OF T	RUMS ON SIGHT	£.		WATER:	0		SOIL:	0				



SAM	PLE LOCATIO	N/MW		2		DATE:			6/23/2010		
GAN	The DOCATIC			4		DATE.	R Court States		0/23/2010		
PROI	ECT NAME:		(CEMEX		ANALYSI	SPERFO	RMED.	SEE CHAIN O	E CUSTOD	
ADDR	and the second			OMITAS DI	R	SAMPLE		ALTILLO,	9:47		
	STATE:			NCOVE, CA		SAMPLE		NERS:	3 - PLASTICS		
	CONTACT:			GERALD COBURN			ATIVES		EAT / HNO3 / H	ICI.	
and the second second second second	ULTANT:					LAB. ANA	and the second se	et et te t	DELLAVALLI		
		OW ROAD			AL.						
PROJ	ECT MANAGER:		BEN	NYDAM		MONUM	ENT:		POST		
SAMP	LER:		DEL-TECH/	ASHLEY A	VILLA	WELL CA	SING M	ATERIAI	PVC		
SIGNE	ED:		ashl	ey and	lla	WELL CA	SING DI	A.:	4" /	0.6528	
SAMP	LE MEDIA:		GROU	JNDWATER		P.I.D. RE	ADING /	ODOR:	N/A	NONE	
TOP C	OF CASING ELEV.	ATION:			MSL	COLOR:			CLEAR		
DEPT	H TO WATER:		(feet.100th's)	8.40	FEET	CALC. PU	JRGE VO	L.:	26.13	GAL.	
DEPT	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V	OLUME	PURGED	78	GAL.	
STAN	DING WATER CO	LUMN:		40.02	FEET	DEPTH O	F PUMP:		47	FEET	
				FIEI	DPA	RAMETE	RS			n diga sa	
				FILL	JUIA		IN S		THE SHE ST		
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
	CASING VOLUME	VOLUME	DOWN	RATE	-			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	3.0 GPM	8.16	548	21.2	128	N/A	51	
	26.13	26			8.26	553	21.9	122	Н.	38	
	52.25	52	п	.u	8.29	551	22.1	125		41	
	78.38	78	"	"	8.20	553	22	125	"	30	
					<u> </u>						
v# 61 ⁴ 7/1											
PURG	E METHOD:			CENTRIFUG	AL PUM	P.					
SAMP	LE METHOD:			CENTRIFUG	AL PUM	Р.					
D. T. W	V. AFTER PURGE:				_	D. T. W. A'	T SAMPLI	E TIME:	15.45'		
and the second second second	INTEGRITY:			CAP & SEAL	ARE SI	ECURE.					
WELL	LOCATION:			SEE SITE MA	AP.						
REMA	RKS:										
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE		
QUAL	ITY CONTROL:			ALL PURGIN	G AND N	IONITORING	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.	
				DEDICATED	PURGE	TUBING IS IN	STALLED	IN EACH V	VELL. NEW NITE	ILE GLOVE	
CONT	AINMENT:			NO CONTAII	VMENT /	PURGE WAT	ER TO THE	GROUND			
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.L.DISS	OLVED OX	GEN METER		
				SOLINIST SLC		ER	TURBIDITY		She martin		
_											



DEL-TECH geotechnical support services

			And the second			and the A	The second	4	Contraction of the	5 12 5
SAM	PLE LOCATIO	N/MW-		3		DATE:			6/23/2010	
	E la factoria		The Course						al and a	No. President
	ECT NAME:		Contraction of the local division of the loc	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD
ADDR	the second state of the se			OMITAS DI		SAMPLE TIME: 9:03				
	STATE:		the second se	NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS				
	CONTACT:		GERA	LD COBURN	1	PRESERV	the second s	and the second se	EAT / HNO3 / H	CALL OF THE OWNER OWNE
CONS	ULTANT:				LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.	
			and the states				21102T-22-2		- Aller and	
	ECT MANAGER:			NYDAM		MONUM			POST	
SAMP.	and the state of the		DEL-TECH /		the state of the s	WELL CA				
SIGNE				ey and		WELL CA	the second state in the second state of particular	the second s	2" /	0.1632
	LE MEDIA:		GROU	JNDWATER		P.J.D. REA	ADING / (DDOR:	N/A	NONE
a literature in the second second	F CASING ELEVA	and the second se	10. 1100.011	0.50	MSL	COLOR:	manne		CLEAR	
	H TO WATER: H OF WELL:		(feet.100th's)	2.52	FEET	CALC. PL			6.55	GAL.
	H OF WELL: DING WATER CO		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
STAN	DING WATER CO	LOWIN:		40.13	FEET	DEPTH O	r rump:		41	FEET
				FIEI	D PA	RAMETE	RS		and the state of the	
FIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	1000 ASS 104 AS 1000 A
	CASING VOLUME	VOLUME	DOWN	RATE		-			OXYGEN	COLO
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	3.0 GPM	7.16	369	21.5	99	N/A	9
	6.55	6.5		"	7.12	339	19.2	108		6
	13.10	13	"	"	7.06	341	18.5	112	- 11	4
	19.65	9.5	"	"	7.02	342	18.3	115	"	3
							Contraction of			The second
PURGI	E METHOD:			CENTRIFUG	AL PUM	P.	_	_		
SAMPI	LE METHOD:			CENTRIFUG	AL PUM	Р.				
D. T. W	. AFTER PURGE:					D. T. W. A'	F SAMPLE	TIME:	2.59'	
WELL	INTEGRITY:			CAP & SEAL	ARE SI	ECURE.				
WELL	LOCATION:			SEE SITE MA	AP.					
REMA	RKS:							_	_	
WEAT	HER:	_		CLEAR / HO	Т!		WIND:		NONE	
QUALI	TY CONTROL:					IONITORING		NT WAS CI	EANED AS NEC	ESSARY.
				Contraction of the local division of the loc	and the second se	An and the second s	The state of the second s	and so in the second	ELL. NEW NITR	the second s
CONTA	AINMENT:			NO CONTAIN	MENT /	PURGE WAT	ER TO THE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FLC	OWCELL	_	Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLC			TURBIDITY			
										_
_										



				·			n - 197	E RAIG.	Lind on These		
SAM	PLE LOCATIC	N/MW-	•	4		DATE:			6/23/2010		
					ar						
	ECT NAME:		(CEMEX		ANALYSI	S PERFC	RMED:	SEE CHAIN O	F CUSTODY	
ADDR			The second se	OMITAS DI		SAMPLE			8:40		
	STATE:			NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS					
	CONTACT:		GERA	LD COBURN	PRESERVATIVES: NEAT / HNO3 / HCL						
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.	
			(2	A. 1100							
	ECT MANAGER:			I NYDAM		MONUM	ENT:		FLUSH		
SAMP	LER:		DEL-TECH /			WELL CA	SING M.	ATERIAL			
SIGNE				y and		WELL CA	SING DI	A.:	4" /	0.6528	
	LE MEDIA:		GROU	JNDWATER		P.I.D. REA	ADING / O		N/A	NONE	
	F CASING ELEV	ATION:			MSL	COLOR:			Г BROWN TO O	CLEAR	
and the second se	H TO WATER:		(feet.100th's)	5.62	FEET	CALC. PU			15.02	GAL.	
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.	
STANI	DING WATER CO	LUMN:		23.01	FEET	DEPTH O	F PUMP:		27	FEET	
		- Sunt -		EIEI	DBAI	RAMETE	DC				
				FIEI	D PAI	AMETE	RS				
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
1	0	0	N/A	3.0 GPM	8.08	1108	22.9	39	N/A	171	
	15.02	15	"		7.08	1476	21.7	43		30	
	30.04	30		"	7.00	1557	21.1	45		19	
	45.06	45	"	"	6.97	1552	23.0	49	0	15	
_											
					-			and the second			
PURGI	E METHOD:	in the second		CENTRIFUG	AL PLIM	p		Manne - Maria			
	LE METHOD:			CENTRIFUG	the second s						
	AFTER PURGE:			CENTINIOU	no rom	D. T. W. A'	C SAMPLI	TIME:	5.70'		
	INTEGRITY:			CAP & SEAL	ARE SE		C.L.	J ANNALJ.	5.70		
	LOCATION:			SEE SITE MA							
REMA				0000110110					()		
WEAT			_	CLEAR / HO			WIND:		NONE		
QUALI	TY CONTROL:					Internet in the second second second second	~	terester and the second second states and	LEANED AS NEC	And the second se	
CONT	AINMENT:			and the second se		TUBING IS IN PURGE WATI			VELL. NEW NITR	ILE GLOVES	
contr	AITWIETTI:			NO CONTAIL	VIVIEIVI /	FUNGE WAT	EK IO IIIL	GROUND			
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER		
				SOLINIST SLO	OPE METE	R	TURBIDITY	METER			
_		_									
-		_									

DEL-TECH GEOTECHNICAL SUPPORT

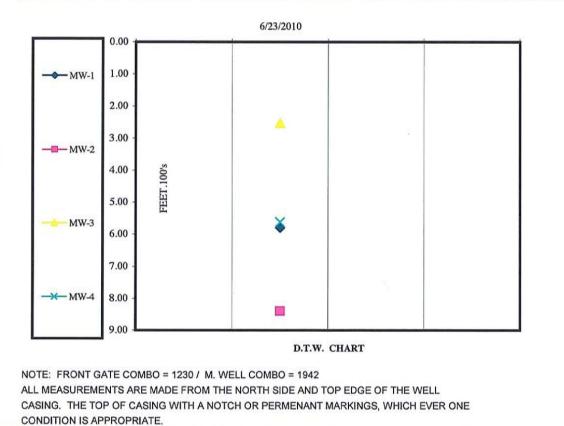


(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA.

MONITORING WELL FIELD SUMMARY LOG 2010 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR. 3A	QTR. 3A	TOTAL
DATE		6/23/10			DEPTH
LOCATION					
MW-1		5.80			35.89'
MW-2		8.40			48.42'
MW-3		2.52			42.65'
MW-4		5.62			28.63'
		-			
_					





2011 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. July 11, 2011

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



SAM	PLE LOCATIO	N/MAN		1		DATE:			7/11/2014	
SAN	FLE LOCATIC	- • • • • • • • • • •		1		DATE:			7/11/2011	
10 10 10 10 10 10 10 10 10 10 10 10 10 1			E DE EL MEN		111233			12000		
and the second se	ECT NAME:			CEMEX		Contraction of the second s	And the second se	RMED:	SEE CHAIN O	
ADDR				OMITAS DI		SAMPLE		NTING .	17:00	
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	~
	CONTACT: ULTANT:		GERAI	LD COBURI	N	PRESERV			EAT / HNO3 / H	
CONS	ULIANI:	_				LAB. ANA	LYSIS B	x :	DELLAVALLE	LABS.
					1					
	ECT MANAGER:			NYDAM		MONUMI	and the second se		POST	
SAMP			DEL-TECH /			WELL CA				
SIGNE				y anil		WELL CA			2" /	0.1632
the second se	LE MEDIA:		GROU	JNDWATER		P.J.D. REA	ADING/(and the second	N/A	NONE
in the second	OF CASING ELEV	ATION:			MSL	COLOR:			LACK TO CLEA	
	H TO WATER:		(feet.100th's)	6.30	FEET	CALC. PU			4.83	GAL.
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V				GAL.
STAN	DING WATER CO	LUMN:		29.59	FEET	DEPTH O	F PUMP:		34	FEET
				EIEI	D PA	RAMETE	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBID
A POARSKI SUITE	CASING VOLUME	VOLUME	DOWN	RATE		10.462.000-000A	o to Alto BREELTAN VO		OXYGEN	COLO
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	3.0 GPM	7.18	469	19.6	96	N/A	7
	4.83	5	"	0	7.09	464	19.0	102		3
	9.66	10	"	0	7.05	465	19.2	107	"	2
	14.49	15	"	"	7.06	465	19.1	105	"	2
				_						
e sur le sur					2007/	a Danga		ALL ALL		1.
_	E METHOD:			CENTRIFUG						
	LE METHOD:			CENTRIFUG	AL PUM					
	V. AFTER PURGE:					D. T. W. A'	F SAMPLI	E TIME:	8.99'	
	INTEGRITY:			CAP & SEAI		CURE.				
	LOCATION:			SEE SITE M.	AP.					
REMA	RKS:				_			_		_
WEAT	HED.			CLEAR / HO	T1		WIND:		NONE	
	ITY CONTROL:				The second second second	IONITORING		NT WAS C	LEANED AS NEC	FSSAPV
YUNU	CONTROL:			and the second states in the second state of the second states at the	and the second se		and the second se		The second s	
CONT	AINMENT:			DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLO' NO CONTAINMENT / PURGE WATER TO THE GROUND						
CONTRA				NO CONTAINMENT / FORGE WATER TO THE GROUND						
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
			_	SOLINIST SLO	OPE METH	ER	TURBIDITY	METER		
	RUMS ON SIGHT			WATER:	0		SOIL:	0		



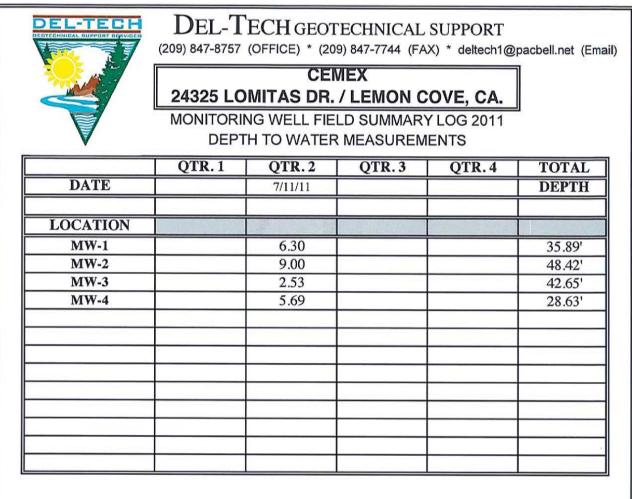
						(1	100		-114-11	
SAM	PLE LOCATIO	N/MW-		2		DATE:			7/11/2011		
			A STATE OF								
	ECT NAME:			CEMEX	_	ANALYSI		RMED:	SEE CHAIN O	F CUSTODY	
ADDR	and the second se			OMITAS DI		SAMPLE			16:39		
And the second se	STATE:		the standard second	NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS					
	CONTACT:		GERAI	LD COBURN	N	PRESERVATIVES: NEAT / HNO3 / HCL					
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.	
100-00				THE REAL	1.	- Alertin				10 10 10 10 10 10 10 10 10 10 10 10 10 1	
	ECT MANAGER:		the second se	NYDAM		MONUMI	Contraction of the local data		POST		
SAMP			DEL-TECH /			WELL CA	and the second				
SIGNE				ey anil		WELL CA			4" /	0.6528	
the second s	LE MEDIA:		GROU	INDWATER		P.J.D. REA	ADING / (DDOR:	N/A	NONE	
and the second se	F CASING ELEVA	ATION:		0.00	MSL	COLOR:	norm	-	CLEAR		
	H TO WATER:		(feet.100th's)	9.00	FEET	CALC. PL			25.73	GAL.	
	H OF WELL: DING WATER CO	TIMAN	(feet.100th's)	48.42	FEET	TOTAL V			* <u>78</u> 47	GAL.	
STAN	DING WATER CO	LUMIN:		39.42	FEET	DEPTH O	F PUMP:		4/	FEET	
				FIEI	D PA	RAMETE	RS				
								2 <u>2</u> 1 26			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	A PROPERTY AND A CONTRACT OF A PARTY OF	
	CASING VOLUME	VOLUME	DOWN	RATE		-			OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)		(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	3.0 GPM	7.61	530	21.4	76	N/A	46	
	25.73	26	"		7.94	538	21.2	70		46	
	51.47	52	"	"	7.92	556	21.1	84		38	
	77.20	78		"	7.93	561	21.1	92		36	
						1					
Minio	N ^a Man Andrea and St		New States								
PURGI	E METHOD:			CENTRIFUG	AL PUM	P.					
SAMPI	LE METHOD:			CENTRIFUG	AL PUM	P.					
	AFTER PURGE:					D. T. W. A'	F SAMPLI	E TIME:	9.16'		
WELL	INTEGRITY:			CAP & SEAI	ARE SI	ECURE.	_				
WELL	LOCATION:			SEE SITE M.	AP.			_			
REMA	RKS:			-				_			
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE		
QUALI	TY CONTROL:			ALL PURGIN	G AND I	IONITORING	EQUIPME	ENT WAS C.	LEANED AS NEC	ESSARY.	
									VELL. NEW NITH		
CONT	AINMENT:			Contraction of the second s		PURGE WAT		and the second se	and the second se		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y S L DISS	OLVED OXY	GEN METER		
				SOLINIST SLO		ER	TURBIDITY		SET METER		

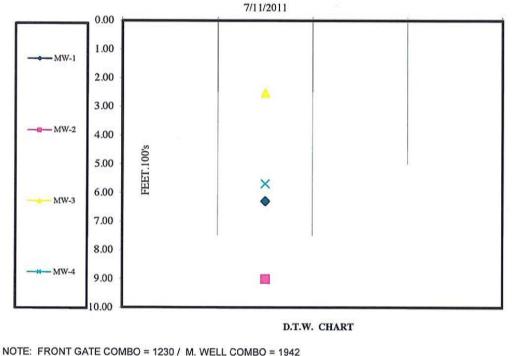


		-			1	and the second second						
SAM	PLE LOCATIO	ON/MW-		3		DATE:			7/11/2011			
					1. S. S. R.							
	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	Contraction and Contraction of Contr		24325 L	OMITAS DI	R.	SAMPLE	TIME:		16:14			
	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAL	NERS:	3 - PLASTICS			
	CONTACT:		GERAI	LD COBURN	V	PRESERV	ATIVES	: NI	EAT / HNO3 / H			
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.		
		Prop.			TIERRY	E REVI III	The The					
and the second se	ECT MANAGER:	_		I NYDAM		MONUMI	ENT:		POST			
SAMP	and the second		DEL-TECH /	the second s	COLUMN THE REAL PROPERTY AND ADDRESS OF THE REAL PROPERTY ADDRESS OF THE REAL PROPE	WELL CA	SING M	ATERIAI				
SIGNE			Gohl	ey anil	lla _	WELL CA			2" /	0.1632		
	LE MEDIA:		GROU	INDWATER		P.J.D. REA	ADING / O	DDOR:	N/A	NONE		
and the second se	F CASING ELEVA	ATION:			MSL	COLOR:			CLEAR			
	H TO WATER:		(feet.100th's)	2.53	FEET	CALC. PU			6.55	GAL.		
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.		
STANI	DING WATER CO	LUMN:		40.12	FEET	DEPTH O	F PUMP:		41	FEET		
				FIEI	DPA	RAMETE	RS					
- E - Miles				T IL/I	JD I H		N D			24-1- ACTIVATION		
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI'		
	CASING VOLUME	VOLUME	DOWN	RATE	-				OXYGEN	COLOR		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	3.0 GPM	7.06	485	21.1	30	N/A	14		
	6.55	6.5	"	"	6.93	428	18.8	55		5		
	13.10	13	U U	"	6.91	424	19.3	63		3		
	19.64	9.5	"	"	6.89	423	19.7	72	u.	3		
ST.	The second second	-							ALCONTRACTOR IN	1		
PURGI	E METHOD:			CENTRIFUG		P						
	LE METHOD:			CENTRIFUG								
	AFTER PURGE:			CLIVINICO	AL I UM	D. T. W. A	SAMPLE	TIME	2.55'	_		
	INTEGRITY:			CAP & SEAI	ARE SI		CONTRACTOR	S A ALVAAS.	2.33			
	LOCATION:			SEE SITE M		SCORD.						
REMA	and the second			ODD OTTO TH				_				
										_		
WEATI	HER:	_		CLEAR / HO	T!		WIND:		NONE			
QUALI	TY CONTROL:			ALL PURGIN	IG AND N	10NITORING	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.		
				DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE								
CONTA	AINMENT:	_		NO CONTAINMENT / PURGE WATER TO THE GROUND								
INCTO	UMENTATION:			VOLOCOT	OWOFILE		VALDIA	NUED OF				
INSTR	UMENTATION:			Y.S.I. 3560 FL					GEN METER			
				SOLINIST SLO	OPE METH	:K	TURBIDITY	METER				
					_	_						
								_				



En any les					X. Marine				12 million	
SAM	PLE LOCATIO	N/MW -		4		DATE:			7/11/2011	
		Sur Sur			42.4	-				
PROJE	ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD
				OMITAS DR. SAMPLE TIME: 15:55						
				NCOVE, CA. SAMPLE CONTAINERS: 3 - PLASTICS						
				LD COBURN PRESERVATIVES: NEAT / HNO3 / H						
CONSULTANT:						LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.
and the second					100-00					
				I NYDAM	AM MONUMENT: FLUSH					
				ASHLEY AVILLA WELL CASING MATERIAL PVC				PVC		
				WELL CASING DIA.:				4" /	0.6528	
				INDWATER		P.I.D. READING / ODOR: N/A NONE				
The second s	F CASING ELEVA			MSL						
the second s	I TO WATER:		(feet.100th's)	5.69	FEET	CALC. PU			14.98	GAL.
	I OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.
STANI	DING WATER CO	LUMN:		22.94	FEET	DEPTH O	F PUMP:		27	FEET
FIELD PARAMETERS										
		RAMETERS								
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
	CASING VOLUME	VOLUME	DOWN	RATE		1.000			OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	3.0 GPM	7.97	937	23.9	177	N/A	1000+
	14.98	15	"	"	7.41	998	20.9	-9	"	144
	29.95	30	0	"	7.27	1013	20.9	-33		60
	44.93	45	"	"	7.20	1024	20.7	-41		33
					_					
				and a second second		7				
PURGE METHOD: CENTRIFUGAL PUM SAMPLE METHOD: CENTRIFUGAL PUM										
	the second s			CENTRIFUG	AL PUM	And a second			4.001	
D. T. W. AFTER PURGE: WELL INTEGRITY: CAP & SEAL ARE SI						D. T. W. AT SAMPLE TIME: 6.09'				
WELL LOCATION:				CAP & SEAL ARE SECURE. SEE SITE MAP.						
REMAI				SEE SITE NL	ч г.					
ALL NUMBER								_		
WEATI	HER:			CLEAR / HO	T!		WIND:		NONE	
QUALI	TY CONTROL:	ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY.								
						E TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVES				
CONTA	INMENT:			NO CONTAI	MENT /	PURGE WAT	ER TO THE	GROUND		
INSTRUMENTATION: Y.S.I. 3560 FLOWCE						Y.S.I. DISSOLVED OXYGEN METER				
		SOLINIST SLO	ST SLOPE METER TURBIDITY METER							





ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



2012 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. April 18, 2012

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



						- Contraction of the second		The second		
SAM	PLE LOCATIO	N/MW-		1		DATE:			4/18/2012	
	a we we are an are	ALL REAL			AND IN	-	a gana		THE WAY AND A	THE PROPERTY
PROJE	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTODY
ADDR				OMITAS D	242.2	SAMPLE			18:25	
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	1
	CONTACT:		GERAI	LD COBURN	N	PRESERV			EAT / HNO3 / H	
CONSI	ULTANT:					LAB. ANA	LYSIS B	<u>Y:</u>	DELLAVALLE	LABS.
					11/2			11	COLUMN AND AND	
and the second se	ECT MANAGER:	_		NYDAM	LOUT	MONUMI			POST	
SAMP			DEL-TECH	ASHLEY I		WELL CA	and the second			0.1620
	LE MEDIA:			INDWATER		WELL CA			2" / N/A	0.1632 NONE
	F CASING ELEVA	ATION	GROU	NDWATEN	MSL	COLOR:	WING/	JDOK:	CLEAR	NONE
	H TO WATER:	ATTON.	(feet.100th's)	9.73	FEET	CALC. PL	RGEVO	L.:	4.27	GAL.
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(1000110001110)	26.16	FEET	DEPTH O	and the second se		34	FEET
						1		- Sector Sector		
				FIEI	LD PA	RAMETE	RS	1		
TIME		1 COTTA 1	DDAW	PUMPING	- II	E.C.	TEMP	ODD	DISCOLVED	TUDDIDITY
TIME	CUMULATIVE CASING VOLUME	ACTUAL VOLUME	DRAW DOWN	RATE	pH	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	2.0 GPM	7.25	562	19.1	154	N/A	19
	4.27	4	"	2.0 GFWI	7.03	565	19.1	117	N/A "	6.5
	8.54	8		"	7.05	567	18.1	138	"	6
	12.81	12	11	"	7.02	569	18.2	166		0.99
En The Art								-		
PURGI	E METHOD:			CENTRIFUG	AL PUM	Р.				
SAMPI	LE METHOD:			CENTRIFUG	AL PUM	P.				
	AFTER PURGE:					D. T. W. A'	FSAMPLI	E TIME:	9.75'	
a second s	INTEGRITY:			CAP & SEAI		CURE.				
	LOCATION:	_		SEE SITE M.				_		
REMA	RKS:			REPLACED	LOCK	_	_			
WEATI	HED.			CLEAD (UC	TI		WIND		NONE	
-	HEK: TY CONTROL:			CLEAR / HO		IONITODING	WIND:	WTWARC	NONE LEANED AS NEC.	FSSADV
QUALI	III CONTROL:						A CONTRACT OF A		VELL. NEW NITR	Construction of the owner own
CONTA	AINMENT:			and a lot of the second se		PURGE WAT				THE GLOVES.
								51100110		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO		ER	TURBIDITY			
_										
0										



SAM	PLE LOCATIO	N/MW.	(2		DATE:			4/18/2012	
				nge Wester	- 15-478					
PROJE	ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	FCUSTOL
ADDR	ESS:			OMITAS DI	R.	SAMPLE			18:05	
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAI	NERS:	3 - PLASTICS	
SITE C	CONTACT:		GERAI	D COBURN	V	PRESERV	ATIVES	: NI	EAT / HNO3 / H	CL
CONST	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.
					1.11		S			I ST AND
PROJF	ECT MANAGER:		BEN	INYDAM		MONUME	ENT:		POST	
SAMPI	LER:		DEL-TECH		IGHT	WELL CA	SING M	ATERIAL	PVC	
SIGNE	D:		Ochles	+ Olight		WELL CA	SING DI	A.:	4" /	0.6528
SAMPI	LE MEDIA:		GROU	NDWATER		P.I.D. REA	DING / C	DDOR:	N/A	NONE
тор о	F CASING ELEVA	ATION:			MSL	COLOR:			CLEAR	
and a second	H TO WATER:		(feet.100th's)	11.04	FEET	CALC. PU			24.40	GAL.
and the second second second second	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V				GAL.
STANI	DING WATER CO	LUMN:		37.38	FEET	DEPTH O	F PUMP:		47	FEET
				FIEI	DPA	RAMETE	RS			
				111.1	JO I A		1.0			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
	CASING VOLUME	VOLUME	DOWN	RATE	0.000	ALC: SPECIFICATION	439.003802033		OXYGEN	COLOI
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	4.0 GPM	7.47	621	20.6	187	N/A	50.5
_	24.40	24.5	"	"	7.82	591	20.7	184	"	28
	48.80	49	"	"	7.72	617	20.7	175	"	24
	73.20	73.5	"	"	7.66	639	20.8	169		18
PURGI	E METHOD:			CENTRIFUG	AL PUM	Р.				
	LE METHOD:			CENTRIFUG						
D.T.W	AFTER PURGE:					D. T. W. A.	SAMPLE	TIME:	21.65'	
WELL	INTEGRITY:			CAP & SEAI	ARE SI	ECURE.				
WELL	LOCATION:			SEE SITE M.	AP.					
REMAI	RKS:									
WEATI	HED.			CLEAR / HO	TI		WIND:		NONE	
	TY CONTROL:			the second second second second		IONITORING		NTWASC	LEANED AS NEC.	ESSARV
20mul	a contraction				Constant and the second second second		And the second se	and the second se	VELL. NEW NITR	NAME AND ADDRESS OF TAXABLE PARTY.
	AINMENT:			and the second se	and the second se	PURGE WAT				136 GEOVE
CONTA										
CONTA				VOL OCCO EL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
_	UMENTATION:			Y.S.I. 3560 FL					GERTMETER	
_	UMENTATION:			Y.S.I. 3560 FL SOLINIST SLO			TURBIDITY		GER METER	
	UMENTATION:								OLIV METER	
_	UMENTATION:									

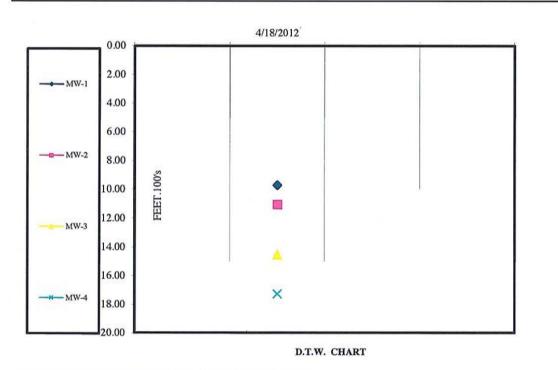


SAM	PLE LOCATIO	N/MW-		3		DATE:			4/18/2012	
			1		5 67	DITE.	1000	- 196 Mar	4/10/2012	
PROT	ECT NAME:			CEMEX		ANALVEI	C DEDEC	DMED.	SEE CHAIN O	ECUSTOD
ADDR				OMITAS DI	D	SAMPLE		KMED:	17:39	FCUSIOD
CONTRACTOR OF CONTRACTOR	STATE:			NCOVE, CA		SAMPLE	And the second se	NEDC.	3 - PLASTICS	
	CONTACT:	-	and the second se	LD COBURN		PRESERV	and the second se	- 1000	EAT / HNO3 / H	CI
	ULTANT:		ODIA	LD COBORI		LAB. ANA			DELLAVALLE	
00110						Ditto: /ti ti	CETOIO D		DEELATTALEE	LADD.
PROT	ECT MANAGER:		BEN	NYDAM	and a product	MONUMI	INT.		POST	
SAMP			DEL-TECH	and the second se	IGHT	WELL CA	a second s	ATEDIAL		
SIGNE		_		y Dight	JOILI	WELL CA			2" /	0.1632
	LE MEDIA:			INDWATER	0	P.I.D. REA			N/A	NONE
a designed and a second second	F CASING ELEVA	ATION:	GROC		MSL	COLOR:	IDING / V	JUOK.	CLEAR	ROND
and the second se	H TO WATER:		(feet.100th's)	14.52	FEET	CALC. PL	RGE VO	L.:	4.59	GAL.
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:		28.13	FEET	DEPTH O			41	FEET
					1-V-10					
				FIEI	LD PA	RAMETE	RS			
									1	
FIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOI
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)		(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	1.0 GPM	7.12	465	20.4	164	N/A	13
	4.59	4.6		"	7.04	515	19.3	163	11 11	6
	9.18	9			7.03	526	19.2	169		2
	13.77	13.8			7.04	562	19.1	183		1
										-
PURG	E METHOD:			CENTRIFUG		p			and the second se	
	LE METHOD:			CENTRIFUG	state and the local division of the second					
	AFTER PURGE:			000000		D. T. W. A'	FSAMPLI	TIME:	14.70'	
WELL	INTEGRITY:			CAP & SEAI	ARE SI					
	LOCATION:			SEE SITE M						
REMA	RKS:									
_										
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE	
QUALI	TY CONTROL:			ALL PURGIN	IG AND I	MONITORING	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.
_				the second se	and the second se	the second s	the second s	the second s	VELL. NEW NITR	ILE GLOVE
CONT	AINMENT:			NO CONTAII	NMENT /	PURGE WAT	ER TO THE	E GROUND		
***								_		_
INSTR	UMENTATION:			Y.S.I. 3560 FL			and share and share the state of state		GEN METER	
				SOLINIST SLO	OPE METI	ER	TURBIDITY	METER		



PROJECT N ADDRESS: CITY, STAT SITE CONT CONSULTA PROJECT N SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CIME CU CASI P CIME CU CASI P CIME CU CASI P	TE: TACT: ANT: MANAGER: IEDIA: ASING ELEV WATER:	ATION: DLUMN: ACTUAL VOLUME PURGED 0 7.4	24325 L LEMO GERAI BEN DEL-TECH	17.28 28.63 11.35	A. N LIGHT S MSL FEET FEET FEET LD PA pH (units) 7.91	DATE: ANALYSI SAMPLE SAMPLE SAMPLE PRESERV LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS) 1188	TIME: CONTAI ATIVES LYSIS B CNT: SING M SING DI ADING / O URGE VO OLUME F PUMP:	NERS: : NI Y: ATERIAL A.: DOOR: LIGHI L.: PURGED O.R.P. (Mvolts)	4" / N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	CL 2 LABS. 0.6528 NONE CLEAR GAL. GAL. FEET
ADDRESS: CITY, STAT SITE CONT CONSULTA PROJECT M SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH OF STANDING CIME CU CASI P CIME CU CASI P CURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	TE: TACT: ANT: MANAGER: MATER: MATER CO MATER: MATER CO MATER: MATER CO MATER: MA	ACTUAL VOLUME PURGED 0 7.4	24325 L LEMO GERAI BEN DEL-TECH Conflog GROU (feet.100th's) (feet.100th's) (feet.100th's)	OMITAS D NCOVE, CA LD COBURI N NYDAM / ASHLEY I / ASHLEY I / DOMATER 17.28 28.63 11.35 FIEI PUMPING RATE (GPM/LPM)	A. N LIGHT S MSL FEET FEET FEET LD PA pH (units) 7.91	SAMPLE SAMPLE PRESERV LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	TIME: CONTAI ATIVES LYSIS B CNT: SING M SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	NERS: : NI Y: ATERIAL A.: DOOR: LIGHI L.: PURGED O.R.P. (Mvolts)	17:17 3 - PLASTICS EAT / HNO3 / HU DELLAVALLE FLUSH / PVC 4" / N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	CL E LABS. 0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOF
ADDRESS: CITY, STAT SITE CONT CONSULTA PROJECT M SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH OF STANDING CIME CU CASI P CIME CU CASI P CURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	TE: TACT: ANT: MANAGER: MATER: MATER CO MATER: MATER CO MATER: MATER CO MATER: MA	ACTUAL VOLUME PURGED 0 7.4	24325 L LEMO GERAI BEN DEL-TECH Conflog GROU (feet.100th's) (feet.100th's) (feet.100th's)	OMITAS D NCOVE, CA LD COBURI N NYDAM / ASHLEY I / ASHLEY I / DOMATER 17.28 28.63 11.35 FIEI PUMPING RATE (GPM/LPM)	A. N LIGHT S MSL FEET FEET FEET LD PA pH (units) 7.91	SAMPLE SAMPLE PRESERV LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	TIME: CONTAI ATIVES LYSIS B CNT: SING M SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	NERS: : NI Y: ATERIAL A.: DOOR: LIGHI L.: PURGED O.R.P. (Mvolts)	17:17 3 - PLASTICS EAT / HNO3 / HU DELLAVALLE FLUSH / PVC 4" / N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	CL E LABS. 0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOF
CITY, STAT SITE CONT CONSULTA PROJECT M SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH OF STANDING CIME CU CAS P CIME CU CAS P CIME CU CAS P CURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	FACT: ANT: MANAGER: IEDIA: ASING ELEV WATER: WELL: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	LEMO GERAI BEN DEL-TECH GROU (feet.100th's) (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	NCOVE, CA LD COBURI N NYDAM / ASHLEY I / Coght JNDWATER 17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	A. N LIGHT S MSL FEET FEET FEET LD PA pH (units) 7.91	SAMPLE PRESERV LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	CONTAI ATIVES LYSIS B CNT: SING M SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	: NH Y: ATERIAL A. : DOOR: LIGHI L.: PURGED O.R.P. (Mvolts)	3 - PLASTICS EAT / HNO3 / H DELLAVALLE FLUSH , PVC 4" / N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOI
SITE CONT CONSULTA PROJECT M SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CIME CU CASS P CIME CU CASS P CURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	FACT: ANT: MANAGER: IEDIA: ASING ELEV WATER: WELL: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	GERAI BEN DEL-TECH GROU (feet.100th's) (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	LD COBURI N NYDAM / ASHLEY I / Coget JNDWATEF 17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	N LIGHT MSL FEET FEET FEET LD PA pH (units) 7.91	PRESERV LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	ATIVES: ALYSIS B ENT: ASING MA ASING DI ADING / (WRGE VO OLUME F PUMP: RS TEMP. (Celsius)	: NH Y: ATERIAL A. : DOOR: LIGHI L.: PURGED O.R.P. (Mvolts)	EAT / HNO3 / H DELLAVALLE FLUSH PVC 4" / N/A T BROWN TO C 7.41 22 27 27 DISSOLVED OXYGEN (PPM)	0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOI
CONSULTA PROJECT M SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH OF STANDING CIME CU CASS P CIME CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CU CU CASS P CU CU CU CU CU CU CU CU CU CU CU CU CU	ANT: MANAGER: IEDIA: ASING ELEV WATER: WELL: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	BEN DEL-TECH GROU (feet.100th's) (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	N NYDAM / ASHLEY I / Content / ASHLEY I / Content / ASHLEY I / ASHLEY I	LIGHT MSL FEET FEET FEET LD PA pH (units) 7.91	LAB. ANA MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	LYSIS B ENT: SING M. SING DI ADING / (VRGE VO OLUME F PUMP: RS TEMP. (Celsius)	Y: ATERIAL A.: DDOR: LIGHT L.: PURGED O.R.P. (Mvolts)	DELLAVALLE FLUSH PVC 4" / N/A T BROWN TO C 7.41 22 27 27 DISSOLVED OXYGEN (PPM)	0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOI
PROJECT N SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CU CASS P CIME CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CASS P CU CU CU CU CU CU CU CU CU CU CU CU CU	MANAGER: IEDIA: ASING ELEV WATER: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	DEL-TECH GROU (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	/ ASHLEY I / DOMATER 17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	MSL FEET FEET FEET LD PA pH (units) 7.91	MONUMI WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	ENT: SING M. SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	ATERIAL A. : DDOR: LIGHI L.: PURGED O.R.P. (Mvolts)	FLUSH 2 PVC 4" / N/A T BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	0.6528 NONE CLEAR GAL. GAL. FEET TURBIDI COLOI
SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CIME CU CAS P CIME CU CAS P CAS P CAS P CAS CAS P CAS CAS CAS P CAS CAS CAS CAS CAS CAS CAS CAS CAS CAS	IEDIA: SING ELEV WATER: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	DEL-TECH GROU (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	/ ASHLEY I / DOMATER 17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	MSL FEET FEET FEET LD PA pH (units) 7.91	WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	SING M. SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	A. : DDOR: LIGHI L.: PURGED O.R.P. (Mvolts)	. РVС 4" / N/A Г BROWN TO С 7.41 22 27 DISSOLVED OXYGEN (PPM)	NONE CLEAR GAL. GAL. FEET TURBIDI COLO
SAMPLER: SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CIME CU CAS P CIME CU CAS P CAS P CAS P CAS CAS P CAS CAS CAS P CAS CAS CAS CAS CAS CAS CAS CAS CAS CAS	IEDIA: SING ELEV WATER: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	DEL-TECH GROU (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	/ ASHLEY I / DOMATER 17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	MSL FEET FEET FEET LD PA pH (units) 7.91	WELL CA WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	SING M. SING DI ADING / (URGE VO OLUME F PUMP: RS TEMP. (Celsius)	A. : DDOR: LIGHI L.: PURGED O.R.P. (Mvolts)	. РVС 4" / N/A Г BROWN TO С 7.41 22 27 DISSOLVED OXYGEN (PPM)	NONE CLEAR GAL. GAL. FEET TURBIDI COLO
SIGNED: SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CIME CU CAS: P CIME CU CAS: P CURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	IEDIA: ASING ELEV WATER: WELL: WATER CO JMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	GROU GROU (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	17.28 28.63 11.35 FIE PUMPING RATE (GPM/LPM)	MSL FEET FEET FEET LD PA pH (units) 7.91	WELL CA P.I.D. REA COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	SING DI ADING / (DRGE VO OLUME F PUMP: RS TEMP. (Celsius)	A. : DDOR: LIGHI L.: PURGED O.R.P. (Mvolts)	4" / N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	NONE CLEAR GAL. GAL. FEET TURBIDI COLO
SAMPLE M TOP OF CA DEPTH TO DEPTH OF STANDING CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS P CUCCAS CUCCAS P CUCCAS CUCCAS P CUCCAS CUCCAS P CUCCAS CUC	SING ELEV WATER: WELL: WATER CO MULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	GROU (feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	JNDWATER 17.28 28.63 11.35 FIEJ PUMPING RATE (GPM/LPM)	MSL FEET FEET LD PA pH (units) 7.91	P.I.D. RE/ COLOR: CALC. PU TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	ADING / (VRGE VO OLUME F PUMP: RS TEMP. (Celsius)	DDOR: LIGHT L.: PURGED O.R.P. (Mvolts)	N/A F BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	NONE CLEAR GAL. GAL. FEET TURBIDI COLO
DEPTH TO DEPTH OF STANDING TIME CU CASI P CU CU CASI P CU CASI P CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CASI P CU CU CU CASI P CU CU CU CU CU CU CU CU CU CU CU CU CU	WATER: WELL: WATER CO UMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	(feet.100th's) (feet.100th's) DRAW DOWN (D.T.W.) N/A	17.28 28.63 11.35 FIEI PUMPING RATE (GPM/LPM)	MSL FEET FEET LD PA pH (units) 7.91	COLOR: CALC.PU TOTAL V DEPTH O RAMETE E.C. (UmMHOS)	URGE VO OLUME F PUMP: RS TEMP. (Celsius)	LIGHT L.: PURGED O.R.P. (Mvolts)	Г BROWN TO C 7.41 22 27 DISSOLVED OXYGEN (PPM)	CLEAR GAL. GAL. FEET TURBID
DEPTH OF STANDING STANDING CU CAS P PURGE ME SAMPLE MI D. T. W. AFT WELL INTE WELL LOC	WELL: WATER CO UMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	(feet.100th's) DRAW DOWN (D.T.W.) N/A	28.63 11.35 FIE PUMPING RATE (GPM/LPM)	FEET FEET LD PA pH (units) 7.91	TOTAL V DEPTH O RAMETE E. C. (UmMHOS)	OLUME F PUMP: RS TEMP. (Celsius)	L.: PURGED O.R.P. (Mvolts)	7.41 22 27 DISSOLVED OXYGEN (PPM)	GAL. GAL. FEET TURBIDI COLO
STANDING	WATER CO UMULATIVE ING VOLUME ER PURGE 0 7.41	ACTUAL VOLUME PURGED 0 7.4	DRAW DOWN (D.T.W.) N/A	11.35 FIEI PUMPING RATE (GPM/LPM)	FEET D PA pH (units) 7.91	DEPTH O RAMETE E. C. (UmMHOS)	F PUMP: RS TEMP. (Celsius)	O.R.P. (Mvolts)	27 DISSOLVED OXYGEN (PPM)	FEET TURBIDI COLO
PURGE MET SAMPLE MI D. T. W. AFT WELL INTE	umulative ing volume per purge 0 7.41	ACTUAL VOLUME PURGED 0 7.4	DOWN (D.T.W.) N/A	FIE PUMPING RATE (GPM/LPM)	pH (units) 7.91	RAMETE E. C. (UmMHOS)	RS TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBID COLO
CAS P PURGE ME SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	PING VOLUME PER PURGE 0 7.41	VOLUME PURGED 0 7.4	DOWN (D.T.W.) N/A	PUMPING RATE (GPM/LPM)	pH (units) 7.91	E.C. (UmMHOS)	TEMP.	(Mvolts)	OXYGEN (PPM)	COLO
CAS P PURGE ME SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	PING VOLUME PER PURGE 0 7.41	VOLUME PURGED 0 7.4	DOWN (D.T.W.) N/A	PUMPING RATE (GPM/LPM)	pH (units) 7.91	E.C. (UmMHOS)	TEMP.	(Mvolts)	OXYGEN (PPM)	COLO
CAS P PURGE ME SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	PING VOLUME PER PURGE 0 7.41	VOLUME PURGED 0 7.4	DOWN (D.T.W.) N/A	RATE (GPM/LPM)	(units) 7.91	(UmMHOS)	(Celsius)	(Mvolts)	OXYGEN (PPM)	COLO
PURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	er purge 0 7.41	PURGED 0 7.4	(D.T.W.) N/A	(GPM/LPM)	7.91	A CONTRACTOR OF A CONTRACTOR O	and the second se	and the second se	(PPM)	
PURGE MET SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	0 7.41	0 7.4	N/A		7.91	A CONTRACTOR OF A CONTRACTOR O	and the second se	and the second se		(N.T.U.)
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	7.41	7.4		1.0 GPM		1188	21.0	and the second se		
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA				"			21.0	202	N/A	629
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	14.82				7.41	967	20.9	187	"	52
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	Contraction of the local data and the local data an	15	"	"	7.13	1001	20.8	173	n	16
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA	22.23	22.2	"	"	7.05	1001	20.5	166	"	9
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA										
SAMPLE MI D. T. W. AFT WELL INTE WELL LOCA							Sec. 2			
D. T. W. AFT WELL INTE WELL LOCA	THOD:			CENTRIFUC	AL PUM	P.				
WELL INTE WELL LOCA	ETHOD:			CENTRIFUC	AL PUM	Р.				
WELL LOCA	TER PURGE:				_	D. T. W. A'	FSAMPLE	E TIME:	17.39'	
				CAP & SEAL		ECURE.				
REMARKS:	ATION:			SEE SITE M	AP.					
WEATHER:				CLEAR / HO	T!		WIND:		NONE	
QUALITY C	ONTROL:			ALL PURGI	G AND I	MONITORING	EQUIPME	ENT WAS CI	LEANED AS NEC	ESSARY.
				and the second se					VELL. NEW NITR	ILE GLOVI
CONTAINM	ENT:			NO CONTAL	NMENT /	PURGE WAT	ER TO THE	E GROUND		
INSTRUMEN	NTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SL		ER	TURBIDITY			

DEL-TECH GEOTECHNICAL SUPPORT DEL-TECH (209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email) CEMEX 24325 LOMITAS DR. / LEMON COVE, CA. MONITORING WELL FIELD SUMMARY LOG 2012 DEPTH TO WATER MEASUREMENTS QTR.1 QTR.2 QTR.3 QTR.4 TOTAL DATE DEPTH 4/18/12 LOCATION MW-1 9.73 35.89' MW-2 48.42' 11.04 MW-3 14.52 42.65' MW-4 17.28 28.63'



NOTE: FRONT GATE COMBO = 1230 / M. WELL COMBO = 1942 ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



2013 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 12, 2013

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



DEL-TECH geotechnical support services

SAM	PLE LOCATIC	DN/MW.		1		DATE:			6/12/2013	
							THE DAY	100		
PROJ	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD
ADDR				OMITAS D		SAMPLE	TIME:		10:50	
	STATE:		LEMO	NCOVE, CA	۱	SAMPLE	CONTAL	NERS:	3 - PLASTICS	
	CONTACT:		GERAI	LD COBURI	Ň	PRESERV			EAT / HNO3 / H	
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.
		7.121				A Statement		SV2 Series		
PROJ	ECT MANAGER:			NYDAM		MONUMI	ENT:		POST	
SAMP	LER:		DEL-TEC	H / DON LIC	GHT	WELL CA	SING M	ATERIAL	PVC	
SIGNI	ED:		San	Sizet		WELL CA	SING DI	A.:	2" /	0.1632
SAMP	LE MEDIA:		GROU	INDWATER		P.I.D. REA	ADING / C	DDOR:	N/A	NONE
TOP C	F CASING ELEV	ATION:			MSL	COLOR:			CLEAR	
DEPT	H TO WATER:		(feet.100th's)	10.86	FEET	CALC. PL	RGE VO	L.:	4.08	GAL.
DEPT	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	OLUME	PURGED	12.0	GAL.
STAN	DING WATER CO	LUMN:		25.03	FEET	DEPTH O	F PUMP:		~ 34	FEET
						RAMETE	TIL			
				FIEI	JD PA	KANIEIE	RS			
ГІМЕ	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
11/19/24/19/2010	CASING VOLUME	VOLUME	DOWN	RATE	P	2.0.		onu.	OXYGEN	COLOI
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
10:18	0	0	N/A	0.5 GPM	7.87	579	21.0	214	N/A	16
10:26	4.08	4	"	"	7.50	505	17.6	200	"	13
10:34	8.17	8	"	"	7.26	504	17.1	197		9
10:42	12.25	12	11		7.01	501	17.2	199		5
10:50	16.34	16	"	"	7.00	500	17.1	199		5
PURG	E METHOD:			CENTRIFUG	AL PUM	P.				
SAMP	LE METHOD:			CENTRIFUG	AL PUM	P.				
D.T.W	AFTER PURGE:					D. T. W. A'	SAMPLE	TIME:	10.89'	
WELL	INTEGRITY:			CAP & SEAI	ARE SE	CURE.				
WELL	LOCATION:			SEE SITE M	AP.					
REMA	RKS:									
WEAT	UTPD -			CLEAD			NUT NO		NONE	
the second s	TY CONTROL:			CLEAR	IC AND	IONITOPING	WIND:	NT WAR C	NONE	FCCADY
QUAL	CONTROL:								EANED AS NEC	
CONT	AINMENT:			the second se		PURGE WAT			ELL. NEW NIIK	ILE GLOVE
00111				no contAll	TRADINA /	TOROL WALL	SA IO IHE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO	OPE METH	ER	TURBIDITY	METER		
_										



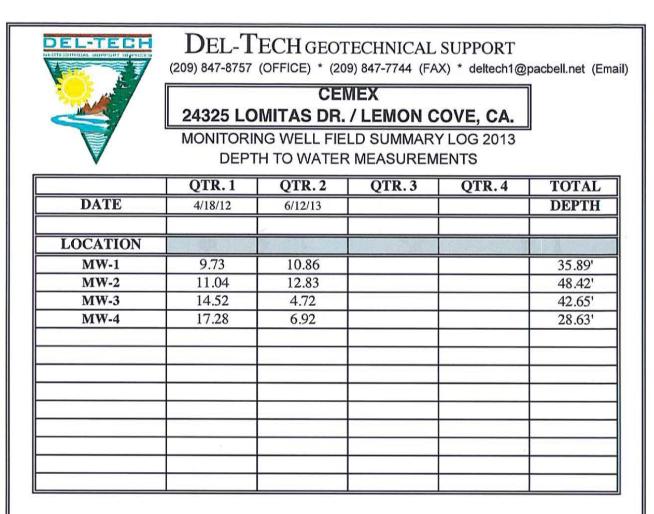
				-	-		5 20 48		SUVE SERVES	
SAM	PLE LOCATIC	N/MW-		2		DATE:			6/12/2013	
	N.E.	Service and					1. A. M. L.			
	ECT NAME:			CEMEX		ANALYSI		ORMED:	SEE CHAIN O	and the second se
ADDR			and the second se	OMITAS D		SAMPLE			11:27	
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	
	CONTACT:		GERAI	LD COBURI	N	PRESERV	and the second second second second	and Sector Contraction of Contractio	EAT / HNO3 / H	and the second se
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLI	ELABS.
		C DOILERS								
The second s	ECT MANAGER:		and the second se	NYDAM		MONUMI			POST	
SAMP	and the second se			H / DON LIC	GHT	WELL CA	the second s			
SIGNE				- Sizer		WELL CA	the second s	and the second se	4" /	0.6528
	LE MEDIA:	ITTON	GROU	INDWATER		P.J.D. REA	ADING / O	and the second se	N/A	NONE
THE R. LEWIS CO., LANSING MICH.	F CASING ELEV	ATION:	(P	10.00	MSL	COLOR:	manua		DY RUST TO	
	H TO WATER: H OF WELL:		(feet.100th's)	12.83	FEET	CALC. PU			23.23	GAL.
	H OF WELL: DING WATER CO	I IIMNI.	(feet.100th's)	48.42	FEET	TOTAL V DEPTH O			and the second se	GAL.
OTAIN	UNIO WATER CO	LOWIN:		53.59	FEET	DEFINO	r rump:		~ 47	FEET
				FIE	LD PA	RAMETE	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	The second s
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR
10.55	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
10:55	0	0	N/A	2.5 GPM	7.40	676	22.4	166	N/A	43
11:05	23.23	23	"	"	7.98	458	21.8	152	n	28
11:15 11:25	46.47 69.70	46 69			7.88	552	22.1	165		11
11.25	09.70	09		· · · · ·	7.80	644	22.4	156		8
					54		A REAL	11 Million		
And the second se	E METHOD:			CENTRIFUG	the subscription of the second se		_			
	LE METHOD:			CENTRIFUG	AL PUM				10.001	
	AFTER PURGE:			010 0 0011		D. T. W. A'	FSAMPLI	E TIME:	18.72'	
and the second state of the second	INTEGRITY:			CAP & SEAI		ECURE.				_
REMA	LOCATION:			SEE SITE M.	AP.					
REMA	KK5:									
WEAT	HER:			CLEAR			WIND:		NONE	
QUALI	TY CONTROL:		-	ALL PURGIN	G AND N	IONITORING	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.
				DEDICATEL	PURGE	TUBING IS II	STALLED	IN EACH W	VELL. NEW NITH	ILE GLOVE
CONTA	AINMENT:			NO CONTAI	NMENT /	PURGE WAT	ER TO THE	E GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO	Sector and the sector of the s	0.7.0	TURBIDITY		San marbit	
							. or on or of the			

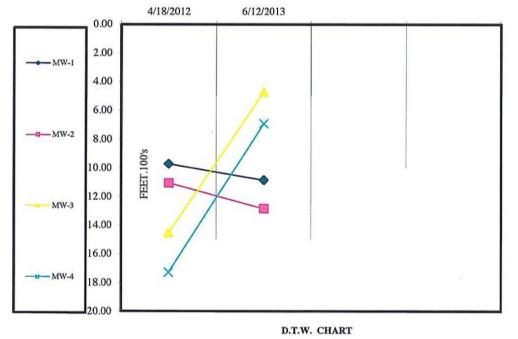


SAM	PLE LOCATIO	N/MW		3		DATE:			6/12/2013	
ORM	I LE LOCATIO	117 NI () -		5	1	DAIE.			0/12/2013	
PPOH	ECT NAME:			TEMEY	1153	ANALVEL	C DEDEC	DMED.	SEE CHAINIO	E CUSTOD
ADDR				CEMEX		ANALYSI SAMPLE		DRMED:	and the second se	
	STATE:		and the second data are been	NCOVE, CA		SAMPLE		MEDC.	11:50 3 - PLASTICS	
	CONTACT:		and the second	LD COBURN		PRESERV	Provide Statements and the statements		EAT / HNO3 / H	CL
	ULTANT:		UERAI	LDCOBURI	N	LAB. ANA			DELLAVALLE	
COND	CHIMIT.		And the second second second			LAD. AITA	L 1919 D	**	DELLAVALLI	LADS.
PROH	ECT MANAGER:		BEN	NYDAM		MONUMI	NT.	-	POST	
SAMPI	the second s		the second s	H / DON LIC	LIT	WELL CA	and the second se	ATEDIAL		
SIGNE		_		- Size		WELL CA	in the second		2" /	0.1632
	LE MEDIA:			INDWATER		P.I.D. REA			N/A	NONE
	F CASING ELEVA	ATION:	GROC		MSL	COLOR:	IDING/ (JUON.	CLEAR	NONE
and the second se	H TO WATER:		(feet.100th's)	4.72	FEET	CALC. PL	RGE VO	T.:	6.19	GAL.
the second se	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(37.93	FEET	DEPTH O			~ 41	FEET
								and a second		
				FIEI	LD PA	RAMETE	RS			
FIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TIPRIDI
	CASING VOLUME	VOLUME	DOWN	RATE	P	1	I LOWIL .	Oata .	OXYGEN	COLO
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
11:30	0	0	N/A	1.0 GPM	7.96	418	18.5	152	N/A	9
11:36	6.19	6	"	"	7.20	419	18.3	167	"	7
11:42	12.38	12	"	"	6.98	419	18.2	171	0	7
11:48	18.57	18	"	"	6.86	419	18.3	175	in .	4
			din second							
DUDCI	E METHOD:	N= A3		CENTRIFUG		D				
	LE METHOD:			CENTRIFUG						_
	AFTER PURGE:			CENTRIFUG	AL PUM	D. T. W. A.	CAMPTI	TIME.	5.18'	
the later water	INTEGRITY:			CAP & SEAI	ADE SI	Contraction of the local data and the local data an	DAWITLI	S TIME:	5.10	
	LOCATION:			SEE SITE M		SCOKE.			1	
REMAI				SEE SITE ME	<u>.</u>					
WEATI	And and set of a second se			CLEAR			WIND:		NONE	
QUALI	TY CONTROL:			And a second	Contraction of the local division of the loc	the second s	the second se	the state of the s	LEANED AS NEC	
-								the second s	VELL. NEW NITH	LILE GLOVE
CONTA	AINMENT:			NO CONTAI	VMENT /	PURGE WAT	ER TO THE	E GROUND		
	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
INSTRU						20	TURBIDITY	METER		
INSTRU				SOLINIST SLO	JPE MEII	SK	TORDIDITI	AVILLA LOIN		
INSTR				SOLINIST SLO	DPE MEII	SK	TORBIDITI	METER		
INSTRU				SOLINIST SLC	DPE MEII	3K	TOKBIDIT	METER		



					1					1.4
SAM	PLE LOCATIC	DN/MW-		4		DATE:			6/12/2013	
ANY BILL										
PROJE	ECT NAME:		(CEMEX		ANALYSI	S PERFC	RMED:	SEE CHAIN O	F CUSTODY
ADDR				OMITAS D		SAMPLE			12:20	
the second s	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	
	CONTACT:		GERAI	LD COBURI	N	PRESERV	and the second se		EAT / HNO3 / H	and the second se
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.
		CALL 3					1417 A.		ne suprimeran	
and the second se	ECT MANAGER:		CONTRACTOR OF A DESCRIPTION OF A DESCRIP	NYDAM		MONUMI	Automatica and an an		FLUSH	
SAMP	and the second se			H / DON LIC	GHT	WELL CA	and the second se			0 (500
SIGNE	LE MEDIA:			JNDWATER		WELL CA	and the second se		4" / N/A	0.6528
and the second se	F CASING ELEV	ATION	GROU	NDWATER	MSL	P.I.D. REA	aDING / C	and the second se	IN/A	NONE
and the second se	H TO WATER:	ATION.	(feet.100th's)	6.92	FEET	CALC. PL	RCF VO		14.17	GAL.
	HOF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(Icclifoodi 3)	21.71	FEET	DEPTH O			~ 27	FEET
								The second second	NAME OF COMPANY	
				FIEI	LD PA	RAMETE	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TUPPIDIT
TIME	CASING VOLUME	VOLUME	DOWN	RATE	pn	E.C.	I LANIE .	U.K.F.	OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
11:59	0	0	N/A	2 GPM	6.99	682	21.6	170	N/A	358
12:06	14.17	14	" _	"	7.30	887	21.3	163		103
12:13	28.34	28	"	"	7.27	900	21.2	158		40
12:20	42.52	42	u .	"	7.26	900	21.2	151	"	15
							1.4			
PURGI	E METHOD:			CENTRIFUG	AL PUM	P.				
SAMPI	LE METHOD:			CENTRIFUG	AL PUM	P.				
	AFTER PURGE:					D. T. W. A'	SAMPLE	E TIME:	7.17'	
	INTEGRITY:			CAP & SEAI		ECURE.				
CONTRACTOR OF CONTRACTOR OF CONTRACTOR	LOCATION:			SEE SITE M.	AP.					
REMA	RKS:									
WEAT	HER:			CLEAR			WIND:		NONE	
QUALI	TY CONTROL:			ALL PURGIN	G AND N	MONITORING	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.
							and the second	and the second	VELL. NEW NITH	ILE GLOVES
CONTA	AINMENT:			NO CONTAI	NMENT /	PURGE WAT	ER TO THE	E GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO	OPE METI	ER	TURBIDITY	METER		
		_					_			
_										





NOTE: FRONT GATE COMBO = 1230 / M. WELL COMBO = 1942 ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



2014 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. July 30, 2014

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



						5 1 2 1 - 1			2	
SAM	PLE LOCATIO	DN/MW-	•	1		DATE:			7/30/2014	
				- MENNE SIN	Set 2				TANK BUSINESS	
the second s	ECT NAME:		Contraction of the local division of the loc	CEMEX				ORMED:	SEE CHAIN O	F CUSTODY
ADDR	and the second se			OMITAS D		SAMPLE			20:22	
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	
	CONTACT: ULTANT:		GERA	LD COBURI	N	PRESERV			EAT / HNO3 / H	
CONS	ULIANI:			_		LAB. ANA	ALYSIS B	SY:	DELLAVALLE	LABS.
PROD	CT MANAGED.		DEL	INDIAN		MONTO				1
SAMP	ECT MANAGER:		the second se	NYDAM	TIT	MONUM WELL CA		ATERIAL	POST PVC	
SIGNE				- Size	JHI	WELL CA			2" /	0.1632
	LE MEDIA:			JNDWATER		P.I.D. RE.	NAME AND ADDRESS OF TAXABLE PARTY.	and the second se	N/A	NONE
	OF CASING ELEV	ATION:	Unite of		MSL	COLOR:	april of /		Y LT. RUSTY TO	
	H TO WATER:		(feet.100th's)	14.91	FEET	CALC. PI	JRGE VO		3.42	GAL.
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V		110.010.000.000		GAL.
STAN	DING WATER CO	LUMN:		20.98	FEET	DEPTH C	F PUMP		~ 34	FEET
				LALIAI	13.15.4		INC.			
				FIEI	JD PA	RAMETE	KS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDITY
	CASING VOLUME	VOLUME	DOWN	RATE	pm	1	I LIVII .	O.K.I.	OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
20:09	0	0	Conservation of the local sectors of the local sect	1.0 GPM	6.93	732	22.4	4	((
20:13	3.42	4	1.001.000	"	6.70	709	22.2	5		
20:17	6.85	8		"	6.61	706	22.2	42	and the state of the state	The second
20:21	10.27	12		"	6.58	709	22.4	60		4
20:22	SAMPLED									
		Mar Barris	and the second		-	alun ar anna	TON GREE		1 - Martine and	
	E METHOD:		_	CENTRIFUG					*	
	LE METHOD:			CENTRIFUG	AL PUM			-	15.001	-
and the state of the second second second	V. AFTER PURGE: INTEGRITY:			CAP & SEAI	ADE SE	D.T.W.A	T SAMPL	E TIME:	15.00'	
	LOCATION:			SEE SITE M		CURE.				
REMA	and the second statement of the se			SEE SITE WE	.					
WEAT	HER:			PARTLY CL	OUDY / I	TOT	WIND:		NONE	
QUAL	ITY CONTROL:			ALL PURGIN	IG AND N	10NITORING	EQUIPME	ENT WAS CI	LEANED AS NECI	ESSARY.
_						the second se			LL. NEWNITRIL	E GLOVES.
CONT	AINMENT:			NO CONTAII	VMENT /	PURGE WAT	ER TO THE	E GROUND	-	
Thioms										
INSTR	UMENTATION:			Y.S.I. 3560 FL					GEN METER	
			1	SOLINIST SLO	JPE METE	sR	TURBIDITY	METER		
	_									



DEL-TECH geotechnical support services

PROJE					The second s					
PROJE								us pat		The second
	ECT NAME:			CEMEX		ANALYSI		RMED:	SEE CHAIN OI	FCUSTODY
ADDR				OMITAS DI		SAMPLE			20:00	
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	
	CONTACT:		GERAI	LD COBURN	1	PRESERV			EAT / HNO3 / H	
CONST	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.
			and a second second		-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-					Voltania and a second
the same the	ECT MANAGER:			INYDAM		MONUMI	A DATA DATA DATA DATA DATA DATA DATA DA		POST	
SAMPI	was predominant and			H / DON LIC	HT	WELL CA	The second se	the second s		0 (700
SIGNE	LE MEDIA:			Sige	_	WELL CA	and the second se		4" /	0.6528
	F CASING ELEV	ATION.	GROU	INDWATER	MSL	P.J.D. REA	ADING / C	DDOR:	N/A RUSTY	NONE
	H TO WATER:	ATION:	(feet.100th's)	18.61	FEET	CALC. PL	IRCE VO	т.	19.46	GAL.
a state of the second stat	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(rectificities)	29.81	FEET	DEPTH O			~ 47	FEET
						222			An	
				FIEI	D PA	RAMETE	RS			
IME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TUPPIDI
	CASING VOLUME	VOLUME	DOWN	RATE	pir	D . C.	I LEIVIL .	U.K.I.	OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:49	0	0		10 GPM	6.78	680	23.8	50	(2 - 1)-1	(11110)
19:51	19.46	20	In the second	"	7.80	555	23.3	36		220.01
19:53	38.92	40			7.91	527	21.8	23		Sec. 1
19:55	58.38	60		"	7.82	518	21.6	16		1000
19:59	77.84	100			7.07	795	21.9	26		1250
20:00	SAMPLED					State Stra				
		_								
								WA WA		
	E METHOD:			the second se	diam'r a san a	IERSIBLE PU	CALCULATION OF			
	LE METHOD:			3" GRUNDFO	DS SUBN	IERSIBLE PU	And the second se			
	AFTER PURGE:			010 4 0E 11		D. T. W. A'	F SAMPLI	E TIME:	42.10'	
	INTEGRITY:			CAP & SEAL		ECURE.				
REMA	LOCATION:					DV TUDDID	DADE DI	CTV DICC	HARGE WATEI	
REMIA	RRS.			and the second se					WORSENED.	S.
WEATI	HER:			PARTLY CL		and the second se	WIND:	NOTED.	NONE	
	TY CONTROL:			where the part of the state of	the state of the s	and the second se	and the second se	NT WAS CI	LEANED AS NECH	ESSARY.
-						a design of the second second second second second			LL. NEW NITRIL	
CONT	AINMENT:			NO CONTAIN	MENT /	PURGE WAT	ER TO THE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO			TURBIDITY			
						And 1 -				



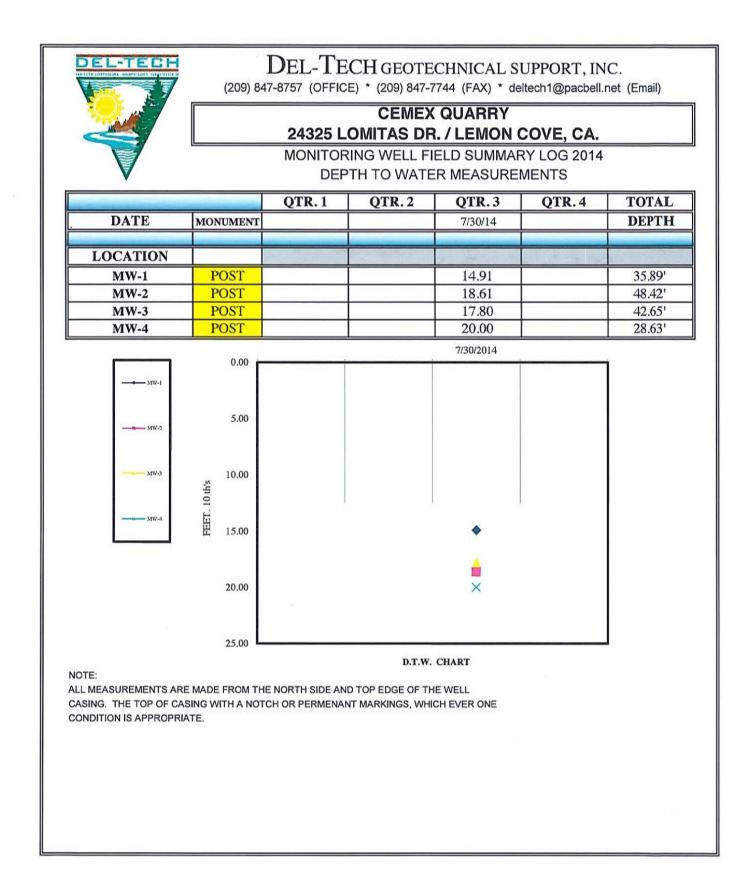
$DEL\text{-}TECH \ \text{Geotechnical support services}$

19701		13. 2. 1		2	-					
SAM	PLE LOCATIC	DN/MW.		3		DATE:			7/30/2014	
Marial - M										
	ECT NAME:	· · · · ·		CEMEX		ANALYSI	S PERFC	ORMED:	SEE CHAIN OI	FCUSTODY
ADDR				OMITAS DI		SAMPLE			19:41	
	STATE:		the substantial design of the substantial de	NCOVE, CA		SAMPLE	and the second se	the state of the s	3 - PLASTICS	
The second s	CONTACT:		GERA	LD COBURN	4	PRESERV	the second s		EAT / HNO3 / H	the second s
CONS	ULTANT:					LAB. ANA	ALYSIS B	Y:	DELLAVALLE	LABS.
		121					PL COL			
	ECT MANAGER:			NYDAM		MONUM	the state of the state of		POST	
SAMP				H/DONLIC	HT	WELL CA				0.1.600
SIGNE	SD: LE MEDIA:			-Size-		WELL CA			2" /	0.1632 NONE
	LE MEDIA: DF CASING ELEV.	ATION	GROU	INDWATER	MSL	P.J.D. REA	ADING / C		N/A LT. BROWN T	
	H TO WATER:	ATION:	(feet.100th's)	17.80	FEET	CALC. PI	IRGE VO		4.06	GAL.
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(rectifoon 3)	24.85	FEET	DEPTH O			~ 41	FEET
				FIEI	D PA	RAMETE	RS			
TIME	CITIL CITIL LA COMPANY	1.0001111	DRAW	DUD (DDD)(C	TI	EC	TEMP	ODB	DISSOLVED	TIDDIDIT
TIME	CUMULATIVE CASING VOLUME	ACTUAL	DRAW DOWN	PUMPING RATE	рН	E.C.	TEMP.	O.R.P.	OXYGEN	COLOR
	PER PURGE	VOLUME	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:28	0	0	(D.1.11.)	1.0 GPM	7.04	796	25.3	6	(FFM)	(1.1.0.)
19:28	4.06	4		"	6.92	795	23.5	-41		
19:36	8.11	8	-	11	6.85	702	24.5	15		
19:40	12.17	12		0	6.78	688	22.3	35		3
19:41	SAMPLED	C. Siling							In the local day of the	121.2
								Q. 1. E.		
PURG	E METHOD:			CENTRIFUG	AL PUM	P.				
SAMP	LE METHOD:			CENTRIFUG	AL PUM	Р.				
and the second second second second	V. AFTER PURGE:					D. T. W. A	T SAMPLI	E TIME:	18.16'	
	INTEGRITY:			CAP & SEAL		ECURE.	_	_		
	LOCATION:			SEE SITE M/	AP.					
REMA	RKS:			_	_		_	_		
WEAT	HER:			PARTLY CL	OUDY / I	HOT	WIND:		NONE	
QUAL	ITY CONTROL:			ALL PURGIN	IG AND N	IONITORING	EQUIPME	ENT WAS C.	LEANED AS NECI	ESSARY.
				DEDICATED	PURGE	TUBING INS	TALLED IN	V EACH WE	ELL. NEW NITRIL	E GLOVES.
CONT	AINMENT:			NO CONTAIL	VMENT /	PURGE WAT	ER TO THE	E GROUND		-
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OX	GEN METER	
				SOLINIST SLO		ER	TURBIDITY		- Are to a second to be to	
			_							



DEL-TECH geotechnical support services

SAM	PLE LOCATIO	DN/MW.	1	4		DATE:			7/30/2014	
		End of					5/			E and
	ECT NAME:		C	CEMEX		ANALYSI	S PERFC	RMED:	SEE CHAIN O	FCUSTODY
ADDR				OMITAS DI		SAMPLE			19:19	
	STATE:			NCOVE, CA	6 m -	SAMPLE			3 - PLASTICS	
	CONTACT:		GERA	LD COBURN	1	PRESERV	Contraction of the local division of the loc		EAT / HNO3 / H	and the second se
CONS	ULTANT:					LAB. ANA	ALYSIS B	Y:	DELLAVALLE	LABS.
				Renau Andrea						do 112
	ECT MANAGER:			NYDAM		MONUMI			FLUSH	
SAMP				H / DON LIC	ЭНТ	WELL CA				0.6500
SIGNE	LD: LE MEDIA:			NDWATER		WELL CA			4" /	0.6528
The state of the s	DF CASING ELEVA	ATION	GROU	NDWATER	MSL	P.J.D. REA	ADING / C		N/A STY TO LIGHT	NONE
	H TO WATER:		(feet.100th's)	20.00	FEET	CALC. PU	IRGE VO	Contract Contract	5.63	GAL.
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.
	DING WATER CO	LUMN:	(8.63	FEET	DEPTH O	a second and a second se	and the second second second second second	~ 27	FEET
-1011-							and the second second			
				FIEI	D PA	RAMETE	RS	- Magerine		
ГІМЕ	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT
	CASING VOLUME	VOLUME	DOWN	RATE	X				OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:00	0	0		1.0 GPM	8.08	912	25.9	79		a transferration
19:06	5.63	6		"	7.52	858	24.1	91		Service Street
19:12	11.27	12		"	7.07	873	23.9	83		TURBET
19:18	16.90	18		"	6.98	859	23.8	71		8
19:19	SAMPLED							Second State		
PURG	E METHOD:			CENTRIFUG	AL PUM	P.				
	LE METHOD:			CENTRIFUG						
D. T. W	AFTER PURGE:					D. T. W. A'	T SAMPLI	E TIME:	20.16'	
WELL	INTEGRITY:			CAP & SEAL	ARE SI	ECURE.				
	LOCATION:			SEE SITE MA	ĄΡ.					
REMA	RKS:									
WEAT	HER:			PARTLY CL	OUDY / I	HOT	WIND:		NONE	
QUAL	TY CONTROL:			ALL PURGIN	G AND N	MONITORING	EQUIPME	ENT WAS C.	LEANED AS NECI	ESSARY.
				DEDICATED	PURGE	TUBING INS	TALLED IN	EACH WE	ELL. NEW NITRIL	E GLOVES.
CONT	AINMENT:			NO CONTAII	VMENT /	PURGE WAT	ER TO THE	C GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OX	GEN METER	
				SOLINIST SLO		ER	TURBIDITY			
					and a state of the second					



jament j	DELLAVALLE Latenstory, Inc.	AVALLE [®] Accerty, linc. d consultants				Report of Water Analysis	f Water	Analysi	Ø	₩ 2	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-5129	, Suite 110, Fres 74 - (800) 228-9	sno, CA 93728 896 - (559) 233	H6129
		Cemex 13475 N Friant Rd Friant		č	93626					ις ις αης	Lab No. 93772 Sample Date 5/11/2 Sample Time Submitted Date 5/12/2	93772 5/11/2006 5/12/2006		
		13588 58								Ref	Submitted by Reported Date	Gerald Coburn - Pint Mgr 5/19/2006	um - Plnt M	10
	Material Submitted: Water	d: Water								LOCA	Locallon Froject Copy To Fax e-mail	principalita workers		Burr
		nnit							ma/L					
No.	. Description	Н	NO3	so4	TDS	Total	co	HCO3	ö	ca	BM	Na	Ж	Fe
						Alkalinity as CaCO ₃	as CaCO ₃	as caco ₃						
	MDL>		0.04	0.03	10		0.9	ę	0.03	0.1	0.1	0.2	0.3	0.004
	2 - 1 - 1	1.0 ± 14.0	0.45	0.2	10	10	1	5	0.1	0.1	0.1	1.0	0.5	0.1
	EPA>	4500H-B	4500N03E	300.0	2540C	2320B	23208	2320B	300.0 C	31208	31208	31208 200.7	3120B 200.7	31208
•	17.00	62	9.6	6.07	600	261		961	15.0	VEV.	0 5	1 20		50
- 2	MW2 16:24	7.8	52.5	40.2	613	259	7⊽	259	20.5	61.8	30.2	48.8	6.3	3.1
e	MW3 15:00	7.3	59.8	<0.2	660	285	</td <td>285</td> <td>33.5</td> <td>89.7</td> <td>25.2</td> <td>76.7</td> <td>6.3</td> <td>0.3</td>	285	33.5	89.7	25.2	76.7	6.3	0.3
4	MW4 14:05	7.5	79.1	<0.2	605	286	۶	286	32.8	78.2	21.7	65.9	4.6	1.6
		*See exter	*See external laboratory documentation	y documer	Itation									
		NOTE: For received in t	NOTE: For dissolved metals (bolded), all water samples we received in the laboratory and acldified with HNO ₃ to pH <2	itals (bolded) r and acidifi	f), all water s ed with HNO	NOTE: For dissolved metals (bolded), all water samples were filtered when received in the laboratory and acldfiled with HNO $_3$ to pH <2	ltered when							
		ND = None Detected	Detected	on love 1 tree	off of soliton	ND = None Detected MCI = Modernic Contractions I and considered to the Contraction Meter Origins and Modernic Developtions (Title 20)	O total	of her allow	citorine Decuted	Cont Citto 22				
		MDL = Meth	MDL = Method Detection Limit; RL = Reporting Limit	imit; RL = R	eporting Limit			uairiy aru mo	enfext fillionil					
		SM = Standa	Ird Methods fo	r the Examin	ation of Wate	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995	er, 19th ed., 1	995						
		EPA = Enviro Records reta	EPA = Environmental Prote Records retained for 5 yrs.	ection Agenc	y methods us	EPA = Environmental Protection Agency methods used unless otherwise indicated. Records retained for 5 yrs.	wise indicated							
					Approved Bv:									
			ġ.		· Constantial de		El AD Carlification #1505	85						

Page 1 of 1

ELAP Certification #1595

CELLAVALLE [•] Lettorrettory, fire.	0 411 -1			Report of Water Analysis	t of M	/ater /	Analy	<u>sis</u>		19 FA	10 W. McKini X (559) 268-1	ey, Suite 110, 1174 - (800) 2	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129
RMC Pacific 24325 Lomita Lemon Cove 13588 08 Material Submitted	Materia as Dr. P	ls CA CA	93244						Sami Sami Submitt Subn Report Report Locatior	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Conv To	85263 5/19/2005 5/20/2005 Gerald Coburn 6/1/2005 Stillwell Project -	burn lect - Groun	85263 5/19/2005 5/20/2005 Gerald Coburn 6/1/2005 Stillwell Project - Groundwater Monitoring
										FAX E-Mail			
No. Description	E C	DS	R	×	5	DW	mg/t	ġ	HC0.	Total	so.	Ő	e
						•				Alkalinity as CaCO ₃			
MDL>		10	1.5	0.3	0.1	0.1	220			2	0.03	0.04	0.004
RL->	1.0 ± 14.0	10	1.0 34200	0.5	0.1	0.1	0.1 1 450001 C 2220B		5.0	10.0	0.2	0.2 0.45	0.1
EPA>		20407		00210	00710		300.0				300.0	300.0	
1 Monitoring Well MW1 11:08am	70	206	20.1	25	33.3	6.4	17.6	⊽	101	101	43.5	17.1	00
		489	60.6	6.1	55.3	30.2	24.8	⊽	179	179	127	67.7	4.3
MW3		652	90.2	5.0	92.3	25.4	46.1	⊽	293	293	143	44.3	0.5
4 MW4 13:20pm		559	74.0	3.5	81.2	21.5	34.9	চ	233	233	108	83.5	2.4
	NOTE: For dissolved metals (bolded), all water samples were filtered when	r dissolved	metals (bo	(ded), all wa	ter samples	s were filter	ed when						
	received in the laboratory and acidified with HNO $_3$ to pH <2	the labora	tory and ac	dified with	HNO 3 to pl	H<2							
	MDL = Method Detection Limit, RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.	ood Detectik ard Method onmental F	on Limit; RL s for the Exe trotection Ao	= Reporting mination of 1 ency methoo	Limit Mater and V Is used unle	Vastewater, ess otherwis	19th ed., 19 e indicated.	995					
			2	•									
						App	Approved By:				LAP Certific	ELAP Certification #1595	

Report of Water Analysis 1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-9898 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring Copy To	Fax e-mail geraldw.coburn@cemex.com	HCO ₃ Total Total	v as caco ₃ Ci SO4 NO ₃ -N NO ₃ TDS Ca Mg Na	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.03 0.03 0.01 0.0443 10 0.1	5 0.1 0.2 0.1 0.45 10 0.1 0.1 1 2320B 4500NO3F 4500NO3F 2540C 3120B 3120B 3120B	300 300 300	MT42008 811/2008 811/2008 911/2008 910/2008 910/2008 9.11/2008 9.11/2008 9.11/2008	80 7.9 23.0 2.8 12.3 148 23.8 4.1 11	18.8 49.7 17.8 78.8 432 65.6 23.0	39.2 95.4 16.9 74.7 592 73.4 20.9	23.8 74.9 26.5 118 548 78.3 21.6	*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit, RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1895 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QAQC available upon request.
Report of			он со ₃	as CaCO $_3$ as CaCO $_3$ as CaCO $_3$ as CaCO $_3$	mg/L mg/L	1 0.9	2320 B 2320 B		8/10/2/01/8 8/10/2/01/8			د د	<1 <1	cumentation lant Level according to the Ca imit, RL = Reporting Limit r the Examination of Water ar oction Agency methods used were filtered. Wo grams. est.
			Total Alkalinity	as CaCO ₃ as	тдг		2320 B	COOL ON O	BUUZALIA	80	180	253	222	*See external laboratory documentation MCL = Maximum Contaminant Level acc MDL = Method Detection Limit; RL = SM = Standard Methods for the Examina EPA = Environmental Protection Agency Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QA/QC available upon request. Approv
	÷			H	unit		4500H B	accuracy,	0007/6/8	7.5	7.2	7.4	6.9	*See exte MCL = Mt MDL = M MDL = M MDL = M MDL = M SM = Star EPA = En Dissolved MBAS mo QA/QC av
DELLAVALLE [®] Labouratory, inc. Onmist and Consultants	Cernex 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water			WCL>	MDL>	SM-V	EPA> Analveie Date:	transform Dates.				004 Caines - Domestic Well 07:45	

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring	Copy To Fax e-mail geraldw.cobum@cemex.com						đ										Page 2 of 2
Report of Water Analysis			Dissolved	*Fe					Send Out		•	*	*				8	
			Total	¥	ШgЛ	0.3		3120 B	8 8/11/2008				2.8					
			Total	Fe	mg/L 0.30	0.004	0.01	3120 B	8/11/2008	1.33	2.96	0.22	0.15					
CDELLANALLE [®] Lathoratory, linc. Connicts and Consultants	Cemex 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water			MCI-J	MDL>	R	SM-> EPA->	Analysis Date:	65010	002 Stillwell - Domestic Well 08:10	003 Morton - Domestic Well 07:55		ž				

of Water Analysis 1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 120142 Sample Date 8/28/2008 Submitted Date 8/28/2008 Submitted Date 8/28/2008 Submitted by Gerald Coburn-Plant Mgr Reported Date 9/16/2008 Location/Project Stillwell Proj-GW Monitoring Copy To Fax e-mail geraldw.coburn@cemex.com	CI SO4 NO3-N mg/L mg/L mg/L 250 250 10 0.03 0.03 0.01 0 0.1 0.2 0.1 450 300 300 300 8/28/2008 8/	6.8 89 <1 <1 89 <1 <1 22 242 7.9 192 <1 <1 192 20.6 99.6 5.5 24.3 375 37.2 29.8 52 8.1 2.91 7.2 111 <1 <1 <1 10 0.8 1.6 <0.1 <0.45 132 23.3 6.4 12 2.0 7.5 222 <1 11 0.8 1.6 <0.1 <0.45 132 23.3 6.4 12 2.0 7.5 222 <1 <1 2.22 30.4 560 85.0 24.2 7.8 4.2 2.04 MCL = Maximum Contamination <1 6.8 7.3 30.4 560 24.2 7.0 4.2 2.04 MCL = Maximum Contamination <1 6.8 7.3 6.4 1.2 2.0 0.42 5.04 8.5 6.4 1.2 <td< th=""></td<>
Report o	r	Total Alkalinity OH CO ₃ HCO ₃ as CaCO ₃ as CaCO ₃ as CaCO ₃ as CaCO ₃ mg/L mg/L mg/L mg/L 1 0.9 5 10 1 1.0 5 2320 B 2320 B 2320 B 2320 B scarzoos scarzoos scarzoos scarzoos	<pre><1 <1 89 <1 192 <1 <1 192 <1 <1 192 <1 <1 222 <1 <1 222 <1 client c</pre>
		12 8.0001	6.8 89 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
CHALAVALLE [®] Laboratory, Inc.	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	PH MCL> MDL> RL> RL> RL> SM-+ EPA> Anatysis Date: Anatysis Date: B28/2008	001 MW-1 14:47 6.8 002 MW-2 14:21 7.9 003 MW-3 13:30 7.2 004 MW-4 13:00 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5



July 31, 2006

Gerald Coburn CEMEX #13588 13475 N. Friant Road Friant, Ca 93626

Re: Lab No. 95594, 95595

Dear Gerald,

Enclosed are the results of analysis for the domestic well water and pond water samples recently collected to meet Tulare Counties annual sampling requirements.

If you have any questions, please call me.

Respectfully Ben Mydam

Ben Nydam Certified Crop Advisor # 22552

BN/sd

Enclosures

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8114 - (800) 228-9896 - (559) 233-6129	95594 6/26/2006 6/26/2006 Gerald Coburn-P M 7/1/2006 Stillwell D.Well Monitoring	Fe K 0.004 0.3 0.1 0.5 B 3120B 3120B	0.2 2.5 <0.1 4.0 <0.1 2.7
lley, Suite -8174 - (80		Na 1.5 3120B	22) 23)
1910 W. McKin FAX (559) 268	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	Mg 0.1 0.1 3120B	30.0 30.0 30.0 30.0 7.5 53.35 48.0 398 167 <1
	Suth S Suth S Cost	Ca 0.1 0.1 3120B	57.7 78.5 72.2 nitoring Reg
sis			oratory 26.0 20.0 20.0 20.0 20.0 20.0 20.0
ır Analy		HCO ₃ as caCO ₃ 3 5 5 5 2320B	167 220 217 217 217 217 estic Water Q estic Water Q estic Water Q estic Water Q
of Wate		CO ₃ CaCO ₃ 0.9 2320B	67 <1 20 <1 20 <1 for Ferrous Iron from E bater samples were filter hHNO ₃ to pH <2 pto the California Domest g Limit ofs used unless otherwise ods used unless otherwise
Report of Water Analysis		Total Alkalinity as CaCO ₃ 10 2320B	30.0 30.0
	93626	10 10 2540C	48.0 398 84.1 565 56.4 515 56.4 515 56.4 515 or documenta <i>retals (bolded),</i> <i>ry and acidified</i> inant Level acco inant Level acco in the Examinat for the Examinat or the Examinat tection Agency r Approved By:
	S	SO ₄ 0.03 0.2	ABD.000 84.1 56.4 56.4 fl metals (tory and fory and fory and fory and for the i rotection fra.
	Cernex 13475 N Friant Rd riant 13588 13 13 18 Mater	45	7.5 53.36 48.0 398 167 7.8 75.75 84.1 565 220 7.5 81.52 56.4 515 217 7.5 81.52 56.4 515 217 80.75 84.1 565 220 80.75 84.1 565 220 80.75 84.1 565 220 80.75 84.1 565 217 80.65 220 80.65 220 80.65 220 80.65 220 80.65 220 80.65 220 80.65 220 80.65 220 80.65 220 80.65 20 80.65 20 70 80.65 20 80.65 20 80.
AWALLE [®] Moory, Inc. 4 Consultants	Cemex 13475 N Friant 13588 08 1: Water	unit pH 1.0±14.0 4500H-B	7.5 7.5 7.5 7.5 7.5 7.5 8.5 8.6 ext <i>NOTE: F</i> <i>NOTE: Veced li</i> <i>ND = Nor MCL = Mat MDL = Me SM = Stan Records re Records re</i>
DELLAVALLE Laboratory, Int.	Cerne 13475 Friant 13588 08 08 Material Submitted: Water	No. Description MDL> RL> SM>	1 Stillwell - domestic well 07:35 2 Morton - domestic well 07:20 3 Calmes - domestic well 07:00

	-				
8 13-6129	lanage	×	0.3 0.5 3120B	4.0	
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	95595 6/26/2006 Gerald Coburn-Plant Manager 7/7/2006 Stillwell Project - Ponds	Fe	0.004 0.1 3120B	0.6 0.1	
y, Suite 110, Fr 174 - (800) 228		Na	1.5 1 3120B	13	
910 W. McKinle AX (559) 268-8	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax	ßW	0.1 0.1 3120B	7.8 4.0	C C
81 17	Sub Sub S	ß	0.1 0.1 3120B	41.1 21.6	tions (Title 22
S		CI CI	0.03 0.1 300.0	11.7 7.3	nitoring Regula
Analysi		HCO3	caCO ₃ 3 5 2320B	141 69	ooratory Quality and Mc 1995 d.
f Water		ິດ ເ	caco ₃ 0.9 2320B	ত ত	rm Basic Lak Iftered when nestic Water (ter, 19th ed., ' wise indicated
Report of Water Analysis		Total	as CaCO ₃ as CaCO ₃ 10 2320B	141 69	*See external laboratory documentation for Ferrous Iron from Basic Laboratory NOTE: For dissolved metals (bolded), all water samples were fiftered when received in the laboratory and acidified with HNO, to pH <2 ND = None Detected NDL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.
	93626	DS	10 10 2540C	200	*See external laboratory documentation for Ferrous Iron NOTE: For dissolved metals (bolded), all water samples we received in the laboratory and acidified with HNO ₃ to pH <2 ND = None Detected MCL = Maximum Contaminant Level according to the California I MCL = Maximum Contaminant Level according to the California I SM = Standard Methods for the Examination of Water and Waste EPA = Environmental Protection Agency methods used unless of Records retained for 5 yrs.
	CA	s04	0.03 0.2 300.0	19.6 15.5	*See external laboratory documentation for NOTE: For dissolved metals (bolded), all wate received in the laboratory and acidified with Hi ND = None Detected MCL = Maximum Contaminant Level according to MDL = Method Detection Limit; RL = Reporting Li SM = Standard Methods for the Examination of W EPA = Environmental Protection Agency methods Records retained for 5 yrs.
		NO3	0.04 1.0 <u>+</u> 14.0 4500H-B 4500NO3E 300.0	<0.40 3.18	*See external laborato NOTE: For dissolved m received in the laborator ND = None Detected MCL = Maximum Contami MDL = Method Detection I SM = Standard Methods fo SM = Standard Methods fo EPA = Environmental Prot
ALLE [®] TJ, Inc.	Cemex 13475 N Friant Rd Friant 13588 08 : Water	P Li	1.0 ± 14.0 4500H-B	7.7 7.8	*See external labora <i>NOTE: For dissolved</i> <i>received in the laboral</i> ND = None Detected MCL = Maximum Conta MDL = Method Detectio SM = Standard Methods EPA = Environmental P Records retained for 5 y
CELLANALLE Leboratory, Inc.	Cerne 13475 Friant 13588 08 08 Material Submitted: Water	Description	MDL> RL> SM> EPA>	Pump Basin 08:30 Recharge Basin 08:40	
	J	No.		7 7	

Approved By:

ELAP Certification #1595



June 19, 2006

Gerald Coburn Cemex #13588 13475 N. Friant Road Friant, CA 93626

Lab No.: 93772 & 94297

Dear Gerald,

Enclosed are the results for the annual monitoring well water samples recently collected on May 11, 2006.

If you have any questions, please call me.

Respectfully,

Ben Nydam

Ben Nydam Certified Crop Advisor # 22552 Dellavalle Laboratory, Inc.

BN:pjm Enclosures

F:\2005-2006\2005-2006 Jun\BN\Cemex93772,94297.doc

	DELLAVALLE Leburationy, Int.	ALLE [®] Ty, Inc.				Report of Water Analysis	of Water	Analys	S		1910 W. McKinley, Sulte 110, Fresno, CA 83728 FAX (559) 268-8174 - (800) 228-9696 - (559) 233-6129	y, Suite 110, Fr 174 - (800) 228-	ssno, CA 8372 9896 - (559) 23	8 3-6129
		Cemex 13475 N Friant Rd Friant 13588 58	riant Rd	CA	93626					Sub So S	Lab No. 93772 Sample Date 5/11/2006 Sample Time 5/12/2006 Submitted Date 5/12/2006 Submitted by Gerald Col Reported Date 5/19/2006	93772 5/11/2006 5/12/2006 Gerald Coburn - Pint Mgr 5/19/2006	urn - Pint N	Ы
	Material Submitted: Water	: Water								Loca	Location/Project Copy To Fax e-mail	Stillwell -Gmdwtr Monitoring	ndwtr Moni	oring
		unit						1						
No.	. Description	H	NO3	SO4	TDS	Total	°03	HCO3	C	Ca	BW	Na	¥	Fe
						Alkalinity as CaCO ₃	as CaCO ₃	as CaCO ₃						
	MDL>		0.04	0.03	10		0.9	8	0.03	0.1	0.1	0.2	0.3	0.004
	RL-J	1.0 ± 14.0	0.45	0.2	10	10	-	S	0.1	0.1	0.1	1.0	0.5	0.1
	SM> EPA>	4500H-B 4500NO3E 300.0	500NO3E 300.0	300.0	2540C	2320B	2320B	2320B	4500CI C 300.0	3120B 200.7	3120B 200.7	3120B 200.7	3120B 200.7	3120B
								a a						
- 0	MW1 17:00	7.2	22.6	<0.2	263	126	۲	126	15.8	45.0	8.5	26.4	3.2	0.2
N	MVVZ 16:24	7.8	52.5	<0.2	613	259	V	259	20.5	61.8	30.2	48.8	6.3	3.1
5	MINUS 15:00	1.3	59.8	Q.7	660	285	⊽ ₹	285	33.5	89.7	25.2	7.97	6.3	0.3
·		2	1.61	2.02	600	007	7	007	32.6	7.87	1.12	60.9	4.0	J.6
		"See external laboratory documentation	nal laborato	ory docume	ntation									
		NOTE: For (dissolved m	ietais (bolde	d), all water :	NOTE: For dissolved metals (bolded), all water samples were filtered when	fittered when							
		received in the laboratory and acidified with HNO $_3$ to pH <2	he laboratoi	ry and acidit	ied with HNC	3 to pH <2					÷			
		ND = None Detected	Detected											
		MCL = Maxim	num Contam	inant Level a	ccording to th	e California Dor	nestic Water C	luality and Mo	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	tions (Title 22	6			
		MDL = Method Detection Limit, RL = Reporting Limit SM = Standard Methods for the Examination of Water	d Detection	Limit, RL = F or the Examin	teporting Lim	MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater 19th ed 1905	tor 10th or 1	005						

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.

ŝ

Records retained for 5 yrs.

ELAP Certification #1595 Approved By:

Cemex Construction Material LP #13588/08 Attn Gerald Coburn Project: Stillwell Project-Domestic Well Monitoring

basic	toroc 530,243,7234 (ux 530,243,749)	2218 Railroud Avenua Redding, California 96001
Bonort To:		na fora a negata.

www.ixisid/b.com

Report To:	DELLAVALLE LABORATORY, INC
	1910 W MCKINLEY, SUITE 110
	FRESNO, CA 93728
Attention:	DELLAVALLE LABORATORY, INC
Project:	GENERAL TESTING 108518

Lab No:	7100307
Reported:	10/19/07
Phone:	(559) 233-6129
P.O. #	24974

General Chemistry

Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
108518-1 WELLER	Water	(7100307-01)	Sampled:10/0	8/07 13:00	Received:10/	09/07 1	0:20			
Ferrous Iron	an the second second	ug/l	ND		20	50	HACH 8146	10/09/07	10/09/07	B730220
108518-2 STILLWE	L Wat	er (7100307-02	2) Sampled:10	0/08/07 12:5	D Received:	10/09/0	7 10:20			
Ferrous Iron		ug/l	ND		20	50	HACH 8146	16/09/07	10/09/07	8710220
108518-3 MORTON	Water	(7100307-03)	Sampled:10/	08/07 12:40	Received:10	/09/07 1	0:20			
Farrous Iron		ug/l	ND	and the second second	20	50	HACH 8146	10/09/07	10/09/07	B730220
108518-4 CAINES	Water	(7100307-04)	Sampled:10/08	8/07 12:30	Received:10/	09/07 10	:20		-ra-is de altra - 1	
Ferrous Iron		ug/l	ND		20	50	HACH 8146	10/09/07	10/09/07	B7J0220

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relativa Percent Difference
4	Less than reporting limit
5	Less than or equal to reporting limit
>	Greater than reporting limit
≥	Greater than or equal to reporting limit
MDL	Method Detection Limit
RL/ML	Minimum Level of Quantitation
MCL/AL	Maxium Contaminant Level/Action Level
mg/kg	Results reported as wet weight
TTLC	Total Threshold Lim': Concentration
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leachate Procedure

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677



July 20, 2006

Cemex #13588 13475 N Friant Rd Friant, CA 93626

Re: Lab No. 104616

Dear Gerald:

Enclosed are the results for the annual monitoring well water samples recently collected on June 14, 2007.

If you have any questions, please call me.

Respectfully,

Ben Nydam

Ben Nydam Irrigation Specialist, BS, CCA

BN:If

Enclosures

DELLANALLE [®] Lathonethory, Inn.			Report		Nater	of Water Analysis	ysis			1910 W. McK FAX (559) 26	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (659) 233-6129	10, Fresno, C 228-9896 -	.A 93728 (669) 233-6	129	
Cernex 13475 N Friant Rd Friant CA 93626 13588 08									Sam Sam Submit Subr Repor Location		104616 6/14/2007 6/14/2007 G Coburn/A Light/Del-Tech 6/29/2007 Stillwell Proj-GW Monitoring	roj-GW N	Del-Tec i Aonitorin	c 0	
Material Submitted: Water										Fax e-mail					
		Total Alkalinitv	Ю	cos	HC03										Total
	Н	as CaCO3 as CaCO3 as CaCO3 as CaCO3	as CaCO3 a	as CaCO3	as CaCO3	ច	so4	NO ₃ -N	NO3	TDS	Ca	Mg	Na	¥	Fe
	unit	тgЛ	mg/L	тgЛ	mg/L	mg/L	mg/L	лди	mg/L	mg/L	mg/L	mg/L	mg/L r	mg/L	mg/L
MGL>			÷	60		250	0.03	0L 100	0.0443	000	0.1	0.1	0.2	0.3	0.004
RL	1.0 to 14.0	10	-	1.0	5	0.1	0.2	0.1	0.45	9	0.1	0.1		0.5	0.01
SM>	4500H B	2320 B	2320 B	2320 B	2320 B	o	4500SO4 E 4500NO3 E		4500NO3 E	2540 C	3120 B	3120 B	1.00		3120 B
EPA>						300	300	300	300		200.7		200.7 2		
Analysis Date:	6/15/2007	6/16/2007	6/16/2007	8/16/2007	6/16/2007	6/15/2007	6/15/2007	6/15/2007	6/15/2007	6/15/2007	6/15/2007	1002/51/9	1002/61/9 1002/61/9		1002/62/0
001 MW/1 14-10	76	141	V	V	141	12.4	37.2	04	1 59	248	40.4	7.1		2.0	1.69
C MM	, a	228	V	V	228	217	107	14.8	65.5	515	60.4	29.1	49	5.6	15.4
MW3	7.7	109	V	V	109	13.4	27.1	1.5	6.78	205	30.4	8.6			0.46
MW4	8.0	234	V	v	234	38.7	79.4	12.3	54.6	512	59.5	19.3		2.8	1.97
	*See extern	"See external laboratory documentation	documentat												
	MCL = Max	MCL = Maximum contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit: RL = Reporting Limit	ninant Level	vel according to the Ci RL = Reporting Limit	to the Califund th	ornia Dome	stic Water (Quality and I	Monitoring R	egulations	(Title 22)				
	SM = Stand	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995	for the Exar	nination of	Water and	Wastewate	, 19th ed.,	1995							
	Dissolved n	crtA = crivirormentar frotection Agency methods used unless outerwise indicated. Dissolved metals (bolded) were fiftered.	d) were filte	ncy memoried.	lun dash sr	Ass ourerw	se likucate	-							
	MBAS mole	MBAS molecular weight = 340 grams.	= 340 grams												

Approved By: ELAP Certification #1595

			Rep	ort of	Report of Water Analysis	r Anal	ysis		1910 W. McK FAX (559) 261	inley, Suite 11 8-8174 - (800)	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	1275
Cemex 13475 N Friant Rd Friant CA 93626 13588 08							Sar Submi Submi Repo Locatic	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project	108120 9/25/2007 10:45 9/25/2007 Gerald Coburn 10/4/2007 Stillwell Project	oburn roject-Do	mestic We	108120 9/25/2007 10:45 9/25/2007 Gerald Coburn 10/4/2007 Stillwell Project-Domestic Well Monitoring	ĝ
Material Submitted: Water								Copy To Fax e-mail					
		Total Alkalinity	Я	co	НСОЗ				1				
	PH th	as CaCO3 as CaCO3 as CaCO3 as CaCO3 mg/L mg/L mg/L mg/L	as CaCO3 mg/L	as CaCO3 mg/L	as CaCO3 mg/L	CI mg/L	SO4 mg/L 250	NO ₃ -N mg/L	NO ₃ mg/L	TDS mg/L	mg/L	Mg ⁿ	mg/L
MDL>			-	0.9	e	0.03	0.03	0.01	0.0443	9	0.1	0.1	0.2
RL>	1.0 to 14.0	10	-	1.0	9	0.1	0.2	0.1	0.45	9	0.1	0.1	-
SM> FPA>	4500H B	2320 B	2320 B	2320 B	2320 B	4500CI C	4500SO4 E	4500NO3 E 300	4500NO3 E 300	2540 C	3120 B 200.7	3120 B 200.7	3120 B 200.7
Analysis Date:	9/27/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007	9/26/2007	9/26/2007	9/26/2007	9/26/2007	10/1/2007	9/26/2007	9/26/2007	9/26/2007
001 Weller-Domestic Well 10:45	2.1	152	⊽	v	152	17.7	61.2	15.9	70.3	295	42.6	16.8	27
002 Stillwell-Domestic Well 10:30	7.0	183	v	v	183	30.5	110	17.7	78.5	425	61.8	22.2	32
003 Morton-Domestic Well 10:20	7.2	235	V	V	235	24.4	78.7	28.1	124	580	83.9	24.6	64
004 Cairnes-Domestic Well 10:10	7.2	218	₽	V	218	75.5	107	18.4	81.5	562	82.9	23.4	53
	*See extern	*See external laboratory documentation	documenta	ion									
	MCL = Max MDL = Met	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit: RL = Reporting Limit	ninant Leve	vel according to the Ca RL = Reporting Limit	to the Califor	nia Domest	ic Water Qu	ality and Mo	nitoring Reg	ulations (Tit	le 22)		
	SM = Stand	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995	for the Exal	nination of '	Water and M	lastewater,	19th ed., 19	95		5			
	EPA = Envi	EPA = Environmental Protection Agency methods used unless otherwise indicated.	otection Age	ency method	ds used unle	ss otherwise	e indicated.						
	Dissolved n	Dissolved metals (bolded) were filtered.	d) were filte	.per									

Approved By:

MBAS molecular weight = 340 grams.

ELAP Certification #1595

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-8896 - (559) 233-6129	Lab No. 108120 Sample Date 9/25/2007					Location/Project Stillwell Project-Domestic Well Monitoring	Copy To	Fax e-mail																				
_									2	Total	Fe	тgл	0.30	100	3120 B		10/1/2007	0.48	0.21	0.15	20.0	07.0						
											¥	mg/L	60	50	3120 B	200.7	8/26/2007	4.7	2.6	4.1	00	0.0						
DELLAVALLE Luborationy, Int.		Cemex	N Friant Rd	Friant CA 93626	13588	08		Material Submitted: Water			34×		MCL>	MUL-2 BI-5	SM-V	EPA>	Analysis Date:		002 Stillwell-Domestic Well 10:30	003 Morton-Domestic Well 10:20								

Report of Water Analysis

Page 2 of 2

1910 W. McKinley, Sulte 110, Fresno, CA 83728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

> CHLAVALLE[®] Lethorratory, Inc.

Summary of Groundwater Monitoring Well Analysis Cemex

									-mail-								
Lab				Total	Ю	co3	HCO3		b								Total
No.	Date	TIME	H	as CaCO ₃	as CaCO ₃	as CaCO ₃	as CaCO ₃ as CaCO ₃ as CaCO3	ច	SO4	SO4 NO3-N NO3	NO ₃	TDS	Ca	Mg	Na	¥	Fe
MVV - 1																	
85263	5/19/05	11:08 AM	7.0	101	2	2	101	17.6	43.5	3.9	17.1	206	33.3	6.4	29.1	2.5	0.9
93772	5/11/06	5:00 PM	7.2	126		⊽	126	15.8	<0.2	5.1	22.6	263	45.0	8.5	26.4	3.2	0.2
104616	6/14/07	2:10 PM	7.6	141	۲	۲	141	12.4	37.2	0.4	1.59	248	40.4	7.1	24.0	2.0	1.7
MW - 2																	
85263	5/19/05	12:24 PM	7.9	179		۲	179	24.8	127	15.3	67.7	489	55.3	30.2	60.6	6.1	4.3
93772	5/11/06	4:24 PM	7.8	269		۲	259	20.5	<0.2	11.9	52.5	613	61.8	30.2	48.8	6.3	3.1
104616	6/14/07	1:43 PM	8.1	228	4	4	228	21.7	107	14.8	65.5	515	60.4	29.1	49.0	5.6	15.4
MW - 3																	
85263	5/19/05	12:48 PM	7.5	293		۲ م	293	46.1	143	10.0	44.3	652	92.3	25.4	90.2	5.0	0.5
93772	5/11/06	3:00 PM	7.3	285		۲	285	33.5	<0.2	13.5	59.8	660	06	25.2	76.7	6.3	0.3
104616	6/14/07	12:45 PM	7.7	109	۲	۲	109	13.4	27.1	1.5	6.78	205	30.4	8.6	17.0	1.6	0.5
MW - 4																	
85263	5/19/05	1:20 PM	7.6	233		⊽	233	34.9	108	18.8	83.5	559	81.2	21.5	74.0	3.5	2.4
93772	5/11/06	2:05 PM	7.5	286		۲	286	32.8	<0.2	17.9	79.1	605	78.2	21.7	65.9	4.6	1.6
104616	6/14/07	12:20 PM	8.0	234	₽	₽	234	38.7	79.4	12.3	54.6	512	59.5	19.3	63.0	2.8	2.0

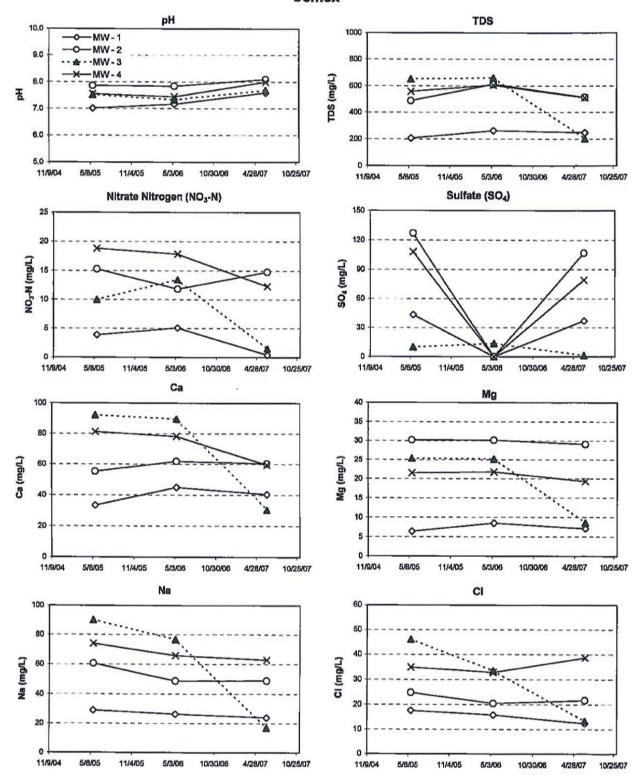
Dissolved metals (bolded) were filtered.

F:\Client C\CEMEX #13588\2007\[MW Analysis Summary 05-07.xis]Table



DELLANALLE Laboratory, Inc. Giamists and Consultants

Summary of Groundwater Monitoring Well Analysis Cemex



6129	на Бр	Total Total K Fe mg/L mg/L mg/L mg/L 0.3 0.30 0.3 0.30 0.3 0.004 0.3 0.004 3120 B 3120 B 200.7 6250007 67.6 15.4 1.6 0.46 2.8 1.97 2.8 1.97	
.A 93728 (659) 233-	Del-Tec Aonitori	Na K mg/L mg/L mg/L 0.2 0.3 1 0.5 3120 B 3120 B 200.7 200.7 613 2.0 49 5.6 17 1.6 63 2.8	
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	104616 6/14/2007 6/14/2007 G Coburn/A Light/Del-Tech 6/29/2007 Stillwell Proj-GW Monitoring	Mg mg/L 0.1 3120B 3120B 200.7 6/152007 8.6 19.3	
ünley, Suite 8-8174 - (80	104616 6/14/2007 6/14/2007 G Coburn/ 6/29/2007 Stillwell Pr	Ca mg/L 0.1 0.1 0.1 0.1 2001 2002 200.7 50.6 59.5 59.5	(Title 22)
1910 W. McK FAX (559) 26	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	TDS mg/L 500 515 512 512	Regulations
	Sam Submi Submi Repol	NO ₃ mg/L 45 0.0443 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.055 6.78 6.78 6.78 6.78 54.6	*See external laboratory documentation MCL = Maximum Contarninant Level according to the California Domestic Water Quality and Monitoring Regulations (Trile 22) MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams.
		SO4 NO3-N mg/L mg/L 250 10 0.03 0.01 0.03 0.01 0.03 0.01 0.03 0.01 37.2 0.4 107 14.8 37.2 0.4 107 14.8 27.1 1.5 79.4 12.3	Quality and 1995 ad.
lysis		SO4 mg/L 250 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.	stic Water r, 19th ed.
. Ana		CI mg/L 250 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.	omia Dome Nastewate ess otherw
of Water Analysis		CO3 HCO3 CaCO3 as CaCO3 mg/L mg/L 0.9 3 1.0 5 820 B 2320 B 820 B 2320 B 820 B 2320 B 61 141 <1 228 <1 109 <1 228 <1 234	to the Calific ng Limit Water and V ds used unk
		CO3 mg/L mg/L co3 co3 co3 co3 co3 co3 co3 co3 co3 co3	tation vel according to the Co RL = Reporting Limit camination of Water ar gency methods used ittered. inns.
Report		Total Alkalinity OH C as CaCO3 as CaCO3 as C mg/L mg/L r 10 1 2320 B 2 2320 B 2320 B 2 6rts2007 6r1 141 <1 228 <1 109 <1 234 <1	r documenta minant Leve n Limit; F is for the Exa rotection Ag od) were filte := 340 gram
		Total Alkalinity as CaCO3 mg/L 10 2320 B <i>erte2007</i> 234 234 234	*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Qualit MDL = Method Detection Limit, RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were fittered. MBAS molecular weight = 340 grams.
		pH unit 4500H B 6/15/2007 8.1 8.1 8.1 8.0	*See extern MCL = Max MDL = Meth SM = Stand SM = Stand EPA = Envi Dissolved <i>m</i> MBAS mole
LLE° blinc.	93626 : Water		
	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MCL> MDL> RL> SM-	

Page 1 of 1

ELAP Certification #1595

Approved By:



September 23, 2008

Cemex

Lab # : 120659, Dear Gerald,

Enclosed are the results for the annual monitoring well water samples recently collected on September 9, 2008

203

Respectfully

Ben Nydam

Ben Nydam Certified Crop Advisor # 22552 Dellavalle Laboratory, Inc.

Channel Include Des-Term Cannel Channel Custor

Invoicing:

4 - Monitoring well: purging, monitoring of field parameters (PH, EC, DO), logging, data collection, water sampling @ D1307.59	= \$1207 (*
4 - Water sample analysis for pH, NO3, SO4, TDS, CO3, HCO3, CI, Ca, Mg, Na, TK, Total Alkalinity Total Iron, Ferrous Iron @ \$ 205.40 each	= 3 (833)60

			Rep	ort of	Report of Water Analysis	Anal	ysis		1910 W. McKi Fax (559) 266	nley, Suite 11 -8174 - (800)	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	
Cemex 13475 N Friant Rd								Sarr Sam Submit	Lab No. Sample Date Sample Time Submitted Date	120659 9/9/2008 9/9/2008			
Friant CA 93626 13588 08								Subi Report Locatio		Gerald Co 9/23/2008 Stillwell Proje	oburn-Pla 3 ect - Domes	Gerald Coburn-Plant Manager 9/23/2008 Stillwell Project - Domestic Well Monitoring	er nitoring
Material Submitted: Water									Copy To Fax e-mail	geraldw.c	obum@c	pp To Fax e-mail geraldw.coburn@cemex.com	
		Total											
		Alkalinity	Ю	တိ	HCO ₃						Total	Total	Total
	Hd	as CaCO ₃ as	as CaCO ₃	CaCO ₃ as CaCO ₃ as CaCO ₃	as CaCO ₃	ច	SO4	NO ₃ -N	NO3	TDS	Ca	Mg	Na
	unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Лвт
			•	00	c	007		200	64400	Ş ç	11	11	15
		ç	- •	6.0 F	0 4	50.0	50.0	10.0	240	e ç			
SM-V	4500H B	2320 B	2320 8	2320 B	2320 B		2.0	4500NO3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B
EPA>						300	300	300	300				
Analysis Date:	8/9/2008	8/10/2008	9/10/2008	8002/01/6	9/10/2008	8/10/2008	9/10/2008	9/10/2008	8/10/2008	8002/6/6	8/11/2008	8/11/2008	9/11/2008
001 Weller - Domestic Well 08:25	7.5	80	4	₽	80	7.9	23.0	2.8	12.3	148	23.8	4.1	£
002 Stillwell - Domestic Well 08:10	7.2	180	۲	V	180	18.8	49.7	17.8	78.8	432	65.6	23.0	32
003 Morton - Domestic Well 07:55	7.4	253	V	V	253	39.2	95.4	16.9	74.7	592	73.4	20.9	51
004 Caines - Domestic Well 07:45	6.9	222	v	₽	222	23.8	74.9	26.5	118	548	78.3	21.6	47
	*See exterr	See external laboratory documentation	documenta	lion									
	MCL = Max MDL = Met	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit: RL = Reporting Limit	ninant Leve	vel according to the C: RL = Reporting Limit	to the Califor	nia Domest	Ic Water Qu	ality and Mo	nitoring Reg	ulations (Tit	le 22)		
	SM = Stand	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995	for the Exal	nination of \	Water and W	fastewater, '	19th ed., 19	35					
	EPA = Envi	EPA = Environmental Protection Agency methods used unless otherwise indicated.	otection Age	ancy method	ds used unle	ss otherwise	indicated.						

Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QA/QC available upon request.

Approved By:

ELAP Certification #1595

Page 1 of 2

CEMEX Construction Materials LP - Gerald Coburn, Plant Mgr - #13588/08 Project: Stillwell Proj - GW Monitoring

Wetlab Results

ARF: 56872

Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

APPL Inc.						
	Swift Avenue		Attn	ANGELA S	MPSON	
Fresno, CA	93722					
Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	K83187 -Client Sample ID	: 120142-1 MW1	-Sample Collection D	ate: 08/28/08	Project: 120142	
SM3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08
APPL ID: A	(83188 -Client Sample ID	: 120142-2 MW2	-Sample Collection D	ate: 08/28/08	Project: 120142	
M3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08
APPL ID: A	(83189 -Client Sample ID	: 120142-3 MW3	-Sample Collection D	ate: 08/28/08	Project: 120142	
M3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08
APPL ID: A	(83190 -Client Sample ID	: 120142-4 MW4	-Sample Collection D	ate: 08/28/08	Project: 120142	
M3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08

Printed: 09/02/08 9:07:03 AM

CEMEX - Lemon Cove Plant #133 - Gerald Coburn - #13588/08 Project: Stillwell Project - Domestic Well Monitoring

Wetlab Results

ARF: 56935

Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

APPL Inc 4203 We Fresno, C	st Swift Ave	anue		Attn	ANGELA S	IMPSON	
Method	Analyt	e	Result	PQL	Units	Frep Date	Analysis Date
APPL ID:	AX83500	-Client Sample ID	: 120659-1 WELLER DOMESTIC	-Sample Collection D	Date. 09/09/08	Project: 120659	i
SM3500FeB	Ferr	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08
APPL ID:	AX83501	-Client Sample ID	: 120659-2 STILLWELL DOMESTI	-Sample Collection)ate: 09/09/08	Project: 120659)
SM35D0FeB	Ferr	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08
APPL ID:	AX83502	-Client Sample ID	120659-3 MORTON DOMESTIC	-Sample Collection D)ate: 09/09/08	Project: 120659)
SM3500FeB	Ferr	ous Iron	Not detected	1. <mark>0</mark>	mg/L	09/09/08	09/09/08
APPL ID:	AX83503	-Client Sample IC	: 120659-4 CAINES DOMESTIC W	-Sample Coilection D)ate: 09/09/08	Project: 120859)
SM3500FeB	Ferr	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08

These results are preliminary and represent information available on 9/10/08 at 9:48am

Printed: 09/10/08 9:48:47 At.1

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-9174 - (800) 228-9896 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stiltwell Project - Domestic Well Monitoring Copy To	Fax e-mail geraldw.coburn@cemex.com															
Report of Water Analysis			Dissolved	* Fe					Send Out	* *							
			Total	¥	тgл	0.3	0.5	3120 B	9/11/2008	1.9	4.0 4 0	, o , c	0.7				
			Total	Fe	mg/L	0.004	0.01	3120 B	8/11/2008	1.33	08.2	110	0.10				
DELLAVALLE® Latimeterry, Inc.	Cemex 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water				MCL> MDL>	RL>	SM>	Analysis Date:		002 Morton Domestic Well 05:10		UD4 Calines - Domestic Well U1.40				

Page 2 of 2

LI ANALLE [®] brattory, Inc.
Charles C
0

Report of Water Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-6174 - (800) 228-9896 - (559) 233-6129

> Cernex 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

Fax e-mail geraldw.coburn@cemex.com

Location/Project Stillwell Proj-GW Monitoring

Copy To

Reported Date 9/16/2008

Submitted by Gerald Coburn-Plant Mgr

Submitted Date 8/28/2008

Sample Time

Sample Date 8/28/2008

Lab No. 120142

	Total	Fe	mg/L	0.30	0.004	0.01	3120 B		9/4/2008	Ŷ	
		¥	mg/L		0.3	0.5	3120 B		9/4/2008		-
		Na	mg/L		0.2	-	3120 B		8/4/2008		-
		Mg	mg/L		0.1	0.1	3120 B		8002/1/6		
		Ca	mg/L		0.1	0.1	3120 B		9/4/2008		
		TDS	mg/L	500	10	10	2540 C		8/29/2008		
		NO3	mg/L	45	0.0443	0.45	4500NO3 F	300	8/29/2008		
		NO ₃ -N									
		SO4	mg/L	250	0.03	0.2		300	8/28/2008		
		IJ	mg/L	250	0.03	0.1		300	8/29/2008		
	HC0 ₃	as CaCO ₃	mg/L		5	\$	2320 B		8/28/2008		
							2320 B		8/28/2008		
	НО	s CaCO ₃ a	mg/L		٣	F	2320 B		8/29/2008		
Total	Nkalinity	as CaCO ₃ as CaCO ₃ as CaCO ₃	mg/L			10	2320 B		8/28/2008		
	4		unit			1.0 to 14.0	4500H B		8/29/2008		
				WCL→	MDL>	RL>	SM->	EPA>	Analysis Date:		

2.91 2.91 2.04 2.04 2.0 2.2 3 12 23 4.3 29.8 6.4 24.2 25.4 37.2 23.3 85.0 596 375 132 580 2.03 24.3 <0.45 304 0.5 5.5 <0.1 68.7 7.1 99.6 1.6 501 3.1 20.6 0.8 355 89 111 222 $\nabla \nabla \nabla$ v $\nabla \nabla \nabla \nabla$ 89 111 222 6.8 7.9 7.5 MW-3 13:30 MW-1 14:47 MW-4 13:00 MW-2 14:21 003 001

*See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)

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SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise Indicated.

Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams.

QA/QC available upon request.

Approved By: ELAP Certification #1595

SEP-08-0	09 TUE 0	4:01 PM		FAX NO.			P. 02/02
Wetlab	Resu	Its	CE	MEX Construct Del	tion Mate		#13588/08
ARF: 5	9643					ey Ave. #110	
APPL Inc.					ano, CA 9372		
	Tempera	nce Avenue		Attn	; Peggy Mille	r	
Method	Analy	te	Result	PQL	Units	Pres Date	Analista
	10 1 11 10	and the second	the second s		- Stubb	Prop Date	wuerkeie Da
APPL.ID: A SM3500FcB		-Client Sample ID: rous Iron		-Sample Collection E	Date: 08/31/09	Project: Filter	Analysis Da
			134963-1 MW-1 Not detected	-Sample Collection E 1.0			The state of the s
SM3500FcB APPL ID; A	Fen 1702376		Not detected	1.0 -Sample Collection D	Date: 08/31/09 mg/L, Date: 08/31/09	Project: Filter 1 09/01/09 Project: Filter 1	Station 09/01/09
SM3500FcB	Fen 1702376	-Cilent Sample ID:	Not detected	1.0	Date: 08/31/09 mg/L,	Project: Filter t 09/01/09	Station 09/01/09
SM3500FcB APPL ID: A SM3500FeB APPL ID: A	Fen 1702376 Fen 1702376	-Cilent Sample ID: ous Iron -Cilent Sample ID: 1	Not detected 134963-2 MW-2 Not detected 134983-3 MW-3	1.0 -Sample Collection D 1.0 -Sample Collection D	Date: 08/31/09 mg/L, Date: 08/31/09 mg/L	Project: Filter 1 09/01/09 Project: Filter 1	Station 09/01/09 Station 09/01/09
SM3500FcB APPL ID: A SM3500FeB APPL ID: A	Fen 1702376 Fen 1702376	-Cilent Sample ID: OUS Iron	Not detected 134963-2 MW-2 Not detected	-Sample Collection D 1.0	Date: 08/31/09 mg/L, Date: 08/31/09 mg/L	Project: Filter t 09/01/09 Project: Filter t 09/01/09	Station 09/01/09 Station 09/01/09
SM3500FcB APPL ID: A SM3500FeB	Fen Y02376 Fen Y02378 Fem Y02377	-Cilent Sample ID: ous Iron -Cilent Sample ID: 1	Not detected 134963-2 MW-2 Not detected 134963-3 MW-3 Not detected	1.0 -Sample Collection D 1.0 -Sample Collection D	Date: 08/31/09 mg/L, Date: 08/31/09 mg/L pate: 08/31/09 mg/L	Project: Filter t 09/01/09 Project: Filter t 09/01/09 Project: Fillor t	Station 09/01/09 Station 09/01/09 Station 09/01/09

and a set

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Wetlab Results ARF: 59765	Cemex #13588/08 Proj: Stillwell Dome	stic Well 19	ilavalle Labora 10 W. McKinle esno, CA 9372	y Ave. #110	
APPL Inc. 908 North Temperance Avenue			n: Docay Millo		
Clovis, CA 93611		All	n: Peggy Mille		
Method Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY03302 -Client Sampl	e ID: 135564-1	-Sample Collection	Date: 09/15/09	Project: Filter	Station
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	09/15/09	09/15/09
APPL ID: AY03303 -Client Sampl	e ID: 135564-2	-Sample Collection	Date: 09/15/09	Project: Filter	Station
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	09/15/09	09/15/09
APPL ID: AY03304 -Client Sampl	e ID: 135564-3	-Sample Collection	Date: 09/15/09	Project: Filter	Station
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	09/15/09	09/15/09
APPL ID: AY03305 -Client Sampl	e ID: 135564-4	-Sample Collection	Date: 09/15/09	Project: Filter	Station
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	09/15/09	09/15/09

DELLAVALLE [®] Lettouratoury, Inc.	ណែរ		Report		of Water Analysis	Anal	ysis		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8896 - (559) 233-6129	inley, Suite 1 8-8174 - (80	110, Fresno, 0) 228-9896	CA 93728 - (659) 233-(3128		
								San	Lab No. 135904 Sample Date 9/22/20	135904 9/22/2009	g				
K Construction M N Friant Rd	rials LP							Submi	Submitted Date 9/23/2009	9/23/200	0				
Friant CA 936 13588	93626							Sub Repo	Submitted by Reported Date	10/5/2009	6				
08								Locatio	Location/Project Stillwell Project-GW Monitoring	Stillwell	Project-0	SVV Monit	oring		
Material Submitted: Water	ter								Fax						
									e-mail	pete.loca	astro@ce	e-mail pete.locastro@cemex.com			
		Total	Ъ	CO3	HC03					Dissolved					
		Alkalinity	as	as	as					Solids					Total
	H	as CaCO3	CaCO3	CaCO3	CaCO3	ū	S04	N-EON	NO3	TDS	Ca	BM	Na	¥	Fe
	unit	mg/L	щg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			3		•	002	250	2.00	45	<u>8</u>					00.0
RL->	1.0 to 14.0	9		0.8	n m	0.0	0.0	10.0	0.0443	P 9	1.0	c. 1.0	1	0.6	0.5
SM>	4500H B	2320 B	2320 B	2320 B	2320 B			4500NO3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B	3120 B	3120 B
EPA>						300	300	300	300		0'0	0.0	0.0	0.0	
Analysis Date:	8/23/2009	9/23/2009	8/23/2009	9/23/2009	8/23/2009	8/23/2009	9/23/2009	802/22/6	80272008	9/25/2009	8/24/2008	8002426	8/24/2008	8/24/2009	8/28/2009
001 MW 1 14:38	6.4	165	⊽	⊽	165	17.0	25.0	0.8	3.40	307	43.6	10.1	26	6.0	1.52
002 MW 2 13:56	7.6	165	V	v	165	20.5	106	0.6	2.61	360	22.8	27.4	52	7.8	5.93
	6.4	86	V	v	98	13.7	19.7	0.4	1.76	195	26.7	6.9	16	3.3	0.56
004 MW 4 12:20	6.9	241	۲	٧	241	76.8	90.8	13.2	58.6	620	79.1	26.7	81	5.2	2.57

*See external laboratory documentation

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EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered.

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QA/QC available upon request.

Approved By:

ELAP Certification #1595

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								1.757	FAX (559) 26	8-8174 - (800) 228-9896 -	FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	28	
									Lab No. 135564	135564				
								Sam	Sample Date	9/15/2009	6			
Cemex Construction Materials LP								Sam	Sample Time					
13475 N Friant Rd								Submit	Submitted Date	9/15/2009	6			
Friant CA 93626								Subi	Submitted by					
13588								Repor	Reported Date	9/28/2009	6			
08								Locatio	Location/Project	Stillwell Domestic Wells	Domestic	Wells		
									Copy To					
Material Submitted: Water									Fax		(
									e-mail	pete.loca	istro@ce	e-mail pete.locastro@cemex.com		
		i tre t	5	500						Dieenlund				
		1 OLA	5	3	SODE									
		Alkalinity	as	as	as					Solids	Total	Total	Total	Total
	Hd	as CaCO3	CaCO3	CaCO3	CaCO3	0	S04	N-SON	NO3	TDS	Ca	Mg	Na	Fe
	unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	тgл	mg/L	mg/L	mg/L	mg/L	mg/L
MCL->						250	250	10	45	200				0.00
MDL>			-	0.9	9	0.03	0.03	0.01	0.0443	10	0.4	0.1	0.4	0.281
RL->	1.0 to 14.0	10	-	1.0	9	0.1	0.2	0.1	0.45	10	0.5	0.1	-	0.5
SM->	4500H B	2320 B	2320 B	2320 B	2320 B			4500NO3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B	3120 B
EPA>						300	300	300	300					
Analysis Date:	9/16/2009	9/16/2009	9/16/2009	9/16/2009	8/16/2009	9/16/2009	9/16/2009	9/16/2009	9/16/2009	8/17/2009	6002/11/6	9/17/2009	8/17/2008	8/17/2008
													1	
001 Weller 10:30	6.5	129	v	v	129	12.6	49.3	6.4	28.5	300	37.5	12.8	24	0.24
002 Stillwell 10:20	6.7	179	V	v	179	22.5	59.0	19.4	85.8	477	60.9	21.6	29	0.08
003 Morton 10:10	6.9	242	v	v	242	34.4	87.0	10.6	47.2	557	66.9	19.2	55	0.11
004 Caimes 10:00	6.9	196	⊽	v	196	17.1	67.7	25.2	112	540	63.4	17.8	48	0.05

1910 W. McKinley, Suite 110, Fresno, CA 93728

Report of Water Analysis

*See external laboratory documentation

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Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams.

QA/QC available upon request.

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 135564 Sample Date 9/15/2009 Sample Time Submitted Date 9/15/2009 Submitted by Gerald Coburn Reported Date 9/28/2009 Location/Project Stillwell Domestic Wells Copy To	Fax e-mail pete.locastro@cemex.com		
Report of Water Analysis			Total *Ferrous K Fe mg/L 81209 send Out 3.7 * 3.7 * 3.1 *	
	Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water	MCL-> MCL-> MDL-> RL-> SM-> SM-> EPA-> Analysis Date: EPA-> Analysis Date: 001 Weller 10:30 002 Stillwell 10:20 003 Morton 10:10 000 Cairnes 10:00	

Page 2 of 2

	emex #13588/58 11well Proj - GW Mo	nitoring 191	avalle Labora 0 W. McKinie sno, CA 9372	y Ave. #110	
APPL Inc.				22.0	
908 North Temperance Avenue Clovis, CA 93611		Attn	: Elisa Sanch	ez	
Method Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY17210 -Client Sample ID:	144382-1 MW1	-Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	08/23/10	06/23/10
APPL ID: AY17211 -Client Sample ID:		-Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	06/23/10	06/23/10
APPL ID: AY17212 -Client Sample ID:	144382-3 MW3	-Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	06/23/10	06/23/10
APPL ID: AY17213 -Client Sample ID:	144382-4 MW4	-Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
SM3500FeB Ferrous Iron	Not detected	1.0	mg/L	06/23/10	06/23/10

Printed: 06/29/10 10:07:27 AM

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DELLANALLE [®] Leibeurgitary, Inte-	WALLE ⁶ arrue, Inc.			Rep	Report of	Water Analysis	r Anal	ysis		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	inley, Suite 1 8-8174 - (80	10, Fresno,)) 228-9896	CA 93728 - (559) 2334	129		
Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	t Rd CA 93626	als LP							Sarr Sabmit Submit Subh Repol		144382 6/23/2010 6/23/2010 Pete Locastro 7/8/2010 Stillwell Projec	144382 6/23/2010 6/23/2010 Pete Locastro 7/8/2010 Stillwell Project - GW Monitoring	GW Mon	itoring		
Material Submitted: Water	Water									Fax Fax e-mail	pete.loca	py ro Fax e-mail pete.locastro@cemex.com	mex.con			
		Total Alkalinitv	OH as	CO3	HCO3										Total	
	Ha	as CaCO ₃	CaCO ₃	CaCO ₃	CaCO ₃	ច	SO4	NO ₃ -N	NO3	TDS	Ca	BM	Na	¥		*Ferous Fe
NICI >	unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	лос	mg/L	mg/L	T/Bm	тg/L	Лдт	mg/L	mg/L	
MDL>			Ŧ	60		062	0.03	2.01	45.0	10.0	11	01	0.15	50	0.28	
RL>	1.0 to 14.0	₽		1.0	5	0.1	0.2	0.1	0.45	10.0	0.1	0.1	1.0	0.5	0.5	
Î III	4500H B	2320 B	2320 B	2320 B	2320 B	SM 4500-CI EM 4500-SO4	A 4500-SO4	4500NO3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B	3120 B	3120 B	
Analysis Date:	6/24/2010	6/24/2010	6/24/2010	6/24/2010	624/2010	300	300 6/24/2010	300	300	6/24/2010	6/28/2010	6/28/2010	6/28/2010	6/28/2010	7/13/2010	Send Out
	7.2	134	₽	₽	134	18.9	34.6	0.4	1.69	257	42.0	10.4	23	3.3	0.74	4
	8.2	154	₽	v	154	21.6	94.6	0.8	3.58	340	15.9	26.4	55	8.7	1.78	•
	7.1	112	2	v	112	18.4	29.0	0.6	2.75	220	35.4	9.1	17	2.4	0.36	•
004 MW 4 @ 08:40	7.2	272	V	₽	272	205	126	16.9	74.9	910	132	38.7	132	5.6	1.79	*
		*See external laboratory documentation	l laboratory	documentat	ion											
		MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDI = Mathod Detection Limit- RI = Recording Limit	num Contan	ninant Level	wel according t RI = Renortir	to the Califon	nia Domesti	c Water Qua	ality and Mor	itoring Reg	ulations (T	lle 22)				

MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were fittered.

MBAS molecular weight = 340 grams.

OA/QC available upon request.

Approved By:

Cemex #13588/08 Proj: Stillwell Domestic Well

ARF: 63597

Wetlab Results

APPL Inc.

Fresno, CA 93728

Dellavalle Laboratory, Inc.

1910 W. McKinley Ave. #110

Method	Analyt	19 19	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	V29764	-Client Sample ID: 152347-1		-Sample Collection D	ate: 01/10/11	Project: STILL	WELL DOMESTI
M3500FeB		ROUS IRON	Not detected	1.0	mg/L.	01/10/11	01/10/11
APPL ID: A	V20765	-Client Sample ID: 152347-2		-Sample Collection D	late: 01/10/11	Project: STILL	WELL DOMESTI
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	01/10/11	01/10/11
APPL ID: A	V20766	-Client Sample ID: 152347-3		-Sample Collection E	late: 01/10/11	Project: STILL	WELL DOMEST
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	01/10/11	01/10/11
APPL ID: A	V20787	-Client Sample ID: 152347-4		-Sample Collection	Date: 01/10/11	Project: STILL	WELL DOMESTI
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	01/10/11	01/10/11

ARF: 6	Temperance Aven	Proj:	Construction #13 Stillwell Projec Monitoring	8588/08 st-DW	1910 Fresn	valle Labor W. McKinli o, CA 937 Elisa Sanct	ey Ave. #110 28	
Method	Analyte		Result	PC	ar	Units	Prep Date	Analysis Date
APPL ID: A SM3500FeB	Y41173 -Client Sar FERROUS IRC		705-1 MW-1 Not detected	-Sample Col 1.		e: 07/11/11 mg/L	Project: STILL: 07/12/11	WATER PROJECT 07/12/11
APPL ID: A SM3500FeB	Y41174 -Cilent San FERROUS IRC		705-2 MW-2 Not detected	-Sample Coll 1.		e: 07/11/11 mg/L	Project: STILLA 07/12/11	WATER PROJECT 07/12/11
APPL ID: A' SM3500FeB	Y41175 -Client San FERROUS IRO	npie ID: 1597 N	705-3 MW-3 Not detected	-Sample Coll 1.(e: 07/11/11 mg/L	Project: STILLV 07/12/11	VATER PROJECT 07/12/11
APPL ID: A) SM3500FeB	/41176 -Client Sam FERROUS IRO	iple ID: 1597 N	05-4 MW-4 Not detected	-Sample Colle 1.0		: 07/11/11 mg/L	Project: STILLV 07/12/11	ATER PROJECT

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		2	Rep	ort of	Wate	Report of Water Analysis	ysis		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8896 - (559) 233-6129	ey, Suite 110, 3174 - (800) 2	Fresno, CA 28-8896 - (55	33728 9) 233-6129	
mex C 175 N 888								S S S S S S S S S S S S S S S S S S S	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date		1 astro		
uo Material Submitted: Water								LOCA	Location/Project Copy To Fax e-mail		roject billwell Project-Domestic We ppy To Fax (925) 426-2226 e-mail pete.locastro@cemex.com	stillwell Project-Domestic Well Monitoring (925) 426-2226 pete.locastro@cemex.com	молтогид
		Total	НО	CO3	HC03								
	Hd	Alkalinity as CaCO ₃	as CaCO ₃	as CaCO ₃	as CaCO ₃	ច	SO4	NO ₃ -N	NO3	TDS	Ca	Mg	Na
	unit	Tigm	mg/L	mg/L	тgл	mg/L	тgл	mg/L	mg/L	mg/L	mg/L	тg/L	mg/L
MGL->				0.9		0.03	0.03	2.01	0.04	10,0	0.1	0.1	0.15
RL->	1.0 to 14.0	9	-	1.0	o o	0.1	0.2	0.1	0.45	10.0	0.1	0.1	1.0
SM>	4500H B	2320 B	2320 B	2320 B	2320 B	SM 4500-CI E	M 4500-SO4	Let 10.107.05.1.A L	SM 4500-CI EM 4500-SO4 Let 10:107.05.1.A	2540 C	3120 B	3120 B	3120 B
EPA> Analysis Date:	7/13/2011	7/13/2011	7/13/2011	1/13/2011	113/2011	300 7/19/2011	300	300 7/19/2011	300	1/22/2011	7/13/2011	7/13/2011	7/13/2011
	r	1				000	0.00		000	000			
00:11 @ 1-700 LUN COU	1.1	145		51	145	18.0	40.0 80.4	0.0	2.83 8 50	320	50.4 20.4	78.6	24
	7.2	530	7	7	530	217	124	18.0	79.5	1190	237	87.8	22
	7.4	233	⊽	7	233	92.2	90.4	15.2	67.4	687	74.6	27.1	107

*See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams.

QA/QC available upon request.

ELAP Certification #1595 Approved By:

Page 1 of 2

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9996 - (559) 233-6129	Lab No. 159705 Sample Date 7/11/2011 Sample Time Submitted Date 7/12/2011 Submitted by Pete Locastro Reported Date 8/1/2011 Location/Project Stillwell Project-Domestic Well Monitoring Copy To Fax (925) 426-2226 e-mail pete.locastro@cemex.com		
Report of Water Analysis		*Ferous Fe Send Out	
		Total Fe mg/L 0.3 0.004 0.01 3120 B	0.11 1.05 1.39
		K mg/L 0.3 3120 B 7/13/2011	3.5 5.3 5.3
	Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MDL> RL> SM> EPA> Analysis Date:	001 MW-1 @ 17:00 002 MW-2 @ 16:39 003 MW-3 @ 16:14 004 MW-4 @ 15:55

Page 2 of 2

DELLANALLE"					עעמונכ	Nepoll of valet Allarysis	A la		1910 W. MCKINIEY, SUITE 110, FRESNO, CA 93/28 FAX (558) 268-8174 - (800) 228-9896 - (559) 233-6129	ey, sune 110 3174 - (800) 2	, Fresno, CA 28-9896 - (55	9) 233-6129	
									Lab No.	Lab No. 152347			
								S	Sample Date	1/10/2011	11		
Cemex Construction Materials LP								Ű	Sample Time				
13475 N Friant Rd								Sub	Submitted Date	1/10/2011	11		
Friant CA 93626								۵	Submitted by	Pete Locastro	castro		
13588								Rel	Reported Date	1/26/2011	11		
08								Loca	Location/Project		Stillwell Domestic Wells	Wells	
									Copy To				
Material Submitted: Water									Fax				
									e-mail	pete.loc:	e-mail pete.locastro@cemex.com	mex.com	
		Total	Ы	co3	HC03								
		Alkalinity	as	as	as								
	H	as CaCO ₃	CaCO ₃	CaCO ₃	CaCO ₃	U	SO4	NO ₃ -N	NO3	TDS	Ca	BM	Na
	unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ηθш	mg/L	mg/L	mg/L	mg/L
MCL->						250	250	10.2	45.0	500			
MDL->			-	0.9	8	0.03	0.03	0.01	0.04	10.0	0.1	0.1	0.15
RL	1.0 to 14.0	6	-	1.0	5	0.1	0.2	0.1	0.45	10.0	0.1	0.1	1.0
SM>	4500H B	2320 B	2320 B	2320 B	2320 B	SM 4500-CI EM 4500-SO4	M 4500-SO4	Let 10.107.05.1.A	Let 10.107.05.1.A Lat. 10.107.05.1.A	2540 C	3120 B	3120 B	3120 B
EPA>						300	300	300	300				
Analysis Date:	1/11/2011	1/11/2011	1/11/2011	1/11/2011	1/11/2011	1/12/2011	1/12/2011	1/11/2011	1/25/2011	1/18/2011	1/12/2011	1/12/2011	1/12/2011
001 Weller 12:40	7.3	54	⊽	₹	54	1.7	1.6	<0.1	<0.45	135	6.0	5.1	11
002 Stillwell 12:58	7.3	54	v	¥	54	2.0	1.5	<0.1	<0.45	135	5.9	5.0	11
003 Morton 11:39	7.6	208	٧	5	208	33.4	75.6	11.0	48.9	505	68.3	19.8	58
004 Cairnes 11:30	7.4	181	۷	۲	181	17.2	55.3	23.9	106	515	65.6	17.6	53

1910 W. McKinley, Suite 110, Fresno, CA 93728

Report of Water Analysis

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*See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (boided) were fittered.

MBAS molecular weight = 340 grams. **OAVOC** available upon request.

ELAP Certification #1595 Approved By:

Sis fresno, CA 93728 (559) 268-8174 - (800) 228-9696 - (559) 233-6125	Lab No. 152347 Sample Date 1/10/2011 Sample Time Submitted Date 1/10/2011 Submitted by Pete Locastro Reported Date 1/26/2011 Location/Project Stillwelf Domestic Wells	Fax e-mail pete.locastro@cemex.com			
Report of Water Analysis					
Report of			*Ferous Fe	Send Out	* * * *
			Total Fe 0.3	0.004 0.01 3120 B 1/12/2011	6.0 6.0 6.0 6.0 6.0
			ле Ма	0.3 0.5 3120 B 1/12/2011	1.3 3.5 2.4
DEL AVALLE Laboratory, Int.	Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water	MCL->	MDL—> RL—> SM—> EPA—> Analysis Date:	001 Weller 12:40 002 Stillwell 12:58 003 Morton 11:39 004 Cairnes 11:30

Page 2 of 2

		Bacte	riologi	cal Wa	Bacteriological Water Analysis	/sis	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9898 - (559) 233-6129
	chanters and Consultanta Chanters and Consultanta					Lab No. 1	152342
	mex Construction Materials LP 175 N Friant Rd ant	CA	93626		ดี		ble Time 11:39 Sampler P. Proctor ed Date 1/10/2011 ritted by Gerald Coburn
	80				Lo R	Reported Date 1/11/201 Location/Project Routine	1/11/2011 Routine
Material Submitted:	÷						bete.locastro@cemex.com
					Total		
				Rec'd	MPN	MPN	Residual
		Date	Time	Temp	Coliform	E-Coli	Chlorine
		Started	Started	ç	per 100 ml	per 100 ml	mg/L
	2 2 2				12	12	
	SM—> Analysis Date:	1/11/2011	1/11/2011	1/11/2011	11/1/2011	9223 1/11/2011	
001 Morton		1/10/2011	16:00	5.9	5	⊽	
			ND = None Detected SM = Standard Metho	ected Methods for th	te Examination of	Water and Waste	water, 19th ed., 1995
			Records retaine mg/L = ppm	d for 5 yrs.			Records retained for 5 yrs. mg/L = ppm
						Approved By:	
							ELAP Certification #1595

Wetlab Results

ARF: 67538

Cemex #13588/08 Proj: Stillwell Proj GW Monitoring Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

Method	Analyte)	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	V59312	-Clieni Sample ID: 169985-1		-Sample Collection D	ale: 04/18/12	*	
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	V59313	-Client Sample ID: 169985-2		-Sample Collection D	ate: 04/18/12		
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	¥59314	-Client Sample ID: 169985-3		-Sample Collection E	ale: 04/18/12		
M3500FeB		ROUS IRON	Nol delected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	Y59315	-Cilent Sample ID: 169985-4		-Sample Collection	ate: 04/18/12		
M3500FeB		ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12

Printed: 05/07/12 3:50:40 PM

Wetlab Results ARF: 67711		: #13588/08 Stillwell Well	Domestic	Dellavalle Labor 1910 W. McKink Frasno, CA 937	ey Ave. #110	
APPL Inc. 908 North Temperance Clovis, CA 93611	Avenue			Atin: Elisa Sanc	hez	
Method Analyte		Result	PQ	L Units	Prep Date	Analysis Date
APPL ID: AV60853 -CI	lient Sample ID: 171014-1		-Sample Colle	ction Date: 05/09/12	Project: Stillwe	Il Domestic Well
	이야지 않는 것은 것은 것은 것을 가지 않는 것은 것을 가지 않는 것이 있다. 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것을 가 있다. 것은 것은 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것을 알고 있다. 것은 것을 알고 있다. 것은	Not detected	1.0	mg/L	05/10/12	05/10/12
SM3500FeB FERRO	이야지 않는 것은 것은 것은 것을 가지 않는 것은 것을 가지 않는 것이 있다. 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것을 가 있다. 것은 것은 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것은 것은 것은 것은 것은 것은 것은 것을 알고 있다. 것은 것을 알고 있다. 것은 것을 알고 있다. 것은	Not detected		ng/L.		05/10/12 I Domestic Well
SM3500FeB FERRO APPLID: AY80854 -CI	US IRON ient Sample ID: 171014-2	Not detected Not detected		ction Date: 05/09/12		
SM3500FeB FERRO APPLID: AY80854 - CI SM3500FeB FERRO	US IRON ient Sample ID: 171014-2		-Sampie Colls 1.0	ction Date: 05/09/12	Project: Stillwa 05/10/12	li Domestic Well
SM3500FeB FERRO APPLID: AY80854 -CI SM3500FeB FERRO APPLID: AY60855 -CI	US IRON Ient Sample ID: 171014-2 US IRON Ient Sample ID: 171014-3		-Sampie Colls 1.0	ction Date: 05/09/12 mg/L ction Date: 05/09/12	Project: Stillwa 05/10/12	II Domestic Well 05/10/12
SM3500FeB FERRO APPLID: AV80854 -01 SM3500FeB FERRO APPLID: AV80855 -01 SM3500FeB FERRO	US IRON Ient Sample ID: 171014-2 US IRON Ient Sample ID: 171014-3	Not detected	-Sample Colle 1.0 -Semple Colla 1.0	clian Date: 05/09/12 mg/l.	Project: Stillwa 05/10/12 Project: Stillwa 05/10/12	ll Domestic Well 05/10/12 Il Domestic Well

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	P	IDELLANALLE [®] Lehter clary, live. Cremiste and Consultants				Repo	ort of	Wate	Report of Water Analysis	Ilysis			1910 W. McKinley, Suile 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	nley, Suite 	110, Fresno 0) 228-9896	, CA 93726 3 - (559) 23	8 3-6129		
	Cemex Constructic 13475 N Friant Rd Friant 13588 08	on Mate		93626							Submit Subr Repor Locatio	Lab No. 1 Sampler N Submitted Date C Submitted by F Reported Date C Location/Project 5 Copy To Fax (1 / 1014 N. Olson 05/09/12 Ramon Neilson 05/29/12 Stillwell Domestic Wells (925) 426-2226	ilson mestic V 2226	Vells				
		Material Si	Material Submitted: Water	Water								e-mail <u>r</u>	e-mail ramon.neilson@cemex.com	ilson@c	emex.cc	E			
I			ate C	gwi	꾿	Total Alkalinity	OH Scaco. as	Total Alkalinity OH CO ₃ HCO ₃ es CarCO ₃ as CaCO ₃ as CaCO ₃	HCO ₃ s caco ₃	ច	so	NO ₃ -N	Ñ	TDS	ទី	BM	Na	×	Total Fe
				Sampled		mall	mg/L	mg/L	mg/L	mg/L	mg/L	Лдт	mg/L	тур	mg/L	mg/L	mg/L	тgл	mg/L
		WCL>					•		e.	250	250	10.2	45.0	500					0.3
		WDI>					-	0,9	en	0.03	0.03	0.01	0.04	10.0	0.1	0.1	0.15		0.004
		RL→			1.0 to 14.0	10	÷	1.0	5	0.1	0.5	0.1	2.0						0.1
		SM->			4500H B	2320 B	2320 B	2320 B	2320 B					2540 C	3120 B	3120 B	3120 8	3120 8 3	3120 B
		EPA>								300.0	300.0	300.0	300.0						
		Analysis Date:			5/10/2012	5/10/2012 5/10/2012		5/10/2012	5/10/2012	5/10/2012	5/10/2012	5/10/2012	5/10/2012	521/2012 5/14/2012		5/14/2012 5/	5/14/2012 5/	5/14/2012 5/	5/14/2012
		Analysis Time:			11:03	11:03	11:03	11:03	11:03	17.58	17.58	17:58	17,58	4:00	12.19	12:19	12:19	12:19	15:58
I																			
001	1 Weller		05/09/12	10:00	6.8	133	¥	۲	133	16.2	38.3	6.9	30.6	1030		15.8	24		<0.10
002			05/09/12	9:25	6.8	171	۲.	₽	171	22.4	55.6	21.6	95.6	212		23.6	32		<0.10
003			05/09/12	10:50	7.1	214	₽	5	214	19.5	66.9	19.6	86.9	175		20.0	56		0.15
004			05/09/12	10:30	7.0	201	v	V	201	17.0	63.4	26.7	118	580	75.7	22.1	51	2.6	<0.10
				,		a del lere			5										
					pH analy MCL = M	PH analyzed ouside of 1 MCL = Maximum Conta	e of 15 n contamin	The second substance of 15 min hold time. MCL = Maximum Contaminant Level acc	ime. I according	to the Ca	lifomia D	Peee external raporatory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	ater Qualit	y and M	onitoring	Regulati	ons (Title	\$ 22)	
					MDL = M	MDL = Method Detection Limit; SM = Standard Methods for the	tection L	imit; RI	RL = Reporting Limit xamination of Water a	ng Limit Water ar	id Waster	MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater. 19th ed., 1995	ed., 1995						
					Dissolved QA/QC av	Dissolved metals (bolded) were filtered. QA/QC available upon request.	ided) wer	e filtered.					-						
							Appr	Approved Bv:											
							F		FLAP	FI AP Certification #1595	n #1595			Î					

Page 1 of 2

ELAP Certification #1595



Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

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Time	Sampled								10:00	9:25	10:50	10:30	
Date	Sampled								05/09/12	05/09/12	05/09/12	05/09/12	
		MCL->	WDI-	RL>	SM->	EPA>	Analysis Date:	Analysis Time:					
									001 Weller	Stillwell	003 Morton	Calmes	
									60	002	003	004	

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		1	J			8	5	710	Q		10	. ~		
		¥	шgЛ	0.3	0.5	3120 B	id ha	7107/1/2	10:15	4.1	6.5	2.3	OV	tte 22)
728 233-6129		Na	mg/L	0.15	1.0	3120 B	21 PO4 12	71/17/1/10	10:15	\$	54	2	. 98	ations (Ti
ino, CA 93 896 - (559)	oring m	Mg	mg/L	0.1	0.1	3120 B		7107/00	10:15	15.2	97 G	147	25.6	g Regul
e 110, Fres 800) 228-9	.ight W Monit	ទី	mg/L	0.1	0.1	3120 B	0100112	ZIUZIUS	10:15	62.2	20.7	1.92	0.00	Aonitorin
(Inley, Suit	Ashley I eilson roject-G -2226 ilson@c	TDS	mg/L 500	10.0	10.0	2540 C		5/9/2012	12:30	363	373	SAS		fity and N
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-9896 - (559) 233-8129	b No. 169985 mpler Del-Tech/Ashley Light Date 04/19/12 ed by Ramon Neilson Date 5/14/12 roject Stillwell Project-GW Monitoring py To Fax (925) 426-2226 Fax (925) 426-2226 e-mail ramon.neilson@cemex.com	NOs	mg/L 45,0	0.04	2.0		300.0	4/18/2012		4.00	325	110	0.10	ater Qual ed., 1994
	Lab No. Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	N03-N	mg/L 10.2	0.01	0.1		300.0	4/18/2012		6.0	5.2	2.0	15.0	6.0 259 <1 <1 259 <1 <1 259 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
60	Subrr Su Rep Locati	s0,	mg/L 250	0.03	0.5		300.0	4/18/2012		52.4	277	1.10	0.00	ol.o alifornia ind Wast
alysis		ō	mg/L 250	0.03	0.1		300.0	4/18/2012		26.0	100	1.44	0.02	to the C ing Limit f Water a
Report of Water Analysis		Total Alkalinity OH CO₃ HCO₃ ൺ CaCO₃ ஊ CaCO₃ as CaCO₃	турт	ę	Q	2320 B		4/19/2012		179	631	101		zoo oo.o tration d time. vel according to the C RL = Reporting Limit xarnination of Water a to.
f Wat		co ₃ es caco ₃	mg/L	0.9	1.0	2320 B		4/19/2012		₽	1	7 1	7 7	6.0 Z39 <1 <1 Z *See external laboratory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level acc MDL = Method Detection LImit; RL = F SM = Standard Methods for the Examine Dissolved metals (bolded) were fittered. Dissolved available upon request.
ort o		OH Bis CaCO ₃	mg/L	-	-	2320 B		4/19/2012		⊽	1	7 1	7 1	 All of the second state <l< td=""></l<>
Rep		Total Alkalinity ss caco ₃	mg/L		10	2320 B		4/19/2012		179		701		259 simal labo zed ousio ethod De ethod De metals (b metals (b
		F	unit		1.0 to 14.0	4500H B		4/19/2012		8		0.1	0.0	 8.0 Z39 <1 <1 *See external laboratory docum PH analyzed ouside of 15 min h MCL = Maximum Contaminant L MDL = Method Detection LImit; SM = Standard Methods for the Dissolved metals (bolded) were fille QAQC available upon request.
	93626 Water	Time	Sampled							18-25	10.05	00.01	DC-11	ğ
۳	Ťi.	Date	Sampled							04/18/12		21/01/10	71 101 14	19419012
DELLAVALLE Lethour attory, Inc.	Cemex Construction Materials LP 13475 N Friant Rd CA 93626 13588 08 Material Submitted: Water		S MCI ->	WDL>	KL→	SM-√	EPA>	Analysis Date:	Analysis Time:			5 0		5
P	Cemex (13475 N 13688 13588 08	-								MW 1		ZANN	C AAM	A 4
										6				* *

Page 1 of 4

Approved By:

Report of Water Analysis Fax (559) 288-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 169985 Sampler Del-Tech/Ashley Light	Submitted by Ramon Neilson	Reported Date 5/14/12 I organization/Provinct Stillwell Project-GW Monitoring	Copy To	Fax (925) 426-2226	e-mail ramon.neilson@cemex.com		*Ferrous Fe							Send Out						•		
							Total	Fe	mg/L	0.3	0.004	0.1	3120 B		51/2012	13.26		2.14	1.02	<0.10	0.66		
			93626			Nater		Time	Sampled									18:25	18:05	17:39	17:17		
រ៉ាំមួ	8	ials LP	CA 5			Ibmitted: \		Date	Sampled									04/18/12	04/18/12	04/18/12	04/18/12		
DELLAVALLE"	Chamics and Consultants	Cemex Construction Materials LP 13475 N Friant Rd	0			Material Submitted: Water				MCL->	WDL->	RL	SM->	EPA>	Analysis Date:	Analysis Time:		-	0	-	5		
	Chamich	Cemex Constructio 13475 N Friant Rd				~									Ana	Ane			7				
	Ĭ	Cemex 13475 N	Friant	090001															002 MW 2	003 MW 3	004 MW 4		
	lufe.						1										N	ð	ð	8	8		

Page 2 of 4

CIEL AVALLE [®] Lanbaurations ₁ , frac.	ALLE" 14, Imc. Mants			Rep	ort o	f Wat	Report of Water Analysis	alysi	Ø		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8696 - (559) 233-6129	ünley, Suite 8-8174 - (8	e 110, Fres 300) 228-96	no, CA 937 196 - (559) 2	28 33-6129	
Cernex Construction Materials LP 13475 N Friant Rd	aterials LP								Subm Sut	Lab No. 169985 Sampler Del-Tech/Ashley Light Submitted Date 04/19/12 Submitted by Ramon Neilson	169985 Del-Tech/Ashle 04/19/12 Ramon Neilson	Ashley L silson	ight			
Friant 13588 08	CA	93626							Repo	Reported Date 5/14/12 Location/Project Stillwell Project-GW Monitoring Copy To	5/14/12 Stillwell PI	oject-G\	N Monito	pring		
Materia	Material Submitted: Water	: Water								Fax (e-mail r	Fax (925) 426-2226 e-mail ramon.neilson@cemex.com	2226 son@ce	mex.cor	E		
				Total Alkalinity	동	ő	HCO3				L					
	Date	Time	Hd	as CaCO ₃	as CaCO ₃ 2	as CaCO ₃	as caco ₃ as caco ₃ as CaCO ₃ as CaCO ₃	ច	SO4	NO ₃ -N	NO3	TDS	Ca	Mg	Na	¥
	Sampled	Sampled	unit	mg/L	Шg/L	mg/L	mg/L	тgЛ	шgЛ	mg/L	mg/L	mg/L	mg/L	mg/L	лgт	mg/L
MCL>	٥							250	250	10.2	45.0	500				
MDL>	^				-	6.0	e	0.03	0.03	0.01	0.04	10.0	0.1	0.1	0.15	0.3
RL>	٨		1.0 to 14.0	9	÷	1.0	S	0.1	0.5	0.1	2.0	10.0	0.1	0.1	1.0	0.5
SM>	٨		4500H B	2320 B	2320 B	2320 B	2320 B					2540 C	3120 B	3120 B	3120 B	3120 B
EPA>	^							300.0	300.0	300.0	300.0					
Analysis Date:	ä		4/19/2012 4/19/2012		4/19/2012	4/19/2012	4/19/2012	4/18/2012	4/18/2012	4/18/2012	4/18/2012	59/2012	59/2012 5/1/2012 5/1/2012	51/2012	51/2012	5/1/2012

ELAP Certification #1595

Analysis Time:

10:15

10:15

10:15

10:15

12:30

Page 3 of 4

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 169985 Sampler Del-Tech/Ashley Light Submitted Date 04/19/12 Submitted by Ramon Neilson Reported Date 5/14/12 ocation/Project Stillwell Project-GW Monitoring Copy To Fax (925) 426-2226	e-mail ramon.neilson@cemex.com								ŝ	
Report of Water Analysis	Lab No. 169985 Sampler Del-Tecl Submitted Date 04/19/12 Submitted by Ramon Reported Date 5/14/12 Location/Project Stillwell Copy To Fax (925) 42	Б -9		*Ferrous Fe				2810 001			
	Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water	IctoT	Time	Sampled Sampled mg/L 0.3		SM> 3120 B		Analysis lime:		

Page 4 of 4

Wetlab Results ARF: 70419		Della 1910	emex #13588 valle Laborat W. McKinley to, CA 93721	tory, Inc. y Ave. #110	
APPL Inc. 908 North Temparance Avenue Clovis, CA 93611			Elisa Sanchi		
Method Analyte	Result	PQL	Unite	Prep Date	Analysis Date
APPL ID: AY78543 -Client Sample ID: 185149-1		-Sample Collection D	ato: 04/08/13		
SM3600FeB FERROUS IRON	Not detected	1.0	mg/L	04/09/13	04/09/13
APPL ID: AY78544Client Sample ID: 185149-2		-Sample Collection D	nte: 04/08/13		
SM3500FeB FERROUS IRON	Not detected	1.0	mgAL	04/09/13	04/09/13
APPL ID: AY78545 -CCent Semple ID: 185149-3		-Semple Collection Da	nte: 04/08/13		
SM3500FeB FERROUS IRON	Not detected	1.0	mg/L	04/09/13	04/09/13
APPL ID: AY78546 -Client Semple ID: 185149-4		-Sample Collection Da	ate: 04/08/13		
SM3500FeB FERROUS IRON	Not detected	1.0	mg/L	04/09/13	04/09/13

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<u>Wetlab</u> ARF: 70		te Proje	IEX #13588/08 act: Stillwell Project- undwater Monitoring	1910	avalle Labora 0 W. McKinle 200, CA 9372	y Ave. #110	
APPL Inc. 908 North 7 Clovis, CA		nce Avenue		Attn	: Elisa Sanch	ez.	
Method	Analyt	0	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	V81824	-Cilent Sample ID: 1897	/42-1	-Sample Collection D	Date: 06/12/13		
SM3500FeB	FEF	ROUS IRON	Not detected	1.0	mg/L	06/13/13	06/13/13
APPL ID: A	781825	-Client Sample ID: 1897	40-9	-Sample Collection E	Deto: 08/19/19		
PUP I La ILLA PL		-onone odtripio ibi ioan	75- 54	-Sample Collection L	Jane. 00/12/13		
SM3500FeB		ROUS IRON	Not detected	-Sample Collection 1	mg/L	06/13/13	06/13/13
	FEF		Not detected		mg/L	06/13/13	06/13/13
SM3500FeB	FEF Y81826	ROUS IRON	Not detected	1.0	mg/L	06/13/13 06/13/13	06/13/13 06/13/13
SM3500FeB APPL ID: A	FEF Y81826 FEF	ROUS IRON -Client Sample ID: 1897	Not detected 742-3 Not detected	1.0 -Sample Collection D	mg/L Date: 08/12/13 mg/L		

4

Report of Water Analysis

FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129 1910 W. McKinley, Suite 110, Fresno, CA 93728

> Cemex Construction Materials LP 93626 S 13475 N Friant Rd 13588 Friant 8

Material Submitted: Water

e-mail ramon.neilson@cemex.com Location/Project Stillwell Domestic Wells Submitted by Ramon Neilson Fax (925) 426-2226 Reported Date 4/15/2013 Submitted Date 4/8/2013 185149 Sampler T. Cox Lab No. Copy To

*Ferrous	Fe							Send Out		*
	Fe	mg/L	6,0	0.004	0.1	3120 B		2	11:16	0.55
	¥	mg/L		0.3	0.5	3120 B		4/11/2013	9:20	4.4
	Na	mg/L		0.15	1.0	3120 B		4/11/2013 4	9:20	25
	Mg	шg/L		0.1	0.1	3120 B		4/11/2013	9:20	16.6
	Ca	mg/L		0.1	0.1	3120 B		W11/2013 4/11/2013	9:20	38.2
	TDS	mg/L	500	10.0	10.0	2640 C		107	00.6	287
	NO3	mg/L	45.0	0.04	20		300.0	4/9/2013	20:06	32.2
	NO ₃ -N	mg/L	10.0	0.01	0.1		300.0	4/9/2013	20:06	135 396 7.3 322
	so.	тgл	250	0.03	0.5		300.0	4/9/2013	20:06	39.6
	ច	mg/L	250	0.03	0.1		300.0	4/9/2013	20:06	13.5
HCO3	as CaCO ₃	mg/L		3.00	5.00	2320 B		4/9/2013	12-11	130
Total Attailnity OH CO ₃ HCO ₃	as CaCO ₃	mg/L		0.9				4/8/2013	12-11	V
Ю	as CaCO ₅	mg/L		1.00	1.00	2320 B			12-11	v
Total Alkalinity	as CaCO ₃	mg/L			10.0	2320 B		4/9/2013 4/9/2013	12-11	130
	Н	unit			1.0 to 14.0	4500H B		4/9/2013	12:11	73
	Time	Sampled								0.41
	Date	Sampled Sampled								13 130 13 130 130 130 130 130 130 130 13
			MCL>	MDL>	RL>	<-WS	EPA>	Analysis Date:	Analysis Time:	001 Weller

*	*	*	*	
0.55	<0.10	<0.10	<0.10	
4.4	2.8	3.9	2.6	
25	33	58	37	
16.6	25.8	23.3	21.4	
38.2	68.7	74.4	72.0	
287	460	653	473	
32.2	90.7	78.8	103	
7.3	20.5	17.8	23.3	
39.6	51.7	74.0	54.3	
13.5	18.0	27.0	12.8	
130	173	232	194	
۲	۲	۲	V	
⊽	۲	٧	7	
130	173	232	194	
7.3	7.1	7.4	7.2	
9:41	9:06	10:05	10:18	
4/8/2013	4/8/2013	4/8/2013	4/8/2013	
	Stillwell			
001	002	003	004	

*See external laboratory documentation

pH analyzed outside of 15 min hold time.

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

Dissolved metals (bolded) were filtered.

QA/QC available upon request.

DELLANALLE® Lebouratory, Inc.

Report of Water Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

> Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

Lab No. 185149 Sampler T. Cox Submitted Date 4/8/2013 Submitted by Ramon Neilson Reported Date 4/15/2013 Location/Project Stillwell Domestic Wells Copy To Fax (925) 428-2228 Fax (925) 428-2228 e-mail ramon.neilson@cemex.com

*Ferrous	Ъе							Send Out	
Total	e P	mg/L	0.3	0.004	0.1	3120 8		4/11/2013	11.16
3	¥	mg/L		0.3	0.5	3120 B		4/11/2013	
						3120 B		4/11/2013	
:	BM	mg/L		0.1	0.1	3120 B		4/11/2013	9:20
Ċ	ča	mg/L		0.1	0.1	3120 B			
ļ	TDS	mg/L	500	10.0	10.0	2540 C		4/11/2013	8:00
5	NO3	mg/L	45.0	0.04	2.0		300.0	4/9/2013	20:06
	NO ₃ -N	mg/L	10.0	0.01	0.1		300.0	4/8/2013	20:06
	SO4	mg/L	250	0.03	0.5		300.0	4/8/2013	20:06
i	σ	mg/L	250	0.03	0.1		300.0	4/9/2013	20:06
HCO3	as CaCO ₃	mg/L		3.00	5.00	2320 B		4/9/2013	1211
Total Atkatinity OH CO ₃ F	as caco ₃	mg/L		0.9	1.0	2320 B		4/8/2013	12.11
Ю	as CaCO ₃	mg/L		1.00	1.00	2320 B		4/9/2013	12:11
Total Alkalinity	as CaCO ₃	mg/L			10.0	2320 B		4/9/2013	1211
1	Ŧ	unit			1.0 to 14.0	4500H B		4/8/2013	12:11
I	Time	Sampled			entri)				
	Date								
			MCL>	MDL>	RL	<-WS	EPA>	Analysis Date:	Analysis Time:

ELAP Certification #1595

DELLAVALLE Chemists and Consultants Cemex Construction Materials LP

13475 N Friant Rd G

93626

Friant 13588

8

Report of Water Analysis

FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129 1910 W. McKinley, Suite 110, Fresno, CA 93728

Location/Project Stillwell Project- Groundwater Monitoring Sampler Don Light/ Deltech Submitted by Ramon Neilson Fax (925) 426-226 Submitted Date 6/12/2013 Reported Date 6/24/2013 Lab No. 189742 Copy To

e-mail ramon.neilson@cemex.com

Material Submitted: Water

E							5		-	
*Ferrous Fe							Send Out			•
Total	mg/L	0.3	0.004	0.1	3120 B		6/19/2013	13:32		<0.10
×	mg/L		0.3	0.5	3120 B		6/19/2013	10:41		3.9
Na	mg/L		0.15	1.0	3120 B		6/19/2013	10:41		34
W	mg/L		0.1	0.1	3120 B		6/19/2013	10:41		13.8
ð	mg/L		0.1	0.1	3120 B		6/19/2013	10:41		55.9
TDS	ng/L	500	10.0	10.0	2540 C		6/19/2013 6/	2:51		497
-CN	mg/L	45.0	0.04	2.0		300.0	-			13.3
N-ON	mg/L	10.0	0.01	0.1		300.0	613/2013	17:04		3.0
Ċ,	mg/L	250	0.03	0.5		300.0	6/13/2013	17:04		57.0
3 ⁻ U3	mg/L	83.3	0.01	0.07		300.0	6/13/2013	17:04		19.0
5	mg/L	250	0.03	0.1		300.0	6/13/2013	17:04		25.5
Total Akalinity CO ₃ HCO ₃	mg/L		3,00	5.00	2320 B		6/18/2013	9:10		175
ő	T/Gu		0.9	1.0	2320 B		6/18/2013	9:10		۲
Total Akalinity CO ₃ HCO ₃	mg/L			10.0	2320 B		6/18/2013	9:10		175
	5			1.0 to 14.0 10.0	4500H B		6/18/2013 6/18/2013 6/18/2013 6/18/2013	9:10		7.5
Ĩ	Sampled	•								10:50
ł										6/12/2013
		MCL->	MDL>	RL>	<-ws	EPA>	Analysis Date:	Analysis Time:		001 MW-1 6/12/2013 10:50 7.5 175 <1 175

* * .

<0.10 0.94

6.5 3.2 4.9

30 24

27.2 11.3 23.6

49.8

570 313 870

44.2

10.0

72.5 50.8 61.8

24.2 16.9 20.6

18.8 28.8 75.4

v v v

202

202 133 245

133 245

7.1 7.6 8.0

> 11:50 12:20

11:27

6/12/2013 6/12/2013 6/12/2013

MW-2 E-WW MW-4

002 003

<2.00

75.0

16.9 0.4

80.8 46.7

1.51

*See external laboratory documentation

pH analyzed outside of 15 min hold time.

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)

RL = Reporting Limit MDL = Method Detection Limit;

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

Dissolved metals (bolded) were filtered.

QA/QC available upon request.

Approved By:

DELLANALLE Leibnarettary, Inc.

Report of Water Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8896 - (559) 233-612

> Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129 Lab No. 189742

Sampler Don Light/ Deltech Submitted Date 6/12/2013 Submitted by Ramon Neilson Reported Date 6/24/2013 Location/Project Stillwell Project- Groundwater Monitoring Copy To Fax (925) 426-2226

e-mail ramon.neilson@cemex.com

				Alkalinity	ő	Vkalinity CO ₃ HCO ₃											Total	
1	Date	Time	H	as CaCO ₃	as CaCO ₅	is CaCO3 as CaCO3 as CaCO3	U	SO4-S	SO₄	NO3-N	NO3	TDS	ខឹ	BW	Na	¥	Fe	*Ferrous Fe
	Sampled Sampled	Sampled	unit	mg/L	mg/L mg/L	тудт	mg/L	mg/L	mg/L	тубш	лдт	mg/L	шgЛ	mg/L	mg/L	Llgm	mg/L	
MCL>							250	83.3	250	10.0	45.0	500					0.3	
MDL→	10				0.9	3.00	0.03	0.01	0.03	0.01	0.04	10.0	0.1	0.1	0.15	0.3	0.004	
RL	22		1.0 to 14.0 10.0	10.0	1.0	5.00	0.1	0.07	0.5	0.1	2.0	10.0	0.1	0.1	1.0	0.5	0.1	
-WS	121		4500H B 2320 B	2320 B	2320 B	2320 B						2640 C	3120 B					
EPA>	535						300.0	300.0	300.0	300.0	300.0							
Analysis Date:	22		6/18/2013	6/18/2013 6/18/2013 6/18/2013	6/18/2013	6/18/2013	613/2013	6/13/2013	6/13/2013	6/13/2013	6/13/2013	6/19/2013	6/19/2013	6/19/2013	6/18/2013	6/19/2013	6/19/2013	Send Out
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Page 1 of 1

Appendix A:

Part 1: November 28, 2014 Response to Comments Memorandum from Tully & Young to Tulare County RMA

Part 2: Comment Letters marked to correspond to responses in memorandum

Part 1: November 28, 2014 Response to Comments Memorandum from Tully & Young to Tulare County RMA



Tully & Young, Inc. 3600 American River Drive, Suite 260 Sacramento, CA 95864

MEMORANDUM

То:	Mike Spata, Director Tulare County Resource Management Agency
From:	Greg Young, P.E.
Date:	November 28, 2014
Subject:	Response to Public Comments submitted regarding the August 25, 2014 Peer Review of <i>Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry</i>

The purpose of this memorandum is to document responses to the public comments received by Tulare County Resource Management Agency ("RMA") to the August 25, 2014 Peer Review Report of *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry* and Addendum (collectively the "Peer Review Memo").

Background

RMA released the Peer Review Memo on August 26, 2014 for 30-day public review. RMA received comments from several interested parties. Tully & Young was asked to review the comments and, where appropriate, prepare a response. Public comments were received from the following:

- 1. Mr. Patrick Mitchell, Mitchell Chadwick (September 30, 2014) on behalf of CEMEX Construction Materials Pacific, LLC ("CEMEX").
- Dr. Andrew Kopania, EMKO Environmental, Inc. (September 30, 2014) author of the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"). This comment included both a letter and a redline version of the Peer Review Memo.
- Mr. Kenneth Schmidt, Kenneth Schmidt and Associates (September 29, 2014) on behalf of Rob Morton, Elias Rodriquez, Orville Cloud, George Clausen, Frank Callahan, Martin Rodriquez, and Tom Cairns.
- 4. Ms. Patricia Stever Blattler, Executive Director of the Tulare County Farm Bureau (September 29, 2014).

- 5. Mr. Rob Morton (September 29, 2014).
- 6. Mr. John Kirkpatrick (September 30, 2014).
- 7. Ms. Julie Bigham (September 29, 2014).

Organization of Response to Comments

After reviewing the public comments, Tully & Young was directed to prepare responses for the first three listed commenters, since these directly addressed the Peer Review Memo. The other comment letters do not specifically address the Peer Review Memo, and as such any appropriate response will be prepared by the RMA.

Responses for the first three comment letters are provided below. Each document is also attached to this memorandum to identify the hand-marked notation in the left-hand column that provides a reference mark corresponding to the comment-response in this memorandum (e.g. the first comment on the Peer Review Memo from Mr. Mitchell is marked "Mitchell 1" and the next "Mitchell 2," etc.).

Comment Letter #1 from Mr. Patrick Mitchell

The comment letter with associated response reference marks is included as Attachment A.

Mitchell 1: As identified in the Peer Review Memo ("Key Findings" – p. 3, "Report Section 4" – p. 11, "Conclusion" – p. 14, and "Assessment" – p. 15), the severity of the drought was recognized. Furthermore, the peer review was of the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"). The Report had already stated the circumstances relating to the current drought conditions – see Report at p. 6, p. 7, and p. 8. The Peer Review Memo was not intended as a documentation of the current severe drought conditions.

Mitchell 2: As clearly indicated in Addendum to the Peer Review Memo, a cursory analysis of the August 22, 2014 data was provided as part of the review of the Report. The water quality information included in the August 25, 2014 correspondence was initially determined to not be of value for the peer review. As noted in the Addendum to the Peer Review Memo, both of these CEMEX submittals will be assessed in more detail. Furthermore, as documented in the adopted Conditions of Approval ("Conditions"), Condition 48 clearly states: "*the applicant shall make available to the RMA on a monthly basis, data concerning...*" Though CEMEX is indicating through this comment that it is RMA's responsibility to have asked for the required reporting data monthly, this condition can easily also be understood as to mean the County does not need to ask. Rather, it could be read as CEMEX shall provide the information regardless of specific, routine RMA requests. Finally, as apparent through the routine testing of well levels and associated water quality analysis and reports prepared by Dellavalle, CEMEX was aware

of data collection and reporting requirements. CEMEX has routinely provided the County with periodic reporting of Dellavalle monthly groundwater level data without prompting. All of these requirements are clearly detailed in the Conditions and the associated Groundwater Monitoring Plan, referenced by Condition 46, 47, and 48.

Mitchell 3: The vast majority of the assessment of the Report compared information to the Hydrogeologic Data Evaluation Report, Stillwell Pasture, prepared by EMKO Environmental, Inc., June 10, 2002 ("2002 Data Report") and included as a technical appendix to the Draft EIR. As identified in the comment, the contour map included in the Peer Review from the Draft EIR appears to have been updated as referenced in the 2002 Data Report (as Figure C-1). However, these two representations of groundwater flow do not "substantially" differ, as stated in the comment. On the eastern edge of the Quarry site, contours in both figures demonstrate groundwater flowing primarily from east to west (see the "483.5" contour line in Figure C-1 as compared to the right-most contours in Figure 4.4-2 of the Draft EIR). Furthermore, the inclusion of the Draft EIR figure in the Peer Review Memo was to further support the counter argument to the Report's statements that water from the Kaweah River does recharge the aquifer. Though this may occur during high flow conditions as noted on page 6 of the Report, both the figure in the Draft EIR (as included in the Peer Review Memo) and Figure C-1 in the 2002 Data Report indicate the Kaweah River does not recharge the groundwater underlying the adjacent property owner wells. Both figures demonstrate this same condition.

Mitchell 4: The Peer Review Memo correctly identifies that several of the Conditions are not satisfied, including such requirements as identified in the Groundwater Monitoring Plan referenced in Condition 46, 47 and 48. Furthermore, CEMEX clearly admits it is not in compliance with Condition 55 that states the "V" ditch "shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells." CEMEX readily admits that it has not placed water into the "V" ditch since early September 2013. This is a finding based upon fact, not a legal conclusion.

Also, as clearly indicated in the 2002 Data Report (p. 20) "the primary potential impact on nearby shallow private wells in the possible reduction in the groundwater table during dewatering of an adjacent active pit. To <u>mitigate</u> this potential impact, a shallow trench will be installed...[w]ater pumped to this trench will maintain the groundwater table of the private wells..." (emphasis added). The Peer Review Memo relied on this information as illustrative of the fact that the quarry project would include a recharge trench to mitigate potential impacts.

Mitchell 5: The RMA contracted with Tully & Young on July 18, 2014 to expeditiously conduct the peer review of the Report. New information provide by CEMEX, such as well levels recorded by the newly installed data loggers, will be evaluated and considered. On September 17, 2014 CEMEX did provide hourly groundwater level data

for three private wells as recorded by the new data loggers. This data reflected groundwater elevations from August 28 through noon on September 16, 2014. No additional well level data beyond September 16 has been provided to RMA. No data was provided for this same time period for the four on-site monitoring wells that were also apparently equipped with new data loggers.

Comment Letter #2 from Dr. Andrew Kopania

This comment letter transmitted a redlined version of the Peer Review Memo with substantial comments inserted throughout the document. The transmittal letter and redlined copy of the Peer Review Memo are included as **Attachment B**.

Kopania 1: Condition 49 states: "Upon receipt of a written compliant from any owner of a pre-existing well which details and alleged impact to the well's water level, yield, or water quality, the RMA shall request a report form a licensed hydrogeologist explaining the problem." Dr. Kopania, author of the Report, is a licensed hydrogeologist. However, this Condition does not have similar mandates to professional licensing for purposes of a RMA instigated peer review of the prepared Report. Mr. Greg Young of Tully & Young, Inc. is a licensed civil engineer and well qualified to perform a peer review of the Report.

Kopania 2: The transmittal letter for the redline comments to the Peer Review Memo indicates several sources of additional information that were not considered when undertaking the peer review. When considering that a peer review is "an in-depth critique of assumptions, calculations, extrapolations, methodology, and of conclusions drawn in the original work, the peer review of the Report used many but likely not all available information to inform its findings. New information provided by CEMEX or produced and/or discovered through other investigations will continue to be assessed and conclusions of the Peer Review Memo refined as appropriate. However, based upon the cursory review of the August 22 and August 25 information as documented in the Addendum to the Peer Review Memo, it is not likely that additional data will significantly alter the current conclusions.

Kopania 3: Condition 48 clearly states CEMEX "shall make available to the RMA on a monthly basis, data concerning (1) the locations and amounts of mine dewatering, (2) the locations and amounts of water delivered to the recharge trench, and (3) the locations and amounts of dewater delivered elsewhere." Given this Condition's requirements, the August 12 Technical Memorandum and associated data were viewed as part of the representation of data to be used in the peer review. The information was not considered to just be a summary of information to respond to a July 24 RMA information request and was viewed as part of the record CEMEX was providing to support the conclusions of its Report. *Kopania* 4: The peer review considered a full array of information and even delayed its availability to include assessing data provided to RMA on August 12, 2014. The Addendum to the Peer Review Memo provided a cursory review of information provided by CEMEX on August 22 and August 25.

Kopania 5: The information submitted on August 25, 2014 provided "a memorandum discussing the water quality data from the CEMEX Stillwell mine, a summary of the procedures used to purge and sample the wells, and photographs of each well head." However, the Groundwater Monitoring Plan requires a quarterly report detailing, among other things, groundwater contours, calculated hydraulic gradients from each monitoring event, tabular and graphical representation of monitoring data, locations and amounts of mine dewatering, and water quality data. The August 25 submittal simply provided annual water quality results and does not constitute Groundwater Monitoring Plan as required by the Conditions.

Kopania 6: The electrical records provided in the August 12, 2014 submittal show monthly usage values from July 2003 through May 2014. Upon inspection of a few of the monthly records, coupled with satellite imagery from related dates, it is still not conclusive that these records represent only the 22 Kw dewatering pump. For instance, Google Earth imagery dated 12/31/2004 (see Figure 1 below) shows little or even no disturbance to the quarry site associated with mining activities, and thus no apparent dewatering and pumping to the "V" ditch. However, the monthly power records for the period of May 2004 through November 2004 range from 1,132 kilowatt-hours used ("kWh") to 6,474 kWh per month. In 2006, when the mine had minor production, power records ranged from 3,626 kWh to 9,995 kWh per month. What consumed power during 2004 that may also be part of the power records for later periods? Or was the use of power in 2004 not related to dewatering, yet later was completely accounting for dewatering?

According to the 2002 Data Report (p. 14) "The water pumped from the dewatered pit may be pumped to several different locations. While mining is occurring along the east side of the project site, some of the water will be pumped to a trench along the eastern boundary of the pasture to maintain the water level in nearby shallow private wells (see Section 5.0). This use is expected to require only a fraction of the total amount of water pumped for dewatering. The water not pumped to the trench is expected to be pumped into the northern ponds or the lakes formed by the previous project phases." Again, simply providing power records and claiming that all the power was for dewatering AND all the dewatering was discharged to the "V" ditch is challenged by these statements.

Finally, according to the 2007 Mining Operation Annual Report submitted to the Department of Conservation (see Attachment C) states that the mine had zero production during 2007. Power records indicate electrical use every month, ranging from

4,638 kWh to 11,331 kWh per month. Was dewatering occurring at rates greater than 2006 while there was zero production in 2007?

The entire power record as provided by CEMEX was included as Attachment 3 to the Peer Review Memo. As detailed in the Peer Review Memo, absent further details regarding other potential power use at the site, this power data may not reflect only the power consumed by the dewatering pump.



Figure 1 - Google Earth Image of Stillwell Quarry as of 12/31/2004

Kopania 7: The Report was prepared in February 2014. The peer review was conducted on the Report and its conclusions in July and August of 2014. Additional data used during the peer review, including supporting data and analysis provided by CEMEX in August 2014, was assessed and used, as deemed appropriate, during the in-depth critique of assumptions, calculations, extrapolations, methodology, and of conclusions drawn in the original Report. The Report itself apparently did not use the data provided in August to derive its conclusions. Thus, the Report did rely on an incomplete set of facts as stated by the Peer Review Memo. *Kopania 8*: Comment noted. The Peer Review Memo used "degraded" to refer to lowered groundwater elevations in the wells of the adjacent property owners, and was not referencing water quality characteristics.

Kopania 9: Refer to the responses for Kopania 2, Kopania 4 and Kopania 7.

Kopania 10: The Report presents factual information regarding quarry operations (see Report's Section 3). As such, the August 12, 2014 Technical Memorandum, the August 22, 2014 Technical Memorandum and the August 25, 2014 Technical Memorandum provided by CEMEX were viewed as supportive factual data intended to support the Report. As noted in other redline comments to the Peer Review Memo (e.g. see responses to Kopania 2, Kopania 4, Kopania 5, Kopania 7 and Kopania 9), CEMEX appears concerned that this additional information was not used for the peer review. However, in this comment, CEMEX is suggesting that the information transmitted in August was "not provided 'in an effort to support conclusions of the Report,' but rather in response to specific requests for information from RMA." (See Kopania 10). As an example of how this data was viewed as supportive to the Report, the August 25, 2014 Technical Memorandum states: "This gradient direction is consistent with previous interpretations,..." and "[t]hus, there does not appear to be any correlation between discharge rates to the recharge trench, groundwater elevations, and groundwater flow directions." These statements indicate that the data and analysis presented are intended to support conclusions of the Report.

Kopania 11: Clarification noted and appreciated. However, the comment also states that water would be present in the "V" ditch during these circumstances due to high groundwater: "[t]hus any notes referencing a dry ditch could not have been referring to the "V" ditch, as it would have contained several feet of groundwater at those times, even if no water was being pumped into the "V" ditch." Upon inspection of the original Dellavalle records included as Attachment 6 to the Peer Review Memo, the notations of "no water in ditch" etcetera generally correspond to winter months such as November, December, January, February and March in 2008, 2009 and 2010.

According to the power usage records during these same periods, usage was at least 6,829 kWh (March 2009) and generally over 10,000 kWh per month, with a high of 13,112 kWh (November 2009). If the "V" ditch already "contained several feet of groundwater," why would power records during these months show usage at levels equal to or even higher than many summer month power usage rates? As stated in comment Kopania 6, Mr. Kopania states: "The Technical Memorandum states that the volumes of water in Table 1 were pumped to the V-ditch and only the V-ditch" (see comment in footnote). According to this comment, the power records are only related to pumping to the "V" ditch. As discussed in the response to Kopania 6, there are still many uncertainties presented by the data and the statements and conclusions by the commenter.

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Kopania 12: Comment noted. See responses to Kopania 6 and Kopania 11.

Kopania 13: Comment noted. See responses to Kopania 6 and Kopania 11.

Kopania 14: As clearly required by Condition 55, sufficient water should be pumped to the "V" ditch to "establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells." Furthermore, the Report nor the Technical Memorandum attempted to assess dewatering operations, quantities discharged to the "V" ditch and groundwater levels in monitoring wells and neighboring wells. As articulated in the Peer Review Memo, the Report's conclusion that mining operations had no affect on neighboring wells absent performing such analysis raises significant questions about the validity of the Report's conclusions.

Kopania 15: Comment noted. See responses to Kopania 3 and Kopania 10.

Kopania 16: Comment noted. See responses to Kopania 6 and Kopania 11.

Kopania 17: Comment noted. See response to Kopania 11.

Kopania 18: Comment noted. See responses to Kopania 6 and Kopania 11.

Kopania 19: Comment noted. See response to Kopania 11.

Kopania 20: Comment noted. This section of the Peer Review Memo simply was noting potential other considerations that were not clearly addressed or dismissed in the Report.

Kopania 21: Comment noted. This section of the Peer Review Memo simply was noting potential other considerations that were not clearly addressed or dismissed in the Report. However, it should be noted that the Stillwell Project Draft EIR, State Clearinghouse #99071123 ("Draft EIR") states: "Shallow groundwater in the vicinity of the Stillwell property flows generally from the area of the south dike of Kaweah Reservoir, beneath nearby orange orchards and houses, and beneath the Stillwell pasture toward the Kaweah River." (see Section 4.4.2 Setting, Groundwater Supplies). Further, the discussion with Impact 4.4-1 in the Draft EIR repeats this assertion, stating: "Data from the three permanent monitoring wells indicated that shallow groundwater beneath the Stillwell property flows generally from the area of the south dike of the Kaweah Reservoir toward the Kaweah River."

Kopania 22: The 2002 Data Report states within its conclusions (p. 20): "The primary potential impact on nearby shallow private wells in the possible reduction in the groundwater table during dewatering of an adjacent active pit. To <u>mitigate</u> this potential impact, a shallow trench will be installed...[w] ater pumped to this trench will maintain the groundwater table of the private wells..." (emphasis added). Furthermore, as illustrated in the Quarry's Draft EIR, the project description states: "Mining activities at

the proposed Stillwell site will begin with the construction of temporary on-site water detention/recharge ditches (Figure 3-4, V-Ditch Schematic)." (Section 3.5.2, Stillwell Project Draft EIR, State Clearinghouse #99071123 ("Draft EIR")). This section continues with a statement about aggregate extraction: "Water will be pumped with a sump from the bottom of the quarry into V-ditches located on the property." Further, Section 4.4 of the Draft EIR states: "A V-ditch would be placed near the eastern project boundary between the excavation activities and nearby shallow wells, as an additional protective measure to protect neighboring domestic wells from mining-related impacts." And, Impact 4.4-1 describes the inclusion of the "V" ditch to "recharge the aquifer system." In other words, the reason that the Draft EIR states that no mitigation is required is due to the inclusion of the "V" ditch and intent to pump water into the ditch as part of the project description. Thus, it is not a mitigation as it is part of the project already.

Kopania 23: Comment noted. See responses to Kopania 6 and Kopania 11.

Kopania 24: Condition 55 is clear as to its requirements.

Kopania 25: The Report included discussions of flows in Kaweah River and rainfall in Lemon Cove. These external factors are no more or less related to mining activities than some of the other potential factors discussed in the Peer Review Memo.

Kopania 26: The 2002 Data Report states (p. 15): "For the Stillwell project, a recharge trench was selected as the appropriate method to maintain water levels at the upgradient neighboring properties. The water pumped to the recharge trench will maintain the water-level elevation and, thus, the hydraulic gradient at the neighboring properties." Also see response to Kopania 22. Claiming that the Report presented a "fresh look" at conditions and factors without relying on this prior analysis, which resulted in the Conditions, further supports the Peer Review Memo's finding that the Report's conclusions reached were without merit.

Kopania 27: Absent a common datum, groundwater contours cannot be developed that allow an understanding to be developed of the relationships between hydraulic gradients, well levels, flow direction, and mine operations. This information is required as part of the Annual Groundwater Monitoring Report required by the Conditions. Specifically, the Groundwater Monitoring Plan states (p. 3): "The mining operator shall provide the County with quarterly groundwater monitoring reports, prepared and signed by a Statecertified hydrogeologist... The reports will also include groundwater contour maps showing the location of each monitoring well and the current direction of groundwater flow and hydraulic gradient calculated for each monitoring event."

Kopania 28: Comment noted.

Kopania 29: As noted in comment Kopania 26, the Report "did not rely upon the previous findings of the EIR." However, this comment seeks to use the 2002 Data Report to help justify the Report findings. The comment quotes the first sentence on page 15, second paragraph of the 2002 Data Report. The second sentence states: "For the Stillwell project, a recharge trench was selected as the appropriate method to maintain water levels at the upgradient neighboring properties. The water pumped to the recharge trench will maintain the water-level elevation and, thus, the hydraulic gradient at the neighboring properties." While the intent may be to only pump water to the "V" ditch from the quarry as it is being dewatered for mining operations, neither the 2002 Data Report nor the Conditions place any limit on the possibility of other sources to maintain water levels. Specifically, Condition 55 states that the "V" ditch "shall contain a sufficient amount of water..." Further, Condition 46 states: "The purpose of the monitoring plan shall be to assess the effectiveness of the V-ditch design in maintaining groundwater levels in wells along the east and southeast boundary of the site…" There is no specific limitation placed on the source water only being from quarry pit dewatering.

Kopania 30: Comment noted. This data was assessed as part of the peer review.

Kopania 31: The power records were provided in the August Technical Memorandum. As discussed in the Peer Review Memo (p. 4), there was still unexplained conflict between statements in the Report and the data provided with the August Technical Memorandum. Based upon this set of comments, CEMEX is clarifying when dewatering began. However, as discussed in responses to Kopania 6 and Kopania 11, several questions still exist, which still maintains the same conclusions of the Peer Review Memo.

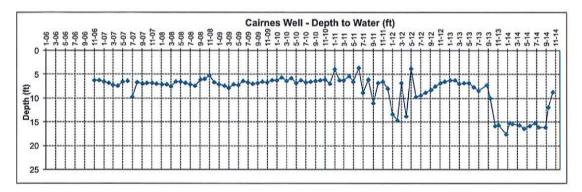
Kopania 32: Comment noted. This was a typographical error. The Peer Review should have not included the word "not" in this sentence.

Kopania 33: Comment noted. Please see previous responses.

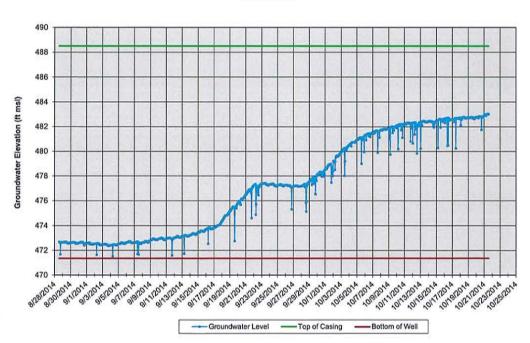
Kopania 34: Condition 55 states that the "V" ditch will be 6-8 feet in depth. According to the DellaValle data, in June 2005 the monitoring wells – which are adjacent to the "V" ditch indicated water levels were between 8 and 12 feet below ground surface. It is as likely that the water in the "V" ditch was from dewatering activities as it was native, exposed groundwater. Furthermore, as contended by other comments, the power records indicate dewatering began in 2003 and dewatering was occurring in June 2005 (note that the power records for July are a record of power usage in June).

Kopania 35: Comment noted. However, recent well level records reported by DellaValle indicate the Cairns well has experienced raised groundwater levels since CEMEX began again discharging to the "V" ditch in early September 2014. A correlation appears to exist. Below is a copy of the measured depth to water in the Cairns' well as reported by

DellaValle in a spreadsheet sent to CEMEX and RMA by Mary Callen of DellaValle on October 24, 2014.



Kopania 36: Comment noted. However, depth to water data provided by CEMEX from a datalogger installed in the Morton well appears to indicate a direct correlation between water in the "V" ditch and improved conditions in the Morton Well. Mr. Kopania provided the plot below in an October 27, 2014 email to RMA. As indicated by the plot, water levels have raised by 10 feet in the Morton well since the reintroduction of water into the "V" ditch. During this period, no significant other factors were present that could result in this improved condition (e.g. Kaweah River flows have not increased, Lake Kaweah levels have continued to decline, and no significant rain events have occurred.)



Morton Well

Kopania 37: Comment noted.

Kopania 38: Comment noted. However, as explained in the 2002 Data Report:

"Groundwater elevations at the northeast, upgradient side of the proposed quarry are approximately 484 feet above mean sea level (ft amsl). Groundwater elevations at the southwest, downgradient side of the proposed quarry are approximately 477 ft amsl. Thus, there is approximately seven feet of difference in groundwater across the proposed project area.

Once the project is completed, the water surface in the lake will stabilize at an elevation that is at an equilibrium between the rate of groundwater inflow from upgradient and the rate of groundwater outflow downgradient. This will result in the upgradient edge of the lake being at an elevation below the adjacent groundwater table, and the downgradient edge of the lake being at an elevation slightly above the previous groundwater table. The downgradient edge of the lake, however, can not rise significantly because the hydraulic gradient in the aquifer would then increase, resulting in an increased rate of groundwater outflow. However, since the lake elevation will not affect the rate of groundwater movement at some distance upgradient of the quarry, the rate of groundwater inflow will not increase. Thus, the lake will reach an equilibrium point at an elevation that maintains the rate of groundwater outflow at about the rate of pre-project groundwater movement. This rate occurs when the lake elevation is at about the same elevation as the current groundwater elevation at the downgradient edge of the project area.

To reduce the overall drop in water surface elevation across the lake, a north-south trending berm will be placed across the eastern third of the lake, as shown on Figure C-1. The east part of the lake will then have a surface elevation of approximately 483.5 ft amsl. The west part of the lake will then have a surface elevation ofo between 477 ft amsl and 480 ft amsl, which is approximately the same as the current groundwater elevation." (2002 Data Report, p. 16).

The important fact to take away is the recognition that the lake will cause a new gradient as it seeks its equilibrium. Thus, the lake would be divided into two sections to allow the water levels nearest the affected upgradient wells to reach an equilibrium close to the preproject condition (483.5 ft amsl compared to 484 ft amsl).

Kopania 39: Comment noted. See various prior related responses.

Kopania 40: See response to Kopania 38.

Kopania 41: As stated in the 2002 Data Report:

"The effectiveness of using a trench to maintain water levels in the shallow wells east of the project boundary was evaluated as part of the aquifer pumping tests conducted at the site by Sierra-Pacific (2000)...During the second test, drawdown was not observed at T-6 due to the recharge occurring at the trench, as shown on Figure 5.

Based on the data shown on Figure 5, use of the shallow trench will prevent a drop in the water levels within the private wells that might otherwise be caused during the gravel mining operations. For the Stillwell project, a recharge trench was selected as the appropriate method to maintain water levels at the upgradient neighboring properties." (2002 Data Report, p. 15).

The scientific evidence from the 2002 Data Report appears to have been used as the basis for the Conditions.

Kopania 42: See prior responses.

Kopania 43: Section 3 of the Report states: "Thus, the low water levels reported in the complaints discussed in Section 2.0 are not a recent incident and have been occurring cyclically since at least August 2011. The data clearly demonstrate that the groundwater level in the area was already dropping rapidly prior to the shutdown on September 4, 2013 of the pumps used for dewatering and for providing water to the recharge trench." (Report, p. 5). This paragraph was determined to be providing conclusive statements by the Peer Review Memo.

Kopania 44: Comment noted.

Kopania 45: See response to Kopania 43.

Kopania 46: Comment noted. The section's intent to have the reader focus on only the last few years, however, intends to support conclusions about the role of the River that are included in Section 6. The Peer Review Memo is broadening the comparison by indicating that the fall/winter of 2006/07 was comparable to the dates the Report focuses on. Thus, the Peer Review Memo regarded these representations as "implying" a conclusion. The implied conclusion was stated in Section 6 of the Report.

Kopania 47: See response to Kopania 46.

Kopania 48: See response to Kopania 46.

Kopania 49: See prior responses. Through these responses and accompanying assessment of data provided by CEMEX in the month of October 2014, the August 25, 2014 Peer Review Memo will remain as is, with any additional analysis and conclusions presented in the overarching cover letter to RMA to be provided in early November 2014.

Kopania 50: Comment noted. The Report failed to provide conclusive representation that the River typically is the source of water to the upgradient wells (from the portion of the River north of the quarry) since there were no groundwater contour maps or historic hydraulic gradient determinations routinely prepared and provided to the RMA.

Kopania 51: Comment noted.

Kopania 52: Comment noted.

Kopania 53: Comment noted.

Kopania 54: The replacement figure identified does not demonstrate "substantial differences" in the representations of the direction of groundwater flow in the area of the subject adjacent private wells. Thus, either figure would result in the same statement in the Peer Review Memo indicating that flow from the River was not readily apparent or demonstrated in the 2002 Data Report or the Report.

Kopania 55: The 2002 Data Report stated: "*At the northern edge of the Stillwell pature, the groundwater table, water level withinthe northern ponds, and the water level in the river (when flowing) are all approximately 483 ft amsl..." (2002 Data Report, p. 13). As shown in the Morton Well water level graphic presented with response to Kopania 36, water levels in the Morton well are currently about 483 ft amsl. According to historic records of depth-to-water in the Morton well, as recorded by DellaValle on a monthly basis, the Morton well has routinely been above 483 ft amsl. As the Morton well is located along the southern half of the eastern boundary, and groundwater flow conditions (e.g. as represented in the "corrected Figure 4.4-2 (see Kopania 54)), the river and northern pond elevations would need to be higher than 483 ft amsl, especially when the River is flowing. Otherwise, it is difficult to conclude the River is a contributing source to a well such at the Morton well.*

Kopania 56: This statement in the Peer Review Memo was intended to indicate that some flows from the River that may occur along the western edge of the project would act as a "mound" and thus defining the hydraulic gradient across the pre-project site and extending upgradient underneath the subject properties. This would be similar to the artificial mounding effect created by the "V" ditch. But, absent any excavation on the project site, the replacement mounding affect to maintain the hydraulic gradient provided by the "V" ditch would be necessary as the River boundary would be creating the same affect naturally. Kopania 57: Comment noted. See prior responses, especially response to Kopania 22.

Kopania 58: As evidenced by the comment in Kopania 20 and Kopania 38, the quarry operates in a shallow alluvial aquifer over bedrock that is independent from deep aquifers in the area and within the broader Kaweah and Kings subbasins. As such, the local parties had not experienced any issues of concern, especially not dating back to 2008, as referenced by the Governor's declaration.

Kopania 59: As evidenced by the water level data recently provided by CEMEX (e.g. see the plot associated with response to Kopania 36), the return of water to the "V" ditch appears to have a direct and fairly immediate affect on water levels in the adjacent wells. As concluded by the Peer Review Memo, although the drought has an effect on local circumstances, it is difficult to say CEMEX is without fault.

Kopania 60: Comment noted.

Kopania 61: As stated in the Report: "*The data from the groundwater monitoring program shows that declining water levels in the wells occurred from August 2011 to May 2012, and again from January 2013 to the present.*" (Report, p. 8). Water levels increased after the low values in May of 2012 to near normal levels. According to the DellaValle reported water level data, levels drastically decreased around September 2013 in at least the Cairns and Morton wells, and did not recover as they had following the low values in May 2012. Pumping to the "V" ditch stopped in September 2013. The Report's effort to correlate the reported low water levels as a trend starting back in early 2012 is not supported by the evidence.

Kopania 62: The Conditions required the "V" ditch to address affects of the quarry, whether mining activities were on-going or not. Furthermore, as noted in response to Kopania 61, low water levels in 2012 rebounded by as much as 7 or 8 feet by September 2012, likely due in significant part to water discharged into the "V" ditch.

Kopania 63: Although it is generally accepted that the primary source of water for the "V" ditch would be water pumped from the mine pit, the 2002 Data Report contemplated other sources, primarily from a water quality standpoint, stating: "If the water pumped from the currently-active pit contains elevated constituent levels..., then water from an alternate source will be pumped to the trench. Alternate sources inlcue the 50-acre northern ponds and previous gravel pits within the project site." (2002 Data Report, p. 17).

When the above is considered in conjunction with Condition 49's statement that "If a significant problem...be caused by mining activities, then immediate action must be taken to correct the condition, which may include (but is not limited to) modifying the recharge ditches to provide more recharge capacity, reducing the amount of pit dewatering, or if

necessary, ceasing mining operations," the parenthetical of "not limited to" can be interpreted as potentially requiring alternative sources of water to be "pumped to the trench."

Kopania 64: See response to Kopania 63.

Kopania 65: The comparison of groundwater level declines seen in spring of 2012, which subsequently recovered by summer of 2012, to conditions in 2013 and 2014 when no quarry dewatering occurred (e.g. no water being discharged to the "V" ditch), is not valid. The Conditions requiring the "V" ditch and sufficient water therein are to address the presence of the quarry, regardless of whether dewatering is occurring. As addressed elsewhere in these responses and in the Peer Review Memo, the Conditions were also to protect the upgradient wells following excavation, when no dewatering occurs and the pits are instead lakes.

Kopania 66: As evidenced by RMA's response to the CEMEX Interim Management Plan (IMP) (see **Attachment D**), the IMP has been rejected for numerous reasons.

Kopania 67: See response to Kopania 66.

Kopania 68: The conclusions of the Peer Review Memo, as articulated throughout the above responses to Mr. Kopania's direct comments, do not merit any adjustment. Furthermore, as evidenced by the recent datalogger information used to plot depth to water in several adjacent wells and the on-site monitoring wells (e.g. see the plot with response to Kopania 36), re-introduction of water into the "V" ditch appears to have had an immediate and positive affect on groundwater levels. This demonstrates that the primary conclusion of the Peer Review Memo – that the Report cannot reach a determinant conclusion that CEMEX has no fault – still stands as a valid conclusion.

Kopania 69: The purpose of the Report was to evaluate whether the alleged impacts to the adjacent wells was "caused by mining activities," (Condition 49), and if so then for immediate corrective actions to be taken. The arguments given in the letters all include statements alleging that the discontinued delivery of water to the "V" ditch was a likely cause of dramatically lowered groundwater conditions. Thus, the Report's objective was to explain the problem and determine whether the alleged stoppage of delivery to the "V" ditch was a cause. The Report states, "*The available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities.*" (Report, p. 8). For purposes of the Peer Review Memo, this statement appeared to be a conclusion that the mining operations were not at fault.

Comment Letter #3 from Dr. Ken Schmidt

This comment letter is included as Attachment E to this memorandum.

Schmidt 1: Comment noted. The identified sentence obviously is not the primary conclusion of the Peer Review Memo.

Schmidt 2: Comment noted. The Peer Review Memo attempted to evaluate the Report and associated materials submitted in mid- and late August. However, some of the information was not exhaustively evaluated as such would not affect the primary conclusion of the Peer Review Memo. Further investigations into the representation of groundwater flow likely would have identified further concerns with the Report's conclusions, as identified by this comment.

Schmidt 3: Comment noted.

Schmidt 4: Comment noted. The affect of "lake leveling" was roughly captured by the Peer Review Memo in discussion of the change to hydraulic gradient that would occur underlying the subject properties as a result of creation of the pit and subsequent lake. As noted by the Peer Review Memo, the intent of the "V" ditch was to establish a mound upgradient of the quarry to essentially compensate for the change to the gradient resulting from dewatering or lake leveling.

Schmidt 5: Comment noted.

Schmidt 6: Comment noted.

Attachment A

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Patrick G. Mitchell pmitchell@mitchellchadwick.com 916-462-8887 916-788-0290 Fax

September 30, 2014

VIA E-MAIL

Michael Spata Associate Director Tulare County Resource Management Agency 5961 South Mooney Blvd. Visalia, CA 93277

Re: Comments on Tully & Young Peer Review of EMKO Environmental Report

Dear Michael:

As you know, I represent Cemex Construction Materials Pacific, LLC ("Cemex"), operator of the Stillwell Mine Project ("Mine") located in Tulare County ("County"). This letter responds to your August 29, 2014 request for comments on Tully &Young Inc.'s Peer Review of a report titled "Hydrologic Evaluation of Current Groundwater Conditions at the Cemex Stillwell Quarry" ("EMKO Report"). The EMKO Report was prepared and submitted to the County by Cemex's consultant EMKO Environmental, Inc. ("EMKO") on February 26, 2014 in response to complaints from Mine neighbors in late January, 2014 regarding decreased water levels in their shallow wells, per Mine Permit Condition of Approval No. 49.

The EMKO Report finds that the extreme drought in California, rather than mining activities conducted by Cemex, is responsible for the lower water levels experienced by Mine neighbors with shallow wells. The Peer Review concludes that "[b]ased upon the lack of historic data and reports to provide both context and a complete technical set of facts, the conclusions reached by the EMKO Report's cause-and-affect [sic.] analysis of this incomplete set of facts appear without merit in many instances." Although the Peer Review acknowledges that "the drought is undoubtedly a primary contributing factor," it concludes that "the actions of CEMEX could have caused or at least exacerbated the degraded local groundwater conditions." Additionally, it concludes that "[a]s such, it is not possible to fully place blame on the current drought conditions or other external factors to explain the current groundwater level conditions being experienced by the subject properties."

As noted in the Peer Review, the current drought, which Tully & Young acknowledges is a primary factor responsible for the neighbors' decreased well water levels, is the worst in California in decades. Contrary to the Peer Review's statement that the drought's severity was "not yet fully apparent," at the time of the neighbors' complaints, Governor Brown issued an

Emergency Drought Proclamation on January 17, 2014. The drought is recognized as a threeyear drought, and was categorized as "extreme" in Tulare County by the U.S. Drought Monitor long before the start of the 2014 calendar year.¹ Furthermore, on April 30, 2014 the State Department of Water Resources ("DWR") released a Public Update for Drought Response report that states: "[s]ince spring 2008, groundwater levels have experienced all-time historical lows...in the southern San Joaquin Valley"; "In many areas of the San Joaquin Valley, recent groundwater levels are more than 100 feet below previous historical lows"; and "The Kaweah and Kings subbasins have the greatest numbers of deepened wells in an alluvial groundwater basin." The Peer Review should be revised to acknowledge the known severity of the drought both at the time of and prior to the neighbors' complaints.

The Peer Review also concludes that Cemex cannot be excused from fault due to "an incomplete set of facts and obvious violations of the Conditions of Approval." The missing data that comprises this so-called "incomplete set of facts" has in fact been provided to the County, but was not considered by Tully & Young in the Peer Review. Mine Permit Condition of Approval 48 requires that certain data be "made available" to the County during Mine operations. The Witchell County had not requested this data from Cemex during Mine operations, but did recently request that it be presented to the County after additional questions regarding the neighbors' well problems were raised. Cemex representatives, EMKO and County staff discussed a timeframe under which additional materials could be compiled and provided to the County. Unfortunately, the Peer Review did not consider this additional material which was provided to the County by EMKO per the agreed-upon schedule, on August 22 and 25, 2014. Additionally, the Peer Review relies what appears to be an administrative draft version of the Revised Draft Environmental Impact Report ("EIR") for the Mine, which was never published and shows incorrect groundwater contours, to conclude that the EMKO Report's analysis of groundwater m Nuttoheld flows is faulty. The correct and final version of this figure from the 2002 Revised DEIR, which shows substantially different groundwater contours, appears in Attachment 7 to the Peer Review. The Peer Review should be revised to include a full analysis of the additional data provided to the County by EMKO and should rely only on final versions of the Mine Project EIR. Tully & Young inappropriately reaches legal conclusions regarding the status of Cemex's

Tully & Young inappropriately reaches legal conclusions regarding the status of Cemex's compliance with its Mine Permit and relies on these conclusions to determine that Cemex "cannot be excused from fault," due to "violations of the Conditions of Approval." In several instances, the Peer Review assumes that the Conditions of Approval which require monitoring and data collection must have been imposed by the County in order to mitigate for impacts that were expected to result from mining. In fact, the EIR for the Mine (which Tully & Young purports to rely upon in the Peer Review) concludes that the Mine would have a *less than significant impact* on nearby shallow wells, and that therefore no mitigation was required. (See Revised Draft EIR Section 4.4.) These Conditions of Approval were included only as a response to concerns from Mine neighbors which had not been substantiated with evidence. In the interest

¹ See http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?CA (last accessed Sept. 29, 2014)

of being a good neighbor, Cemex agreed to accept these Permit Conditions despite substantial evidence in the EIR and record that the impacts to wells would be less than significant. Such agreement does not establish that the Mine would have an impact on neighboring wells if the Conditions were not complied with and therefore these statements and conclusions drawn from them should be removed from the Peer Review.

Finally, as noted in your August 29, 2014 letter, Cemex offered to and subsequently did install dataloggers in many of the neighbors' wells as well as Cemex's monitoring wells located along the V-Ditch. On September 2, 2014, Cemex began dewatering the mine excavation and pumping the water to the V-Ditch and is currently gathering data to further establish a record regarding the impact of the V-Ditch on the neighbors' wells, if any. This information, which will continue to be provided to the County as it is collected, was also not considered by Tully & Young because the Peer Review was prematurely published before the data was obtained.

We request that the Peer Review be revised to consider the additional information recently provided to the County by EMKO, and to correct the deficiencies noted above. Thank you for your consideration of this request.

Best regards,

MITCHELL CHADWICK LLP

Patrick G. Mitchell

PGM:de

CC: Kathleen Bales-Lange, Tulare County Counsel

Aaron Bock, Tulare County RMA

Ron Wilson, Cemex

Pete Locastro, Cemex

Andy Kopania, EMKO Environmental

Allison Reynolds, Mitchell Chadwick

Part 2: Comment Letters marked to correspond to responses in memorandum



Tully & Young, Inc. 3600 American River Drive, Suite 260 Sacramento, CA 95864

MEMORANDUM

To:	Mike Spata, Associate Director
	Tulare County Resource Management Agency
From:	Greg Young, P.E.
Date:	August 25, 2014
Subject:	Findings and conclusions of peer review of Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry, prepared by EMKO dated February 26, 2014

The purposes of this memorandum are to (1) evaluate the findings from the peer review of the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"), and (2) present conclusions of the peer review. A copy of the Report is included as **Attachment 1**.

Background

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Tully & Young, Inc., an experienced water resource planning firm in Sacramento, was contracted by the Tulare County Resource Management Agency ("County") to perform a peer review of Report in response to on-going concerns regarding localized groundwater elevation conditions. Company qualifications and Greg Young's resume are included as Attachment 2. Note that COA 49 specifically requires the use of a licensed hydrogeologist.

The Report was originally prepared at the request of the County "to address several written complaints received by RMA in late January 2014 regarding groundwater conditions adjacent to the CEMEX Construction Materials, Inc. (CEMEX) Stillwell Quarry..." (Report, p. 3). At that time, residents of properties adjacent to the Stillwell Quarry ("Quarry") were experiencing lowering of the groundwater in shallow domestic wells and believed the Quarry was responsible. The Report concluded that "[T]he available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities."

Because groundwater conditions have continued to be of concern on adjacent properties, the Report's conclusion has been questioned and challenged by the same local residents, and has been brought to attention of the County Board of Supervisors (see transcript from July 8, 2014 Board of Supervisors meeting). The County has requested Tully & Young review the Report in light of these challenges as it continues to work to resolve the circumstances being experienced by the local residents.

The review's focus was not limited to the materials and conclusions of the Report. To understand the underlying context as well as data and analysis in the Report, independent research of other data, reports, and materials relevant to the Quarry was undertaken, and discussions were had with County. This independent research and review of other materials, as well as communications with the County, helped place the Report's information and conclusions in context to enable an appropriate peer review. For instance, as discussed later in this memorandum, this review included the original EIR and supporting technical documents, relevant hydrologic and reservoir data, and historic satellite images. <u>However, T&Y fails to consider the complete file and records</u>, as noted in the transmittal letter for these redline comments.

In addition to the aforementioned review and research, the lead author of the Report, Dr. Andrew Kopania, was engaged by CEMEX to prepare additional materials as an addendum to the Report ("August Addendum"). These materials were summarized and provided to the County in a memorandum (see **Attachment 3**) and accompanying data in an email to the County dated August 12, 2014 (also included with **Attachment 3**). Though this memorandum and data was provided after a thorough review of the Report was already completed, it is relevant to the peer review effort and therefore incorporated and referenced herein as appropriate-, <u>This paragraph misstates the purpose of the Technical Memorandum and incorrectly presumes that the materials were prepared as an Addendum to the February 2014 EMKO Report. As stated in the first paragraph of the Technical Memorandum, "This information has been summarized from available records based on the information request in the July 24, 2014 electronic mail message from Aaron Bock and our meeting and teleconference on August 4, 2014."</u>

Governing Permit Conditions

As a starting point, the Conditions of Approval ("Conditions") for the Quarry, as adopted in 2002 by the County Board of Supervisors, were reviewed to understand the requirements placed upon the operator of the Quarry, CEMEX Construction Materials, Inc. ("CEMEX"). Conditions 46 through 55 were identified as having a primary relationship to the conditions of groundwater in neighboring wells (see **Attachment 4**)

During review of the Report and associated research it became apparent that many monitoring reports and associated analyses, as required by the Conditions, were never prepared or provided to the County. <u>Given the incomplete set of information considered byT&Y in its Peer Review, this paragraph should be revised to reflect the information provided to the County by EMKO.</u> For instance, Condition 48 clearly states that an annual groundwater monitoring report shall be prepared, as required by the Groundwater Monitoring Plan ("Monitoring Plan"). Such reports do not appear to exist. <u>Annual reports containing water quality analyses were submitted to the County on August 25, 2014.</u> As a further example, the Monitoring Plan states that the Quarry operator shall provide the County with reports that "*will also include groundwater*

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contour maps showing the location of each monitoring well and the current direction of groundwater flow and hydraulic gradient calculated for each monitoring event." (Monitoring Plan, p. 3). Lacking this information, several questions cannot yet be fully addressed and thus the key finding of the Report is limited.

The August Addendum did provide some additional data and analysis regarding the requirements of Condition 48, namely, providing estimates of historic monthly pumping to dewater the facility.¹ The discussion above and related footnote misstate and misinterpret the information provided in the Technical Memorandum. Specifically, Item #1 on page 1 of the Technical Memorandum states that the "electrical usage records are for the pump(s) used to provide water to the recharge trench..." In addition, Item #4 states that "Table 1 shows...total gallons pumped to the recharge trench..." Thus, the discussion and data provided clearly state that the water pumped using the *electric pumps* was discharged to the V-ditch. There was only a short period of time, during a very wet winter, where some water was pumped to a different location. The third full paragraph on page 2 of the Technical Memorandum states that during January-April 2011, water pumped by a *diesel-fueled pump* was sent to the North Pond. Clearly, the pumping from the diesel-fueled pump would not be reflected in the electrical usage records. There is no ambiguity about the amount of water delivered to the V-ditch.

Organization

This memorandum is organized to first provide the key finding of the peer review, which is then supported by a more complete discussion of elements of the Report and associated research.

Key Finding of Peer Review

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Based upon the lack of historic data and reports to provide both context and a complete technical set of facts, the conclusions reached by the Report's cause-and-affect analysis of this incomplete set of facts appear without merit in many instances. As noted above and in the transmittal letter for these redline comments, the Peer Review is not based upon the full set of information used to prepare the Report and therefore conclusions about the Report's reliance on an "incomplete set of facts" are not correct. As such, it is not possible to fully place blame on the current drought conditions or other external factors to explain the current groundwater level conditions being experienced by the subject properties. Although the drought is undoubtedly a primary contributing

¹ As discussed in this memorandum on pages 4/5, the August Addendum claims the monthly power records from August 2003 through June 2014, translated to volumes of water, represent deliveries to the "V" ditch. However, as noted in Condition 48, the regular reporting should provide "*data concerning (1) the locations and amounts of mine dewatering, (2) the locations and amounts of water delivered to the recharge ditch, and (3) the locations and amounts of water delivered elsewhere.*" Since there is no clear distinction in the data provided with the August Addendum, the data is recognized as only representing concern (1). This discussion clearly misrepresents the information and statements made in the Technical Memorandum. The Technical Memorandum states that the volumes of water in Table 1 were pumped to the V-ditch and only the V-ditch. Pumping to the North Pond during major rainfall events in 2011 is also discussed, and the August 12, 2014 Technical Memorandum clearly states that the volumes pumped to the North Pond are not included in the totals sent to the V-ditch shown in Table 1.

factor, the actions of CEMEX could have caused or at least exacerbated the degraded local

groundwater conditions. It is unclear what is meant by "degraded local groundwater conditions". In federal, state and local law and regulations, "groundwater degradation" typically refers to water quality issues. While it is true that the groundwater at the locations of the private wells is significantly degraded by nitrate and total dissolved solids, that condition existed prior to mining as noted in the 2002 EIR studies and is not an issue addressed by the Report, nor should it be discussed in the Peer Review.

Specifically, absent water in the "V" ditch since September 4, 2013, coupled with the absence of groundwater elevation contour maps and estimates of the hydraulic gradient that should have been routinely prepared, CEMEX cannot demonstrably be excused from fault. Had this information been available, the relationships between actions of CEMEX and the groundwater conditions at the subject properties could more readily be established and understood. <u>Please refer to the transmittal letter for these redline</u> <u>comments</u>. <u>Substantial additional information is available but was not considered in the Peer Review</u>.

Although, it should be noted, that even if water delivered to the "V" ditch, the groundwater levels under the subject properties may still have declined due to the current extreme drought conditions and other external factors. But, with an incomplete set of facts and obvious violations of Conditions of Approval, the Report cannot reach a determinant conclusion that CEMEX has no fault – even if that were the case.

2 Detailed Report Review

As noted above, the August Addendum provided additional data and assessment of facts in an effort to support conclusions of the Report. As noted above, the Technical Memorandum was not provided "in an effort to support conclusions of the Report," but rather in response to specific requests for information from RMA. The data and assessment in the August Addendum is independently addressed first, as it affects the review of the six primary sections of the Report.

The Report includes six primary sections: (1) Introduction, (2) Nature of Complaints, (3) Mining Operations and Monitoring, (4) Rainfall Data for Lemon Cove, (5) Hydrologic Conditions for the Kaweah River, and (6) Summary and Conclusions. Each of these is independently addressed after the August Addendum.

August Addendum

This memorandum provided "a discussion of the operations of the recharge trench at the CEMEX Stillwell Mine." The memorandum continues by citing electrical use records for the pump(s) used to provide water to the "V" ditch, pump size and flow rate information from the pump supplier, pump performance curves, and a table equating the monthly power records from August 2003 through June 2014 to gallons of water per month.

The August Addendum also included an email dated August 5, 2014 from CEMEX

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employee Pete Locastro that states "Noted on the excel sheet are the dates and amounts we pumped into the north pond." (See Attachment 5.)

Assessment

The August Addendum was intended to resolve the previously lacking information of historic discharges to the "V" ditch. However, though the underlying power data (and subsequent translation to gallons delivered per month) does demonstrate consistent power usage since January 2006, the representation that it also represents delivery to the "V" ditch is not conclusive and conflicts with other statements and data.

Specifically, the monthly well-level data collected by Dellavalle and represented in the Report often included notes associated with the data collection event. For instance, as shown in Attachment 6, notes for the monitoring wells include: "Ditch running full," "Ditch 1/2 full," and "No water in the ditch." If, as suspected but not confirmed, the "ditch" referenced in these notes is the "V" ditch, then there are several months when the measurement was taken and no water was in the ditch. This conflicts with the power data from the August Addendum that implies water was in the ditch in these months. Because mining operations may vary daily, it is unclear if on the day groundwater levels were measured, pumping to the "V" ditch was not occurring, but was occurring other days during the same month, or whether no water was being discharged for a longer period - even for several months in a row. The Dellavalle field notes refer to the concrete-lined irrigation canal (aka the Peoples Ditch) located to the east of the V-ditch near the locations of the Quarry neighbors' wells. Dellavalle Laboratory, Inc. has provided a letter confirming this, which is attached hereto as Exhibit A. Even without the letter in Exhibit A, the fact that the Dellavalle notes could not be referring to the Vditch should have been apparent to T&Y during the Peer Review analysis. Specifically, COA 55 (which T&Y restates in full below) states that the V-ditch was to be excavated to a depth of 6-8 feet. The water level data in the table cited by T&Y shows that the depth to groundwater was as shallow as 2-5 feet during the time when many of the "No water in ditch" notes were made. Thus, any notes referencing a dry ditch could not have been referring to the V-ditch, as it would have contained several feet of groundwater at those times, even if no water was being pumped into the V-ditch. Accordingly, the Dellavalle notes clearly do not reference the V-ditch and speculation regarding the Report's conclusions based on the Dellavalle notes is unfounded.

Further, the Report, assessed in more detail in the latter sections of this memorandum, specifically states: "*The water levels have been measured monthly since May 2005, which is more than three years prior to the beginning of dewatering and use of the recharge trench.*" (Report, p. 5). This would translate to dewatering operations beginning sometime after May 2008. Yet, the August Addendum states: "*Continuous dewatering and discharge to the recharge trench occurred from January 2006 until June 17, 2013...*" (August Addendum p.1/2). The data from the August Addendum is presented in Figure 1. The Report misreports the start of dewatering to the V-ditch due to a miscommunication with CEMEX staff. The Technical Memorandum was provided subsequent to the February 2014 Report and contains accurate information regarding the start of dewatering.

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Kopania 12 cont. The start date of dewatering activities and discharge to the "V" ditch in these two instances conflict by several years. There is no evidence provided as to which is correct. The Technical Memorandum corrects a misstatement in the Report and supersedes the statements in the Report regarding the start date of dewatering. Technical Memorandum corrects a misstatement in the Report and supersedes the statements in the Report regarding the start date of dewatering. One possible conclusion is that the power records indicate power consumed by the Quarry, but do not directly translate to discharge to the "V" ditch. This possibility is supported by the email statement indicating water was pumped to the North Pond (see Attachment 5). The North Pond is not connected to the "V" ditch. As discussed above, \mathbb{M} the Technical Memorandum clearly and accurately states that the electrical records are openic for the pumps used to dewater the mine and send water exclusively to the V-ditch. The "possible conclusion" described here is inconsistent with the information provided to

T&Y and reviewed for the Peer Review and, thus, incorrect.

FIGURE: Dewatering Record (gallons per month)

Finally, the August Addendum simply provides power usage records and a translation (and assumption) that the power use was only for pumping to the "V" ditch. No comparison between the timing and quantity of implied pumping to the "V" ditch is made with well level measurements articulated in the Report. In order to reach a possible conclusion that the mining operations have no fault in the current groundwater conditions under the subject properties, it would be require that some comparison of the assumed discharge timing and quantities with measured groundwater levels be conducted. The Technical Memorandum August 12, 2014 memo was prepared to respond to Items b, c, and f of the July 24, 2014 email from Aaron Bock, as is clearly stated in the first paragraph of the Technical Memorandum. The suggested analysis and comparison is based on a faulty premise of cause and effect and would not be useful to determine if mining activities caused water levels in neighboring wells to drop. The water pumped to the V-ditch is the amount necessary to dewater the mine excavation. Therefore, when groundwater levels are high, the pumping rate will be higher, and when groundwater levels are low, pumping rates will be lower. The change in groundwater levels affects the amount of water that goes to the V-ditch, rather than the other way around. As is discussed further below, the Quarry uses a dry-mining technique, whereby all water must be removed from the excavation in order for mining to take place. All water pumped from the mine excavation is and has been pumped to the V-ditch, with the exception of the single wet winter during which some excess water was pumped to the North Pond.

Conclusion

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The August Addendum lacks any analysis to demonstrate whether a relationship exists Kapania 15 between deliveries to the "V" ditch and the groundwater levels underlying the subject properties. The Technical Memorandum was intended as a transmittal of data requested by the County. It was not intended to be a data analysis. Furthermore, and probably more important, statements in the memorandum regarding power records and Kopanial & Kopanial 7 Kopanial 6

the power records themselves seem to conflict with other data discussed more fully in the individual Report sections below. For instance, the August Addendum's statement about "continuous dewatering and discharge to the recharge trench..." conflicts with the Report's representation of timing of dewatering activities. <u>The Technical Memorandum corrects and supersedes the Report on this issue, as described above.</u> It is not clear which representation is correct. Also, given the notations marked by Dellavalle's laboratory personnel regarding "No water in ditch" and "Ditch full," coupled with the seems to indicate that, although pumping was occurring, the discharge was not necessarily to the "V" ditch. <u>The Dellavalle notations refer to the concrete-lined irrigation canal (the "Peoples Ditch")</u>, not the V-ditch, as discussed above and verified in Exhibit <u>A.</u> Rather, the pumping records are likely a good indication of a portion of the first required reporting item for Condition 48 – "*the locations and amounts of mine dewatering.*" Although the "amounts of mine dewatering" may be provided, the "locations" are not. <u>The August 12, 2014 Technical Memorandum clearly describes the locations of the discharges</u>.

Report Section 1.0 Introduction

This section of the Report identifies two of the primary governing Conditions: 46 and 49 and notes that they are "used as the basis for the technical evaluation of the complaints…" (Report, p. 3). This section also notes other information considered by the Report including: "the history of mining and dewatering at the Stillwell Quarry, the available data regarding water levels in neighboring wells and monitoring wells on the Stillwell Quarry property, rainfall data for Lemoncove, and hydrologic conditions on the Kaweah River." (Report, p. 3/4).

Assessment

While the two conditions cited are vital, the Report failed to discuss Condition 48 or 55, among others.² These particular Conditions include the following:

Condition 48: In addition to the Annual Groundwater Monitoring Report required by the Groundwater Monitoring Plan, the applicant shall make available to the RMA on a monthly basis, data concerning (1) the locations and amounts of Mine dewatering, (2) the locations and amounts of water delivered to the recharge trench, and (3) the locations and amounts of dewatering delivered elsewhere. This data shall be tabulated and provided in a form acceptable to the RMA.

Condition 55: The proposed "V" ditch along the east side of the project site shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells. The trench shall be constructed to a depth sufficient to intersect the layer (substrata) of cobbles, or comparable pervious materials, that occurs locally beneath the site (a

² The August Addendum, assessed previously, meets a portion of the data requirements of Condition 48. But as noted previously, it is not clear which of the subsets of data it actually represents. <u>As discussed</u> above, the Technical Memorandum clearly states which data are represented.

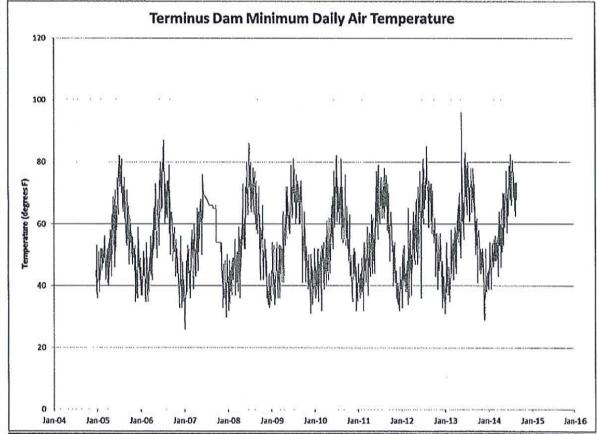
depth of approximately 6 to 8 feet). See comment above regarding the "No flow in ditch" notes. As defined in this Condition, the depth of the V-ditch was below the groundwater level at the time the "No flow" notes were made. The sides and bottom of the "V" ditch shall be designed and maintained to maximize the amount infiltration necessary in establishing the groundwater mound. Water produced from dewatering the mine site shall not be pumped directly into the "V" ditch, but shall initially be pumped into a holding basin(s) to allow fines in the water to settle out and flocculation and precipitation of dissolved iron minerals to occur.

Additionally, while the other information cited as "considered" by the Report would generally be informative and useful for an evaluation such as this, the Report did not identify other considerations that could also be informative such as: (1) new wells drilled or used uncharacteristically upgradient from the neighboring wells that could contribute to groundwater conditions (e.g. to provide frost protection during extremely cold temperatures in early December 2013, or as an irrigation source in place of surface water from the Lemon Cove ditch or Foothill ditch), Given that there is only about 15 to 20 feet of alluvial material above bedrock at the locations of the neighbors' wells, there would be insufficient aguifer capacity for commercial-scale irrigation wells upgradient within the alluvium. Pumping from deeper bedrock wells for irrigation, upgradient or otherwise, would not impact the water levels within the alluvial aguifer. This information was implicit in the Report's evaluation. Furthermore, per the Stillwell Quarry permit, CEMEX is not required to identify or evaluate each potential effect that could be causing a decline of water levels in Quarry neighbors' wells, rather, it is required, only to evaluate the effects of mining on these water levels. (See Condition 49 requiring an evaluation to determine if reported well problems are "caused by mining activities.") Even if such an analysis were required, the need for frost protection in early December 2013 in the area uphill from the neighbors' wells is speculative and does not appear to be supported by any empirical data. Temperature data from Terminus Dam show that the temperature only dropped below 31 degrees F on one day in December 2013 (see graph below). According to information from UC Davis, the critical frost damage temperature for citrus is below 31 degrees F (http://homeorchard.ucdavis.edu/8100.pdf). In addition, such external effects would not explain the very low water levels in the Morton well extending from January 2012 to August 2012 and again in September, October, and November 2013. or (2) historic changes in water level in Lake Kaweah an its potential relationship to localized hydraulic gradients. There is no known or demonstrated hydraulic connection between Lake Kaweah and the alluvial material extending from the eastern saddle dam down toward the neighbors' wells. Regardless, a preliminary review of water levels in Lake Kaweah conducted by EMKO prior to preparing the Report indicated that Lake Kaweah water levels fluctuate dramatically each year and are only near the elevation of the base of the saddle dam for very short periods of time, providing little, if any, opportunity for lake water to percolate through the saddle dam. The figure below shows the water surface elevation in Lake Kaweah since January 1, 2000 plotted against the elevation of the base of the saddle dam on the interior (lake) side (approximate elevation of 680 ft msl). The data demonstrate that the water level in Lake Kaweah fluctuates dramatically, in sharp contrast to the very stable water levels in the neighbors' wells from June 2005 through the end of 2011. The water

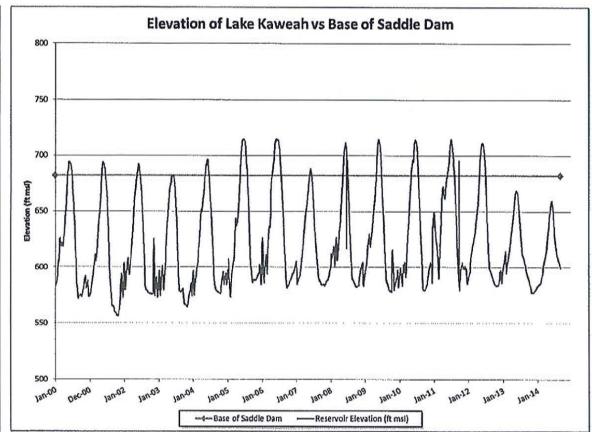
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level in Lake Kaweah only reaches the elevation of the base of the saddle dam for a short period of time most years, while in other years, such as 2013 and 2014, it does not reach that elevation. The low water levels in 2013 and 2014 are properly considered a drought effect, not a separate "consideration", as inferred above. The Report also did not reference any of the prior analysis prepared and presented in the original 2002 EIR – in particular the *Hydrologic Data Evaluation Report*, June 10, 2002 that was also prepared by EMKO (see **Attachment 7**). This particular document included extensive analysis in 2002 of the existing property's (pre-Quarry) relationship with localgroundwater levels and subsurface flow and direction. The 2002 report and EIR concluded that mining would not have a significant impact on water levels in the neighbors' wells. The purpose of the new analysis in 2014 was to reassess that conclusion. Thus, the 2014 analysis needed to be based on a de novo evaluation of the data and not rely on the data and evaluation from 2002 that found that the mining would not impact the wells.



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Conclusion

As noted from reading each Condition, these also should have been part of the Report's "basis for the technical evaluation" of the complaints. Specifically, and as noted previously, (1) lacking the full compliment of data required in Condition 48 presents significant challenges to understand the relation between Quarry operations and neighboring wells, <u>This conclusion is based on a misreading of the Technical</u> <u>Memorandum, as described above.</u> and (2) lacking physical water delivery to the "V" ditch as required by Condition 55, which has not occurred since September 2013, presents significant

challenges to creating and maintaining a "groundwater mound."<u>This assertion is</u> inconsistent with Quarry permit requirements and the March 24, 2014 RMA internal correspondence, which state that pumping to the V-ditch is to be done when the mine is actively being dewatered.

Further, and as discussed below in related sections, other external factors should have also been at least noted as needing to be investigated to understand if they could be contributing factors (e.g. when the Lake level fluctuates normally, is there a corresponding affect to groundwater elevations down-gradient from the Lake's southern saddle dam?). See comments above. There is no requirement that CEMEX evaluate potential external factors not related to mining which might impact Quarry neighbors' wells.

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And finally, lack of reference to the original studies prepared to support the EIR is problematic as this information provides vital context to the pre-Quarry conditions, expected impacts, and proposed mitigation strategies that resulted in the adopted Conditions. While the 2002 studies might provide "vital context" to a peer reviewer unfamiliar with the Project, as stated above, the 2014 Report presented a de novo analysis and did not rely upon the previous findings of the EIR. This comment also misrepresents the findings of the EIR, and the fact that no mitigation was required for impacts to neighboring wells, as the EIR concludes that the Quarry would have a less than significant impact to water levels in these wells. The V-ditch was not a mitigation strategy to offset potential impacts, rather it was a condition negotiated between CEMEX and RMA Staff at the time of the Project approvals and imposed by the County as a condition of approving the Quarry permit.

Report Section 2.0 Nature of the Complaints

This section of the Report simply lists the complaint letters from January 2014, references a figure and summarizes the complaints as "to do with reduced well yield or low water levels, and that the issues began one to two months prior to the end of January 2014 (i.e. late November to late December 2013)."

No assessment of this section was necessary.

Report Section 3.0 Mining Operations and Monitoring

The first portion of this section describes operations of the Quarry, noting that dewatering began in September of 2008 and that wires were stolen from the pump used to fill the "V" ditch on two occasions: (1) stolen on June 17, 2013 and replaced on June 21, 2013, and (2) stolen on September 4, 2013 and not replaced. No water has been pumped to the "V" ditch since September 4, 2013.

The section continues by detailing the monitoring of groundwater levels since May of 2005 and discusses analysis of groundwater levels from the individual well data. The section concludes by stating: "[T]*hus, the low water levels reported in the complaints discussed in Section 2.0 are not a recent incident and have been occurring cyclically since at least August 2011. The data clearly demonstrate that the groundwater level in the area was already dropping rapidly prior to the shutdown on September 4, 2013..." (Report, p. 5)*

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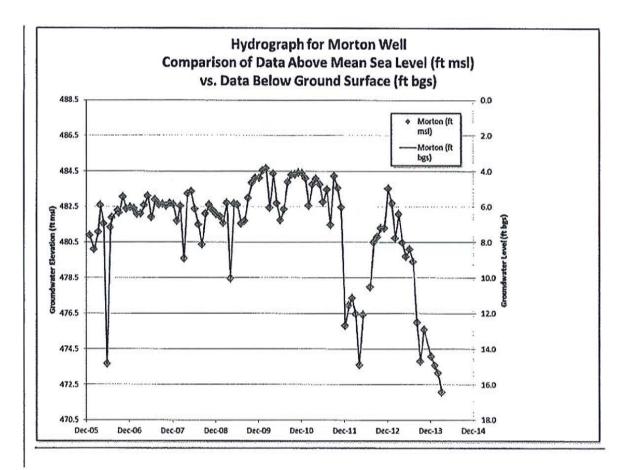
The Report's generalized assessment of groundwater level data from individual wells is misleading and potential wrong. Lacking a common datum to reference the individual well data, and lacking clarity or assessment in the August Addendum regarding the quantities delivered to the "V" ditch as required by Condition 48, it is not possible to reach a conclusion about any relation between water delivered to the "V" ditch and the groundwater levels in the individual wells. A common datum is not necessary to support the conclusions reached by the Report. For instance, if the water level drops two feet in a well, the direction (down) and magnitude of change (two feet) are the same, whether this measurement is recorded as feet below the top of the well, or

converted to a common datum such as feet above mean sea level. This is clearly illustrated below on the Hydrograph for the Morton Well that compares the data in terms of the elevation relative to mean sea level and the depth below ground surface. As shown, the data points and the curve connecting the data points are identical. Thus, it is also possible to compare the data between different wells in the same manner, in terms of trend (up or down) and magnitude (feet of water level change). For example, the fact that the water level in the Morton well dropped almost 11 feet from October 2011 to May 2012 is discernible whether or not the well location has been surveyed to a common datum. For instance, if during the prior instances when wells were noted to have appreciable decreases (e.g. the Report draws attention to period of August 2011 until May 2012), water of sufficient quantity was not being delivered as required by Condition 55, then it is possible the lower groundwater elevation readings were a result of insufficient water in the "V" ditch and not, as the Report contends, part of cyclical decreases caused by other factors. Based on the water levels in the neighbors' wells. sufficient water was undoubtedly being provided to the V-ditch from January 2006 to October 2011 to address any potential effects of mining. The pumping data shown in T&Y's Figure 1 show that the monthly quantity of water pumped to the V-ditch from October 2011 through August 2013 was consistently within the same range or higher than the volumes pumped to the V-ditch from January 2006 to October 2011. The objective of the V-ditch is to maintain water levels to the east of the ditch so that they are not affected by mining. The V-ditch was never intended to protect the neighbors' wells from drought or other actions outside of the boundary of the mining project. It is undisputed that the V-ditch achieved these objectives until the onset of the current drought and drought-related actions (e.g. reduced releases to the Kaweah River). The August Addendum does indicate dewatering activities during this period (see Figure 1). But if groundwater levels were dropping as noted, would increased discharges have stabilized or reduced the lowering? As stated in the Quarry Permit Conditions of Approval, the water to be pumped to the V-ditch is that quantity of water which is dewatered from the Quarry pit. During mining, the pit is maintained in a dry condition with all water in the pit removed and transferred (after settling) to the V-ditch. Therefore "additional" water cannot be pumped from the Quarry pit. The Quarry permit contains no requirement that would obligate CEMEX to obtain additional water from some other location to pump into the V-ditch. Condition 55 specifically states that water of sufficient quantity to maintain groundwater levels be delivered to the "V" ditch. This is a misinterpretation of the actual permit requirements because it is taken out of context. The 2002 EMKO Hydrological report (p. 15, 2nd paragraph) states that the V-ditch "will prevent a drop in water levels within the private wells that might otherwise be caused during the gravel mining operations." There is no intent in the Condition to provide more water to the V-ditch than is actually being pumped from the mining pit. As discussed above, the data clearly show that the dewatering of the mine did not affect the water levels at the neighboring wells from January 2006 to October 2011, prior to the onset of the current drought.

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Essentially, lacking the fundamental data, no analysis can be completed to understand whether the amount of water delivered to the "V" ditch was "sufficient" to meet the groundwater-mounding objective. <u>The fundamental data are presented in Table 1 of the T&Y peer review and the hydrographs in the Feb 2012 Report.</u> The Report, therefore, cannot conclude that water was always in the ditch since 2008 when it has no data from which to base that fact. This statement is incorrect; please refer to the comments above regarding the Technical Memorandum. And thus, it cannot be concluded that historic fluctuations in the water levels – with lowered groundwater levels equivalent or even greater than being experienced in January 2014 – were due to factors beyond the control of the Quarry's operation. Again, absent the vital facts, it is plausible that decreases seen in previous months correlate to periods when *insufficient* water was not (This appears to be a typographical error.) being delivered to the "V" ditch. Absent the facts, no analysis can be made, thus no decisive conclusion can be reached. <u>As</u> discussed in detail above, the "vital facts" were provided prior to the date of the Peer Review (August 25, 2014).

Furthermore, in contrast to the Report's statement: "[T]*he water levels have been measured monthly since May 2005, which is more than three years prior to the beginning of dewatering and use of the recharge trench.*" (Report, p.5), aerial photography from June 2005 appears to show water in a newly constructed "V" ditch.

The figure below is a screen shot of the June 11, 2005 aerial image showing water in the "V" ditch. The water may have been sourced from the northern pond. Though this may have been a temporary action for testing or the beginning of more routine deliveries into the "V" ditch, the appearance of water in June 2005 contrasts with statements in the Report. According to the August Addendum, dewatering did occur in June 2005. As discussed above, the Technical Memorandum corrects and supersedes the Report regarding the date dewatering began. Note, however, that the V-ditch was excavated below the water table that existed in 2005, so the water visible in the aerial photo could simply be groundwater that had been exposed by the excavation of the V-ditch.

FIGURE - Google Earth Aerial Image from August 26, 2005.

On a related note, reviewing the monthly well data from May 2005 through July 2014 (which extends beyond the data set available at the time of the Report), various observations can be made that are at least as relevant as the statements in the Report derived from the same data. For instance:

1. The Cairns Well (see Report Figure 5) shows a dramatic drop in water levels between September 2013's reading and October's reading. Though this well has shown some variability in previous records, this dramatic drop between these two months appears to correlate with the stoppage of delivery into the "V" ditch. <u>Mr.</u> <u>Cairns has stated (both in his January 31, 2014 letter to the County and at variousmeetings) that his well has not been affected by the CEMEX mining operations.</u>

2. The Morton Well (see Report Figure 4) shows a downward trend between January and August 2013 that, if projected to continue at the same rate, would drop slightly below 10 feet by November 2013. Instead, the well drops significantly by October, well below what would have been projected. This also corresponds to the stoppage of delivery to the "V" ditch. A temporal correlation does not demonstrate causation in the absence of other evidence. For instance, the same change in rate of drawdown is also seen in January 2012 in the Morton well, at a time when relatively high volumes of water (in fact, higher than in any prior year) were being pumped to the V-ditch.

3. The well data recording depth was often accompanied by a note if something relevant was encountered. For instance, the note may say "ditch was full" or "well was running," or may note that no key was available and therefore no reading taken. Many instances have no notes recorded in the spreadsheet, but that may not mean relevant factors should have been noted. For instance, in the Report's Figure 5, the Cairns well shows a series of high and low recordings starting about September of 2011 through May of 2012. There are no notes corresponding to any of these readings. Is it possible that the well was or had previously been running at the time of the readings? What other events would make the values jump up and down? The corresponding data for the Morton well

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(see Report Figure 4) is only lower during the period. Why did it not also experience the high and low fluctuations? Similarly, the four monitoring wells (located along the "V" ditch alignment on the upgradient side) also showed a drop during this period. But they also all have no records for several months with notes stating "no key." It is unclear what point is being made here, but it seems to be a stretch to state that the Report's technical analysis is uncertain because there may or may not have been field conditions that were or were not noted.

These assessments could lead an evaluator of the data to different conclusions than those reached in the Report. This again is illustrative of the point that lacking all of the pertinent facts limits the ability to make decisive conclusions about cause and affect.

Finally, this section makes an important anecdotal note that states: "The quarry pit had filled with water to a depth of approximately 15 feet below ground surface, as shown in Figures 2 and 3." (Report, p. 4/5). When reviewing the 2002 hydrologic report prepared in support of the EIR, during pre-project conditions, groundwater elevations were noted to be between 3 and 6 feet below the ground surface. This illustrates a simple fact that is not assessed by the Report - that the open pit creates a different hydraulic condition than if the material were left undisturbed. In other words, with the removal of material that previously contributed to the hydraulic gradient affecting the subsurface flow of groundwater, the gradient has changed. Groundwater still flowing subsurface but upgradient from the open pit now has a new lower elevation to seek as it flows underneath the subject properties. This is an incorrect interpretation of the conditions at the site. The Quarry is permitted and operates as an alluvial aggregate mine, as opposed to a bedrock aggregate mine which would require blasting and other bedrock mining techniques. The mine pit is not excavated into bedrock below the base of the shallow alluvial aguifer. Therefore, there is not a "new lower elevation" into which the groundwater can accumulate. The mine pit is simply a window excavated into the shallow alluvial aguifer and does not impact the depth of the alluvial aguifer. When the pit is not being dewatered, the water level in the pit represents the average level of the groundwater in that area of the aguifer, with groundwater flowing into the upgradient side of the pit and subsequently flowing out of the downgradient side of the pit. Except very locally (within approximately 100 feet to 200 feet of the pit, per Figure 3 of the 2002 EMKO report), the Quarry does not affect the flow of groundwater in the region. The neighbors who allege their wells have been affected are located approximately 1,000 feet to more than 1,600 feet away from the current Quarry perimeter, and are sidegradient to the pit, meaning that they are not along the flow path of the water flowing into or out of the mine pit. The closest well to the pit (approximately 500 feet away), the Cairns well, has not been affected by the mining, per the owner's statements. The lower water level in the mine now, as compared to previous years, is a result of the regional lowering of groundwater due to the drought. As was originally identified and the primary reason for the Conditions, the open pit would have this affect. This statement is incorrect. The EIR concluded that the mining would not have any effect on the neighboring wells. Thus, the "V" ditch was designed as mitigation to provide a groundwater mound (e.g. a method to maintain the pre-project

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hydraulic gradient). The V-ditch was not a mitigation measure, as the EIR determined

- that the project would have a less than significant impact on neighboring wells. The V-
- Kopania 39 ditch was imposed as a Condition of Approval of the Permit and accepted by CEMEX.. The need for a long-term solution to this issue is also recognized with the planned design of the reclaimed mine site. As planned, there will be two reclaimed lakes of different elevation. The "V" ditch or similar recharge trench is to be constructed, in conjunction with a series of weirs, to "maintain current groundwater elevations along the properties to the northeast of the project area." (Condition 52.) This statement misrepresents the reason for the berm between the two lakes and the V-ditch connecting the lakes. A seven-foot difference in groundwater elevation will exist between the upgradient and downgradient edges of the mine pit upon completion of excavation. Without additional reclamation of the mine pit, a large pit lake would form which would be higher than the ground surface at the downgradient (southwest) edge of the property during high groundwater conditions due to the leveling which occurs within a large lake that intersects the groundwater surface. This could result in flooding or high groundwater levels that would impact downgradient properties. A larger lake would also be more susceptible to wind fetch and wave erosion. Therefore, the EIR and Reclamation Plan for the Quarry establish a two-lake system as noted above to avoid the potential problems of a single lake. This issue is addressed in Impact 4.4-5 of the 2002 Revised Draft EIR (page 4-68). These facts demonstrate that during analysis of the project prior to approval, concern was expressed about the open pits creating a lower groundwater elevation and adversely impacting the hydraulic gradient of subsurface flow under the subject properties. Concern was expressed by neighbors who presented no scientific or other

evidence to support said concerns. The detailed technical and CEQA analyses upon which the County was required to rely, however, showed that the project's impacts to neighboring wells would be less than significant. The Peer Review should not conflate these unsupported concerns with scientific evidence. The Report clearly provides evidence that the water elevation in the open pit is as was expected, yet it does not appear that the planned for mitigation, as recognized in the Conditions, is sufficiently providing a groundwater mound. This statement is incorrect. As discussed on page 4-68 of the 2002 Revised DEIR, the expected water level in the final pit lake was between 477 ft msl and 485 ft msl. Due to the drought conditions, as of August 2014, the water level in the pit was at 467 ft msl. In addition, as discussed above, the V-ditch is not a mitigation measure, as no significant impact was identified, but rather a Condition of Approval accepted by CEMEX. This discussion also misrepresents the objective of the groundwater mound. The goal of the mounding was not to maintain pre-mining groundwater elevations, but to retain water which was flowing downgradient toward the naturally lower portion of the alluvial aquifer in which the Quarry pit is located. If the natural subsurface flow is reduced during a drought, the mound is unable to make up for that.

Conclusions

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The Report is too guick to reach decisive conclusions when relevant facts necessary for reaching such a conclusion is absent. This sentence is incorrect for two reasons: First, Section 3 of the Report (which this portion of the Peer Review is evaluating) does not

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present any conclusions. Conclusions are not presented until Section 6 of the Report, after all of the facts and information are presented in the report. Second, the facts are not "absent," but have merely been misinterpreted or overlooked in the Peer Review, as discussed in detail above.. Though the conclusion may still be accurate if it were to be reassessed with all relevant facts available, making such conclusions absent them is without merit. Even with the additional information provided in the August Addendum, there are not enough relevant facts and analysis to reach determinant conclusions.

The Report attempts to remove any fault from CEMEX through its interpretation of the limited groundwater elevation data and associated notes. This statement misrepresents the Report's analysis, which is based on groundwater elevations, history of pumping, rainfall data, and river flow data. As noted above, Section 3 of the Report does not reach any conclusions regarding "fault from CEMEX" (sic.). Thus, this portion of the Peer Review does not discuss the materials actually presented in the Report. As stated previously, the current unprecedented drought condition is a primary contributing factor to current degraded groundwater conditions at the subject properties. But absent an understanding of the relationship of groundwater mounding to the upgradient groundwater elevations, CEMEX cannot be summarily excused from fault. Again, Section 3 of the Report does not "summarily excuse" anything, as that section of the Report does not draw any conclusions.

Report Section 4.0 Rainfall Data for Lemon Cove

This section presents historic rainfall data for Lemon Cove. The Report states: "Although the 2013-2014 water year is not complete, the first four months of this water year have been the driest October-January period measured in Lemoncove since 1923, based on the CDEC data." This fact illustrates the severity of the drought.

No assessment of this section was necessary.

Report Section 5.0 Hydrologic Conditions on the Kaweah River

This section discusses historic flows on the Kaweah River ("River") and presents that "[H]*igh river flows can recharge the local groundwater aquifer from the area north of the Stillwell Quarry...*" (Report, p. 6). The Report also notes that "[C]*onversely, low river flows may not provide any recharge and can also allow the aquifer to drain more rapidly toward the river.*" (Report, p. 6). The Report elaborates on the timing and duration of flows to the River and compares conditions from October 2010 through early February 2014, implying the likely affect to recharge during these different water years.

Assessment

As detailed in the Report's Section 2, complaints about water levels began in early to late December of 2013. At that time, releases from Lake Kaweah ("Lake") had been nearly zero for at least a month. The Report's data and figures imply that that the limited irrigation releases during the summer and no flood releases during the winter months are primary factors in the lowering the groundwater under the subject properties.

Section 5 of the Report only presents data. This Section makes no implication and presents no conclusions regarding the complaints received by the County.

However, this cyclical period of flows has been routine for decades with no identified impact to groundwater levels at the subject properties. For instance, looking at the 2006 to 2007 condition, releases from the Lake became near zero by October 1, 2006 and remained as such until January 2007 (Report, Figure 9). Although the releases from Terminus Dam may become very small, they are typically not zero. From October 1. 2006 to January 2007, the flows averaged approximately 20 cubic feet per second. Furthermore, the discussion in the Report relates to the volume of the releases at specific times, not the rate of the releases. Rainfall during this period was also below normal, comparable to the rainfall in 2012/2013, which the Report notes was part of the lead up to the current degraded condition (Report, Figure 8). When inspecting the well level monitoring data for this period, the wells on the subject properties and the monitoring wells were all stable, with no apparent impact from the near zero flows and limited rainfall for October 2006 through January 2007. This discussion misses the entire point of the data presentation. The area under the curves representing the river releases in Figures 10, 11 and 12 of the Report indicate the total volume of the releases. It is the progressive and dramatic decline in the total volume of releases over the last few years that is causative. The periods of very low flow are not the focus of the analysis; rather, it is the successive dwindling of major releases over the last several years that is distinctive and unique. It is important to note that excavation of the Quarry had not yet begun as of that period, according to the Report. In contrast, the August Addendum indicates that dewatering began on a continuous basis beginning in January 2006 (see Figure 1) - which again raises questions about contradictory statements between the Report and the August Addendum. As stated above, the Technical Memorandum corrects and supersedes the February 2014 Report regarding the start of excavation and dewatering. Excavation and dewatering had begun and were ongoing during the period from October 2006 through January 2007 and therefore the Peer Review's statement to the contrary and any implications drawn therefrom should be corrected.

The Report also states that the River functions to recharge the local aquifer from the north. However, this appears to be in contrast to a few other previously provided facts – namely the analysis to support the EIR. The EIR's hydrologic study states the following with regard to River recharge:

1. "According to the property owner, if riparian water is not provided to the northern ponds, the ponds would become dewatered very rapidly. In addition, the owner reports that once the ponds are dewatered, it would take a very long time to recharge the ponds with groundwater inflow from the upgradient direction and lateral inflow from the Kaweah River through the geologic material present between the river and the ponds. Thus the primary source of water with the northern ponds is riparian water that is diverted from the Kaweah River." (p. 10, Section 3.3, Hydrologic Data Evaluation Report, EMKO, June 10, 2002, see

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Attachment 7). This statement from the EIR does not contrast with the Report. The EIR clearly states that lateral inflow (i.e. recharge of the alluvial aquifer) from the river occurs, but that according to the landowner, such recharge would take "a very long time." It should be noted that the meaning of "very long time" is relative, and in this case the landowner is talking about recharge relative to his irrigation practices. Recharge in geologic terms occurs at much slower rates than the rates at which groundwater is often extracted for irrigation purposes and therefore this statement should not be relied upon to conclude that recharge from the River is absent.

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2. "Thus the groundwater table will be higher than the water level in the river, preventing the flow of water from the river to a dewatered pit during the mining operations." (p. 14, Hydrologic Data Evaluation Report, EMKO, June 10, 2002) This statement has been taken out of context. The cited statement refers to the reach of the River adjacent to the western edge of the mine, not the reach farther to the north. Due to the drop in elevation along the course of the River as it flows from north of the Quarry to the area west of the Quarry, the River elevation is higher than the groundwater elevation to the west of the Quarry.

3. "Therefore, the water available to the neighboring wells will remain the same and will come from groundwater flow entering the neighboring properties from upgradient, which is the same source of water currently entering these wells." (p. 15, Hydrologic Data Evaluation Report, EMKO, June 10, 2002) It is unclear why the Peer Review concludes that there is a contrast between this statement and the Report. The very northern reach of the River is partially upgradient of the neighbors' wells.

4. "In addition, use of a cut-off wall to prevent inflow from the Kaweah River during dewatering is unnecessary, as discussed above in Section 3.3. Specifically, when the Northern Ponds are pumped for irrigation, little or no water percolates in the ponds from the river." (p. 15, Hydrologic Data Evaluation Report, EMKO, June 10, 2002) See comments on #1, above. The percolation rate may be slow, but the rate is relative, as discussed above.

5. Figure 4.4-2 presented in the 2002 EIR (EIR p. 4-53) graphically represents the groundwater flow direction as east to west across the Quarry to the River, with no flow coming from the River from the northern area. A copy of this figure is included below. The figure presented within the text of the Peer Review does not appear in either the 2002 EMKO hydrology report (included as Attachment 7 to the Peer Review) or in the 2002 Revised DEIR. The County has apparently provided T&Y with an incorrect draft version of the published EIR and accordingly the evidence discussed here in the Peer Review is incorrect. The two different versions of the figure are presented below for comparison. The first figure is the incorrect version relied upon by T&Y, while the second figure is the one that appears in the Revised DEIR which is included in Part B of the June 2002 FEIR.

It should also be noted that the correct version of this figure appears as Figure C-<u>1 in Attachment 7 to the Peer Review (see Peer Review PDF page 121 of 135).</u> <u>There is a substantial difference between the two contour maps, which results in</u> <u>an incorrect conclusion by T&Y in the Peer Review.</u>

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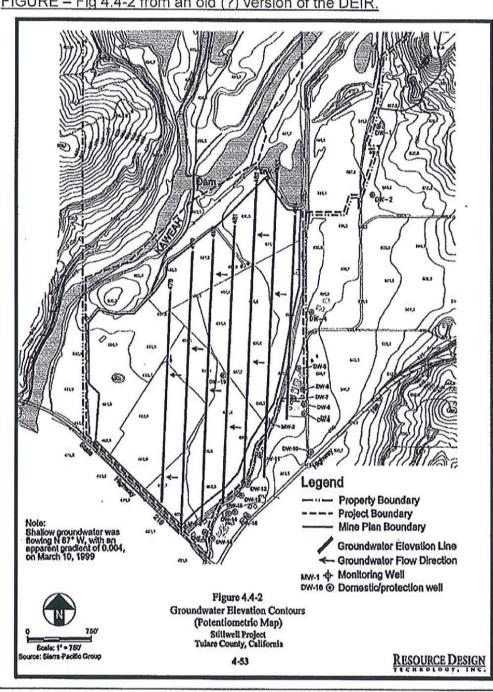
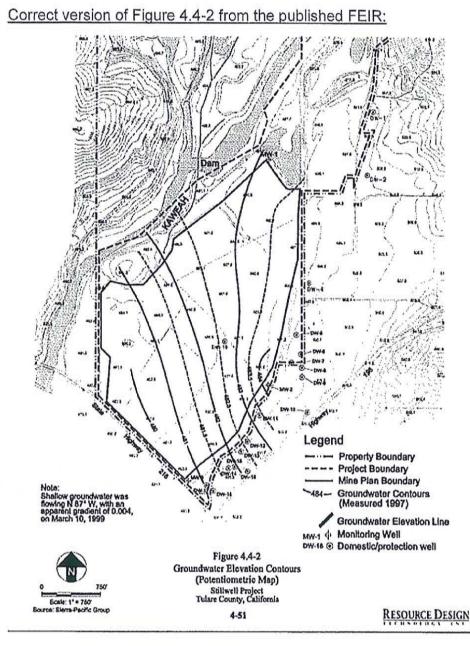


FIGURE - Fig 4.4-2 from an old (?) version of the DEIR.



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As is very apparent from the analysis in 2002, the River does not contribute recharge to the aquifer. This is incorrect. The 2002 analysis did not specifically address this issue and does not provide any data that could lead to this conclusion. However, during preproject conditions, it likely had an influence on the hydraulic gradient and flow conditions that underlay the subject properties – essentially a mounding affect. The data and analysis presented in the 2002 hydrology report and the 2002 Revised DEIR are completely contradictory to the speculative conclusion presented in this sentence of the Peer Review regarding the Kaweah River having a mounding effect. The river acts as a drain, with water from the Stillwell site discharging

to the river.	This is	s shown	repeatedly	in i	the	Revised	DEIR	and	the	2002	hydrolog	gy
report as fo	llows:	N	5.1.0 <u>5.118</u> 5									

1) DEIR page 4-48, first full paragraph, last sentence: "The Kaweah River reportedly gains water as it passes the Stillwell pasture."

- 2) DEIR Figure 4.4-3, page 4-57, and 2002 EMKO report Figure 1 showing Discharge to the Kaweah River for both current conditions and active/post-project conditions.
- 3) DEIR Impact 4.4-5, page 4-68: "Groundwater elevations at the northeast, upgradient side of the proposed quarry are approximately 484 feet above mean sea level (ft amsl). Groundwater elevations at the southwest, downgradient side of the proposed quarry are approximately 477 ft amsl."
- 4) 2002 EMKO report Figure 2 showing the water elevation in the river consistently below the water levels in the onsite monitoring wells.
- 5) 2002 EMKO report Figure 3 cross section showing the pre-mining water level under the site consistently above the water level in the river.
- 6) 2002 EMKO report, page 19, Potential Impacts on Flows Within the Kaweah River, first sentence: "The groundwater surface elevation beneath the pasture in the project area is about 15 feet higher than the water level in the Kaweah River at the Highway 216 bridge...indicat[ing] a large amount of discharge from the Stillwell pasture to the Kaweah River..."
- 7) EMKO 2002 report, page 19, second paragraph, first sentence: "For current conditions, the total discharge to the Kaweah River is 1,310 AF/yr for the 137acre project site."

This fact seems to be apparent since the Quarry's mitigation to address concerns about groundwater levels dropping under the subject properties was to build the "V" ditch to mound water and maintain hydraulic gradients. The Peer Review confuses speculation with fact. As listed above, there are numerous citations to the 2002 Hydrology Report and Revised DEIR that demonstrate that the river acts as a drain, not a mound or barrier. Furthermore, as described above, the V-ditch is not a mitigation.

Conclusion

The current unprecedented drought conditions are having an effect throughout the state on a multitude of factors such as reservoir elevations, stream flows, recharge to groundwater and groundwater levels. However, at the time of the complaints the severity of the current drought was not yet fully apparent – as it was January and wells were seeing problems starting at least the prior month. <u>This statement is incorrect</u>. As early as May 2012, the water levels in the neighbors' wells had dropped to the same levels observed in late 2013 and 2014. In addition, Governor Brown issued an <u>Emergency Drought Proclamation on January 17, 2014</u>. Furthermore, the April 30, 2014 Public Update for Drought Response report from DWR notes that: "Since spring 2008, groundwater levels have experienced all-time historical lows...in the southern San Joaquin Valley"; "In many areas of the San Joaquin Valley, recent groundwater levels are more than 100 feet below previous historical lows"; and "The Kaweah and Kings subbasins have the greatest numbers of deepened wells in an alluvial groundwater

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basin." Thus, it is incorrect to state that "at the time of the complaints the severity of the current drought was not yet fully apparent."

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When looking at the historic near-zero flow conditions similar to that in 2012 and 2013 with low rainfall, coupled with statements about the limited, if any, recharge benefit from the River, the Report's implied conclusion that conditions in late 2013 and January 2014 create a condition severely different than experienced in the past seems baseless. This statement ignores the fact that the groundwater level in the neighbors' wells had already dropped to comparable levels in 2012, the rainfall is the lowest ever recorded in more than a century, and the cumulative releases from the dam are the lowest ever. These are conditions that have never been recorded or reported in the past.

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Similar to every other conclusion of this peer review, the absence of all of the pertinent Facts – especially routine representations of groundwater contours and hydraulic gradient estimates – make it extremely difficult to evaluate the relationships of the River and rainfall to groundwater elevations under the subject properties. As such, the Report should not make decisive statements that excuse CEMEX from any fault. <u>This section of the Peer Review states that it is evaluating Section 5 of the Report.</u> Section 5 of the <u>Report does not make any decisive statements or present conclusions of any sort.</u> <u>Thus, the Peer Review assessment and conclusions related to Section 5 are not based upon the actual information presented in Section 5.</u>

Report Section 6.0 Summary and Conclusions

This section restates a few key facts, and then begins a series of summary statements of its prior evaluation and conclusions. The Report includes two key statements in this section:

1. "The declining trend in 2013 began as early as February, six months before the

discharge of water to the recharge trench was stopped. There is not a correlation between the cessation of discharge to the recharge trench and the water levels in the wells." (Report, p. 8).

2. "It is also worthwhile to note that, had the data supported the opposite conclusion, two of the potential remedies identified in Condition of Approval No. 49 are to reduce the amount of pit dewatering, or if necessary, cease mining operations. Both of these conditions have existed at the site since September 2013." (Report, p. 8).

Assessment

The assessment of each section, as detailed above, is relevant to the summary statements of the Report. Please refer to those prior assessments for further detail. With regard to the two key statements made in this Section, the following is offered for consideration:

1. The current drought very likely has had an adverse impact on localized

- groundwater conditions. Whether due to other external factors from higher
- pumping by other groundwater users even further upgradient and less inflow
- from the normal recharge sources, the groundwater levels would likely decline.
- This trend, as noted by the Report, appears to have begun by the spring of 2013.
- The Report actually notes that this trend began in early 2012.
- However, because pertinent reports were not prepared and provided to the County and the water discharges to the "V" ditch were stopped in September, the rate of decline very well could have been exacerbated by the actions of CEMEX.
- This statement is inconsistent with the conditions that occurred in 2012, when
- pumping to the V-ditch was as high as in any previous year, yet water levels in
- Kopania-62 the neighbors' wells declined almost as far as they did in 2013. In addition, as
 - discussed above, the V-ditch was installed to address the effects of mining. No
 - mining was occurring in late 2013 and 2014. The Report cannot make decisive statements that there is not a correlation between discharge to the "V" ditch absent further understanding of what conditions would have been had sufficient
 - water been in the "V" ditch as was required by Condition 55. As discussed above,
- coponia 13 the only water available to be pumped into the V-ditch is the water that is
 - pumped from the mine pit for dewatering. There is no other water available or
 - required to be pumped by the Conditions of Approval in the Permit.

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2. The Report clearly leaves out key text from Condition 49 as it attempts to imply that the same degraded groundwater conditions would occur if the remedy of ceasing operations or reducing the amount of pit dewatering were imposed. Condition 49 clearly states: "If a significant problem ... be caused by mining activities, then immediate action must be taken to correct the condition, which may include (but is not limited to) modifying the recharge ditches to provide more recharge capacity, reducing the amount of pit dewatering, or if necessary. ceasing mining operations." The first focus is on modifying the recharge ditch, All of the water pumped from the mine is (after settling) discharged to the V-ditch. Since the pumping occurs solely to dewater the mine, when the mine is completely dewatered, there is no additional water to pump to the V-ditch. In addition, all of the water pumped into the V-ditch percolates back into the ground and again becomes part of the alluvial aguifer. Thus, there is not any practical way to modify the V-ditch to provide more recharge capacity. All available water pumped from the mine is already recharging the shallow alluvial aguifer via percolation through the V-ditch. but the Condition also leaves open any option with the included parenthetical. When also considering Condition 55's requirement that "sufficient" water be discharged to the "V" ditch, degraded groundwater conditions could potentially be resolved by simply increasing the quantity of discharge. The EIR objective of the V-ditch is to address potential effects of dewatering of the Quarry on the neighboring wells. If all of the water produced during dewatering is being pumped to the V-ditch and recharging the aquifer, but groundwater levels upgradient of the V-ditch decline (for example, as they did in 2012), then the decline cannot be due to the mining activities but must be due to a lack of inflow from upgradient. Similarly, if there is no dewatering occurring, and groundwater

levels decline, then the decline is not attributable to dewatering. However, this resolution option appears to not have been recognized by the Report either. Furthermore, ceasing mining operations would trigger reclamation actions as detailed in the Quarry's permit conditions, such as Condition 52. In fact, temporary cessation of mining triggers the requirement to file an Interim Management Plan, but does not trigger reclamation of the site if the operator plans to resume mining, as CEMEX does. Accordingly, CEMEX has timely filed an Interim Management Plan with Tulare County to address the temporary cessation of mining as required under the State Mining and Reclamation Act. These reclamation actions included flowing water between two lake elevations through a recharge ditch, using a series of weirs, to assure groundwater elevations on the subject properties were maintained. Adding this statement, which essentially argues that remedies to the current degraded groundwater conditions would result in the same degraded conditions, provides no value to the Report. Rather, by omitting part of the Condition, questions can be raised about the overall evaluation and its conclusions. As described above, those parts of the Condition are not relevant to the current conditions at the site, which is why they were not cited.

Conclusions

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The Report's overall evaluation is based on an incomplete set of facts. As discussed throughout the comments above, more than adequate data and information were available, but they were overlooked or misinterpreted in the Peer Review. Thus, the conclusion that the Quarry operations are not at fault is without merit. This sentence misrepresents the final conclusion of the Report, which states, "There is not a correlation between cessation of discharge to the recharge trench and the water levels in the wells...[t[he historically low rainfall and river discharge amounts are the most likely cause of the lower groundwater levels observed in the wells in the area...[t]he available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities." It is also important to note that the concerns in the letters relate to "pumping air", which could be resolved by lowering the intake, or in the case of jet pumps or centrifugal pumps mounted at the ground surface, changing pump types. It is possible that the Report's conclusions are completely correct. But, absent relevant data, coupled with questions about the overall evaluation in the Report, as detailed in the sections above, it is difficult to say CEMEX is without fault.

EXHIBIT A

Letter From Dellavalle Laboratory, Inc.



Pete Locastro Cemex Construction Materials LP 13475 N Friant Rd. Friant, CA 93628

RE: Lemon Cove Facility - Well Monitoring Program

The ditch referred to in the notes of the monthly well sounding data is the small concrete lined ditch which originates just below the Kaweah Dam. The notes do not refer to the "Cemex V-Ditch" which is northwest of the monitoring wells.

Respectfully,

Ben Nydam

Ben Nydam Certified Crop Advisor # 22552 Dellavalle Laboratory, Inc.

> 1910 W. McKinley, Suite 110 + Fresno, CA 93728 1293 + (669) 233 6129 www.dellavallelab.com

Attachment C

έ.,

CA MINE ID # 91- 54-0034

MINE NAME S	tillwell
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1. Company Operating	Site Contact Perso	1	Telephone
CEMEX	Peter LoCastro		(559)597-2397
Street Address/P.O. Box No.	City		State/ZIP Code/County
24325 Lomitas Rd.	Lemon Cove		CA 92344
2. Designated Agent's Name (individual must reside in CA) Ronald Wilson	Mailing Address 5180 Golden Fo	oothill Pkwy., Suite 200	
City	ZIP Code		Telephone
El Dorado Hills	CA 95672		(916)941-2852
ITEMS BELOW WHICH ARE PRECEDED BY A BOX I INFORMATION FROM THE LAST REPORTING YEAR. SECTIONS MUST BE COMPLETED.)			
3. Owner of Mining Operation CEMEX			Telephone (916)941-2852
Mailing Address (this address will be used to send next year's 5180 Golden Foothill Pkwy., Suite 200	s report form)		
City El Dorado Hills	State/ZIP Code CA 95672		Country (If other than U.S.A.)
Was this operation purchased by you during reporting year?		Was this operation sold by you	during reporting year?
	X NO.	Yes. If yes, date of sale	X No.
Landowner David and Donald Stillwell			Assessor's Parcel # See sheet #4
Mailing Address			Telephone
2001 E. Marinette Ave.			(559) 592-5191
City/State/ZIP Code Exeter, CA 93221			Country (If other than U.S.A.)
5. Status of Mining Activities DURING THE REPORTING YEA	AR CHECK 1 ONLY]	
Newly Permitted-Not yet in operation.	ate Permitted		
X Active.			
Idle (as defined in Public Resources Code Section	on 2727.1). Complete	he following:	
Date operation became idle			
Interim Management Plan pending	-	TTACH PROOF OF SUBMITT	AL
Closed with no intent to resume. Date mining			
Closed—reclamation certified complete by Lead	I Agency. Date min	ng ceased	
6. Status of Reclamation Activities DURING THE REPORTIN	IG YEAR CHECK 1		Received by
Reclamation not started.		DEPAF	TMENT OF CONSERVATION
Reclamation in progress (attach updated reclam	ation plan map indicati	ng progress).	JUN 3 3 CCC
Reclamation certified complete by Lead Agency	ATTACH CERTIF	ICATION	JUN 33 Cm
Reclamation certified complete on		(Date). Of	fice of Mine Reclamation
Financial Assurances released on		(Date).	and resolution
DISTRIBUTION: Original	to State Copy t	o Lead Agency Copy t	o Operator

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CA MINEID# 91- 54-0034

	C Yes No Inspection completed by Lead Agency during the reporting year.
N.C.	es, attach a copy of the Surface Mining Inspection Report (MRRC-1). If inspection report is not attached, please explain on Page 4. 8A. SMARA Lead Agency (city OR county ONLY)
N.C.	8B. Reclamation Plan Status CHECK ONE No Plan
	Approved on (date). Attach copy with amendments, conditions, and PROOF of approval.
	Pending. Submitted to Lead Agency on(date). ATTACH PROOF OF SUBMITTAL
	On Appeal. Submitted to SMGB on(date). ATTACH PROOF OF SUBMITTAL
9. 5	Yes: Financial Assurances approved by Lead Agency. Complete below for approved Financial Assurances:
~	Amount Type Date Posted by Lead Agency Expiration Date or Renewal Date (if applicable) \$47,256 LC 12/21/06 5/30/07 Continuous
	No: Financial Assurances NOT approved by Lead Agency. Financial Assurances pending with Lead Agency. Submitted on(date)
IF / IX N.C.	APPLICABLE, INFORMATION REQUIRED IN ITEMS 10 THROUGH 13 MUST BE PROVIDED FOR EACH SEPARATE PLOT 10. ATTACH NAMED U.S. GEOLOGICAL SURVEY MAP — 7.5' OR 15' QUAD — SHOWING BOUNDARIES OF MINING OPERATION Latitude Longitude Section—Township—Range—Base Meridian Quad Name County
N.C.	11. Type Code(s) of Mining Operation SEE EXHIBIT A FOR TYPE CODES
12. DIS	STURBED ACREAGE COMPLETE ENTIRE SECTION
	1 Approximate disturbed acreage at beginning of 2007. (This figure should match the figure from item 12, line 5 on your 2006 annual report. If it does not match, please explain on Page 4.)
	2 Approximate acreage disturbed during 2007.
	325_(ADD LINE 1 TO LINE 2)
	4 Approximate disturbed acreage reclaimed during 2007.
57	5. 25 (SUBTRACT LINE 4 FROM LINE 3) Approximate disturbed acreage remaining at end of 2007.
N.C.	13. CHECK ALL THAT APPLY Acres Permitted: & Permit #
	Acres Vested (Acres disturbed prior to January 1, 1976) :
	Acres on Federal Lands: & Permit/ID #
IX N.C.	14. \$ Current total assessed value of mining operation as established by County Assessor's Office.

DISTRIBUTION: Original to State Copy to Lead Agency Copy to Operator

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CA MINEID# 91- 54-0034

15. COMMODITIES AND PRODUCTION SEE EXHIBIT B FOR COMMODITIES AND UNITS OF MEASURE			PRODUCTION INFORMATION IS PROPRIETARY AN WILL BE KEPT CONFIDENTIAL PURSUANT TO PUBLIC RESOURCE CODE SECTION 2207(g)				
	ommodities Exhibit B)	Category Number (from Exhibit B)	Check here if No Production for a Commodity		PRODUCTION		
A. PRIMARY COMMODITY PRO	DUCED BY OPERATION:			0	×		
Sand and Gravel		1		U	^		
 ALL OTHER COMMODITIES P (include any production of gold 							
16. FEES SCHEDULE							
A. PRODUCTION CODE				BOVE, REFER TO ION CODE IN 16(A)) AND FEE IN 16	6(B) BELOW.	
A. PRODUCTION CODE B. REPORTING FEE GOLD AND SILVER FEE: IF GOLD OR SILVER PROD	FROM EXHIBIT C	SECTION 15(A)	OR 15(B), CONTIN	ION CODE IN 16(A) 10 2,587.00 NUE ON TO COMPL	-	(B) BELOW.	
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Please mail annual report, reporting fee, gold and silver fee and ALL required attachments to:

Original to State

DEPARTMENT OF CONSERVATION Office of Mine Reclamation 801 K Street, MS 09-06 Sacramento, CA 95814-3529

Copy to Lead Agency

Office of Mine Reclamation

Copy to Operator

DEPARTMENT OF CONSERVATION

JUN 31 1128

DISTRIBUTION:

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CA MINEID# 91-

DISTRIBUTION: Original to State

Copy to Lead Agency

Copy to Operator

Attachment D



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD VISALIA, CA. 93277 PHONE (559) 624-7000 FAX (559) 730-2653

Michael Bond Roger Hunt Planning Public Works . Administration

MICHAEL C. SPATA, DIRECTOR

By Email and Overnight Mail

October 13, 2014

Cemex Construction Materials Pacific, LLC 5180 Golden State Foothill Parkway El Dorado Hills, CA 95762

Att: Ronald Wilson

Subject: Proposed Interim Management Plan Applicable to PMR No. 98-003 (Stillwell Mine)

Mr. Wilson:

On behalf of the Tulare County Resource Management Agency (RMA), this responds to the proposed Interim Management Plan (IMP) -- applicable to Surface Mining Permit (PMR) No. 98-003 -- submitted on August 15, 2014 on behalf of CMEX, the operator of the Stillwell Mine located at 24325 Lomita's Road, Lemon Cove, California.

As indicated below, there are a number of deficiencies for which the proposed IMP must be rejected. The grounds for rejection or incompleteness are identified as follows:

1. Failure to Submit Application and Fees

The proposed IMP was not submitted pursuant to RMA's application for an interim management plan, nor were the application fees of \$1510.00 submitted in connection with the proposed IMP by the operator. Accordingly, RMA cannot conclude that the application is complete until a completed application and fees are submitted to RMA. Enclosed is a copy of the application.

2. Evidence of Idleness Inadequately Submitted

Pursuant to Public Resources Code Section 2770, subdivision (h)(1), "Within 90 days of a surface mining operation becoming idle, as defined in Section 2727.1, the operator shall submit to the lead agency for review and approval, an interim management plan."

As indicated in Sections 3.1 and 3.2 of the proposed IMP, the operator claims that the Stillwell Quarry became "idle" as of May 17, 2013 using the definition contained in Public Resources Code Section 2727.1. Based upon this stated idle date, it appears that the 90-day period would have expired on August 15, 2013.

Pursuant to Public Resources Code Section 2770, subdivision (h)(6), "Unless review of an interim management plan is pending before the lead agency, or an appeal is pending before the lead agency's governing body, a surface mining operation that remains idle for over one year after becoming idle as defined in Section 2727.1 without obtaining approval of an interim management plan shall be considered

abandoned and the operator shall commence and complete reclamation in accordance with the approved reclamation plan."

According to Public Resources Code Section 2727.1, the term "'idle' means that an operator of a surface mining operation has curtailed production at the surface mining operation, with the intent to resume the surface mining operation at a future date, for a period of one year or more by more than 90 percent of its maximum annual mineral production within any of the last five years during which an interim management plan has not been approved."

Applied here, the operator claims the mine became idle as of May 17, 2013 without submitting supporting data. The proposed IMP in Section 3.1 appears to only reference a 2006 annual production value and does not provide evidence of other annual production data. In addition, the year 2006 appears to be outside the period recognized in the criteria as defined in Public Resources Code Section 2727.1.

Therefore, assuming May 17, 2013 is the effective date the mine became idle, then evidence needs to be provided demonstrating that from the period from May 17, 2012 to May 17, 2013, the mine did not exceed 10% of the production for the five preceding annual periods. In support of the claim of idleness, the Mining Operation Annual Reports -- as apparently submitted by the operator to the California Department of Conservation for the years 2008, 2009, 2010, and 2012 -- should be provided with a completed application to RMA.

Nonetheless, RMA's peer review consultant obtained copies of Annual Reports for 2006 through 2013 apparently submitted by the operator of the mine to the Department of Conservation's Office of Mine Reclamation.

After reviewing these Annual Reports, it does not appear that the mine meets the criteria of producing 10% or less for one year or more, as required by Public Resources Code 2727.1, and as claimed by the operator in various sections of the proposed IMP.

For example, in Section 3.1 of the IMP, the operator states that "In 2006, the production reported to the California Department of Conservation as part of the site's Mining Operations Annual Report was 849,000 tons. As of May 17, 2013, Stillwell Quarry will not exceed 10 percent of its reported production in 2006."

However, as shown in the table below, production in 2006 was only 9,584 tons and not 849,000 tons. Apparently, the highest production in the past five years occurred in 2010 and 2011 with 571,300 tons produced during these two years. To qualify as having production reduced to 10% or less, production for the last year would appear to have been 57,300 tons or less. According to the 2013 Annual Report, production was 152,687 tons, and thus, production during 2013 would not show a one year reduction necessary to qualify as "idle."

Report Year	Reported Production (tons)
2006	9,584
2007	0
2008	53,744
2009	256,400
2010	571,300
2011	571,300
2012	638
2013	152,687

Thus, after considering the above information, please respond with a completed application by providing the evidence necessary to support the claim of idleness.

3. Conditions of Approval Inadequately Addressed

Public Resources Code Section 2770, subdivision (h)(1), provides, in part, that "the interim management plan shall provide measures the operator will implement to maintain the site in compliance with this chapter [Surface Mining Reclamation Act of 1975], including, but not limited to, all permit conditions."

After review of the proposed IMP, the conditions of approval associated with PMR 98-003 do not appear to be addressed adequately, particularly condition numbers 46 through 55, as having a primary relationship to the conditions of groundwater applicable to neighboring wells. The operator should take measures that are necessary to avoid causing groundwater impacts to the neighboring wells. Thus, in accordance with the above-stated code section, the operator shall identify measures to maintain the site in compliance with all permit conditions.

Additionally, in connection with PMR No. 98-003, financial assurances should address the reasonable costs to ensure that the water quality, recharge and storage of groundwater that is accessed by others is not diminished or impaired.

4. Conclusion

Based on the above discussion, the proposed IMP is deficient and the purported application is incomplete. Accordingly, pursuant to Public Resources Code Section 2770, subdivision (h)(4), please respond to this letter within 30 days by submitting a completed application (including the required fees) and by addressing the deficiencies described herein.

Sincerely,

Michael C. Spata Director

Enclosure

Patrick Mitchell, Mitchell Chadwick Interested Parties Tulare County Counsel



TULARE COUNTY RESOURCE MANAGEMENT AGENCY APPLICATION



GENERAL INFORMATION / COVER SHEET

SURFACE MINING PERMITS AND/OR RECLAMATION

- Surface Mining Permit & Reclamation Plan
- Reclamation Plan

Amendment to Surface Mining Permit & Reclamation Plan (No. _____)

General Information:

Mailing Address		City	State	Zip
Phone	Cell Phone	E-M	ail	_
Property Owner (if differ	ent)			
Mailing Address		City	State	Zip
Phone	Cell Phone	E-M	lail	
Agent (if applicable)				
Mailing Address		City	State	Zip
Phone	Cell Phone	E-M	lail	_
Site Address:				
Physical Location of Site	(cross streets & nearest	community):		

and a start of the second start	THIS SPACE FOR OFFICE USE ONLY
Application Received/Reviewed by:	Project Number(s)
Use Description	
Current Zoning:	Economic Development Project:
Land Use Designation:	
Agricultural Preserve & Contract Nos. (i	f applicable)
Filing Fee(s):	Total Amount Paid:
Date Received:	Payment Type:
Receipt Number(s)	Existing Entitlements/References:
COUNTY HOURS: Monday-Thu PERMIT CENTER	rsday 7:30 а.m. to 5:30 p.m. – Friday 8:00 а.м. то 12:00 р.м. а Hours: Monday-Thursday 9:00 то 4:30 р.м.

SURFACE MINING PERMITS AND/OR RECLAMATION PLAN

REQUIREMENTS, FEES AND INSTRUCTIONS (Please use dark blue or black ink)

- 1. The application must be filled out completely and in every respect with <u>all</u> questions answered and <u>all</u> requested information provided before the County can officially accept the application for processing. In the course of accepting and processing the application, the Permit Center Official or the Project Planner may request the applicant to clarify, amplify, correct or otherwise supplement the required information. The application may be filed with the Tulare County Resource Management Agency, Permit Center, located at 5961 South Mooney Blvd, Visalia, CA 93277-9394. The phone number is (559) 624-7100.
- 2. Section 7-25-1105 of the Ordinance Code of Tulare County requires a filing fee to be paid at the time of filing an applicant for Surface Mining Permits/Reclamation Plan. This fee is to cover the cost to the County for advertising, investigations and processing the application through its various stages. If the costs of preparing the written staff report and environmental review exceed the deposit paid, the applicant will be billed an additional \$100/hour for staff time. A public hearing will not be scheduled until payment is received. The following fees apply, depending on the type of use applied for:

Description of Permit	FEE AMOUNT (SUBJECT TO CHANGE AT ANY TIME)
Surface Mining Permit/Reclamation Plan (Planning Commission)	\$3,441.00 deposit plus \$100/hr.
Surface Mining Permit/Reclamation Plan exempt from CEQA	\$2,567.00 deposit plus \$100/hr.
Amendment to Surface Mining Permit/Reclamation Plan	\$2,457.00 deposit plus \$100/hr.
Minor Modification to Surface Mining Permit/Reclamation Plan	\$525.00
Request for approval of Financial Assurance	\$135.00
Inspection for release of Financial Assurances	\$350.00 deposit plus \$100/hr.
Interim Management Plan	\$1,510.00 deposit plus \$100/hr.
Additional Fees Due Prior to Public Hearing	(if applicable)
Compliance Monitoring Fee (3 inspections at \$65.00)	\$195.00 deposit
State Fish & Game fee for Environmental Impact Report	\$2,995.25
State Fish & Game fee for Negative Declaration or Mitigated ND	\$2,156.25
County Clerk Filing Fee for Notice of Determination	\$58.00
Recording Fee	\$75.00
Annual Inspection Fee	\$400.00
Additional Charge for Staff Time	To Be Determined

IMPORTANT NOTICE: The applicant is responsible for the payment of all fees associated with this application, including the initial deposit and additional fees charged for processing. In addition, the applicant may be required to submit to the County additional deposits. All fees charged for this application are required to be paid to the County prior to approval of the proposal.

- This application must be filled out with full and complete answers and must be signed by at least one of the property owners.
- 4. At least 10 copies of the site plan and an aerial photo shall be submitted so that a complete evaluation may be made of the application by the appropriate agencies, as required. Additional copies of the site plans may be required. The site plan shall include the following:
 - a. Boundaries and topographic details of the site
 - Location of all streams, surface water bodies, roads, railroads, water wells and utility facilities within 500 feet of the site
 - Location of all currently proposed access roads to be constructed in conducting the surface mining operations(s) and proposed surface dust treatment
 - d. Location of areas [to be] mined, and of waste dumps and tailing ponds
 - e. All existing and proposed processing and stockpile areas
 - f. Typical cross sections of the extent and configuration of slopes to be maintained in excavated areas
 - g. Provisions for the conservation and protection of groundwater, the disposition of surface drainage and erosion control

- h. By use of overlay symbol or color, depiction of separate mining phases, if applicable
- i. The source of map base, north point, and scale
- 5. In the case of large integrated operations, with several separate mines or pits, it will be to the advantage of the applicant to answer all items in sufficient detail not only for clarifying the nature of his operation, but also for protecting any vested rights under the provisions of the Act. The principal map should be of a scale sufficient to show the required details clearly. For a large operation, a smaller-scale, overall map with large-scale detail maps of the critical areas may be more practical. In long-range operations, precision of detail is not as important as a clear exposition of the operation. The use of colored symbols or map overlays is recommended to simplify the map preparation. Aerial photographs may be substituted for maps where they adequately indicate the required information.
- 6. The attached "Indemnification Agreement" must be signed by the applicant and submitted with the completed application.
- 7. Operational Statement: Please attach a detailed operational statement.

SUMMARY OF REQUIREMENTS FOR A SURFACE MINING OR RECLAMATION PLAN APPLICATION

		Application	otan
1.	Completed Application		
2.	Owner's Affidavit(signed by property owner)		
З.	Filing Fee		
4.	Minimum of 10 copies of the site plan of the mined land (additional copies may be require	d) 🗆	
5.	Indemnification and Cost Recovery Agreement (separate attachment)		
6.	Supplemental Information - Review of "Identified Hazardous Waste Sites" List		
7.	Applicant's Request for Notification of Proposed Land Use Action		
8.	Operational Statement (if required by County)		
9.	Copy of the Assessor's Map, deeds, contract of sale, or other legal description.		
10.	10 copies of plans indicating method, sequence and timing for reclamation		
11.	Notarized statement of acknowledgement that all owners of a possessory		0 <u></u> 0
	interest in the land to be mined have been notified of the proposed mining operation	ns 🗆	
12.	10 copies of a Location and Vicinity Map		
	It is suggested that this map be shown on a USGS 7-1/2 minute topographic quadrar -2000") unless larger scale maps are available. If these are not available, or if the op	eration is ext	ensive,
	15 minute sheets (Scale 1' - 1 mile) may be used. Contours, roads, drainage, adjacent	nt towns, etc.	, should

be shown, as well as the site of the operation.

13. Request for Unused Fees Form (Signed by Applicant)

<u>Note</u>: Information on SMARA can be found online at the Department of Conservation-Office of Mine Reclamation website (<u>http://www.consrv.ca.gov/OMR/index.htm</u>). Additional link: on the Mineral Resources page of the County RMA website (<u>http://www.co.tulare.ca.us/government/rma/countywide/mineral.asp</u>)

PLEASE FILL OUT THE FOLLOWING INFORMATION COMPLETELY

1. The applicant requests approval of a (check box):

Surface Mining Permit and Reclamation Plan

Reclamation Plan

Amendment to an existing Surface Mining Permit and or Reclamation Plan

State exactly what is to be done on, or with the property (add additional sheets if necessary): ____

2.	Name of Mineral Property, if applicable:	Name of Mineral Property, if applicable:							
З.	Property owner(s), or owner(s) of surface right	s (use additional sheets if nece	<u>ssary)</u> .						
	Property Owner(s):	Phone:							
	Mailing Address:								
	City:	State:	Zip:						
	<u>Owner(s) of mineral rights</u> - List, if separate fr owner(s) of the possessory rights (claim owner). (Us		aim, indicate the						
	Name(s):	Phone							
	Mailing Address:								
	City:								
	Lessee(s)								
	Name(s):	Phone	:						
	Mailing Address:								
	City:	State:	Zip:						
	Mailing Address:		• • • • • • • • • • • • • • • • • • •						
	Name(s):	Phone	:						
			Zip:						
	City:	State:	Zip						
	Name:	Phone:							
	Mailing Address:								
	City:								
	Where applicable, indicate "Same as applicant." If the actual reclamation is to be conducted by a "person" other than the applicant or operator, indicate the name and address of said person(s).								
	If more than one owner, enter name and address of each on a separate page. If more than one parcel is included in the operation, enter the owners of each parcel. If the surface and mineral rights are separated, show the owners of surface rights under this item. On Federal land, enter U.S.A. as owner, with administering agency; e.g., USFS, BLM, NPS, etc.								
4.	How much area of the total parcel or lot is beir	ng utilized for the proposed use	:						
5.	Present use of the project site:								
6.	Mineral commodity [to be] mined:								
7.	Geologic description, including brief general mineral deposit [to be] mined, and principal mi								

Page 4 of 16

Surface Mining-Reclamation Plan -- January 2013

A brief and concise answer is required. Include only essential data on geologic formations, structures, rocks and minerals, and nature of the mineral deposit.

8. Proposed starting date of operation:

If the surface mine was already in operation on January 1, 1976, or the operation was conducted prior to that date, so state.

- Estimated life of operation: _____
- 10. Duration of first subsequent phases:
- 11. Employees: Indicate the total number of employees and include the number of shifts and number of employees per shift:

	Developed, not yet in operation Temporarily deactivated Stockpile in mine Type of equipment and/or machines to be utilized:								
Typical s	ize and carrying cap	pacity of tr	ucks to be used: _						
Operation	n will be (check app	ropriate b	ox):						
	Under 5,000 tons	or cubic y	yards per year						
	5,000 - 50,000 to	ns <u>or</u> cubi	ic yards per year						
	50,000 - 250,000	tons <u>or</u> c	ubic yards per yea	r					
	250,000 - 1,000,0	000 tons <u>o</u>	or cubic yards per	year					
	Over 1,000,000 to	ons <u>or</u> cub	bic yards per year						
Total ant	icipated production								
				tons <u>or</u>					
				tons <u>or</u>					
	Waste or overbur	den dispo	sed off-site	tons <u>or</u>	cu. yds				
			n						
each not u	operation. Note th	at either to sed out.	ons, or cubic yard Include all ore, mi	in the plan, answer t s (in-place) are reque neral, overburden and /.	sted. The unit				
27227-024	ethod (check all that	apply).							
27227-024	ethod (check all that	apply).							
Mining m	an anda bela kundular sa luku inaka an		Gravel/Sand Di	•					
Mining m	Open Pit Single Bench		Gravel/Sand Pi Drill and Blast	t					

Clay Pit

Hill Top

			Truck to Processing Plant (to RR)
the second se	Side Hill		Borrow Pit
	Drag Line		Tailings Pond
	Low Level		Slurry Pump
	Shovel		Waste Dump
	Gravel Bar		Underground
	Rail		Skimming
	In-stream		Other
Operatir			nize noise, vibration and dust:
Methods	to prevent pollutior	n of surface	e or underground water:
	the nature of the	processing	g and explain disposal method of the tailings or waste from
Estimate	e quantity <i>(gallons p</i> e	vater, meth	quality of water required by the proposed operation. Specify nod of its conveyance to the property and the quantity and
Estimate propose method If the na phases schedule	ang: e quantity <i>(gallons pe</i> d sources of the w of disposal for used ture of the deposit a of the mining oper	and/or sur and/or sur and the mi ation that ent activitie	quality of water required by the proposed operation. Specify nod of its conveyance to the property and the quantity and rplus water: ning method used will permit, describe and show the steps or allow concurrent reclamation, and include a proposed time
Estimate propose method If the na phases schedule phase, so If the mi color or	e quantity <i>(gallons pe</i> d sources of the w of disposal for used ture of the deposit i of the mining oper e for such concurre <i>p indicate and explain)</i>	and the mi and the mi ation that ent activitie	quality of water required by the proposed operation. Specify nod of its conveyance to the property and the quantity and rplus water: ning method used will permit, describe and show the steps or allow concurrent reclamation, and include a proposed time as (<i>If essentially no reclamation may be accomplished during first</i> ce prior to January 1, 1976, indicate on an overlay map (or by
Estimate propose method lf the na phases schedule phase, so lf the mi color or reclama	e quantity <i>(gallons pe</i> d sources of the w of disposal for used ture of the deposit a of the mining oper e for such concurre <i>o indicate and explain)</i> ning operation was symbol) those an tion plan.	and the mi and the mi ation that ent activitie in existence eas mined	quality of water required by the proposed operation. Specify nod of its conveyance to the property and the quantity and rplus water: ning method used will permit, describe and show the steps or allow concurrent reclamation, and include a proposed time as (<i>If essentially no reclamation may be accomplished during first</i>

Surface Mining-Reclamation Plan - January 2013

h	General Plan elements
υ.	
scri	ibe soil conditions and a proposed soil salvage plan:

27. Describe on separate pages the method, sequence and timing proposed to bring the reclamation of the land to its end state. Indicate on the map or diagram the following information:

- a. Backfilling and grading
- b. Stabilization of slopes
- c. Stabilization of permanent waste dumps, tailing, etc.
- d. Rehabilitation of pre-mining drainage
- e. Removal, disposal or utilization of residual equipment, structures, refuse, etc.
- f. Water features and methods planned to overcome stagnation
- g. Control of contaminants, especially with regard to surface runoff and ground water
- h. Treatment of streambeds and stream banks to control erosion and sedimentation
- i. Removal or minimization of residual hazards
- Re-soiling, re-vegetation with evidence that selected plants can survive given the site's topography, soil and climate
- k. Landscaping plan and planting schedule designed to protect natural vegetation and to restore the appearance of the property
- I. Approximate final contouring
- m. The final disposition of structures
- 28. If a short term phasing of the reclamation has been determined, describe in detail the specific reclamation to be accomplished during the first phase:

Describe how the reclamation of the site in this manner may affect future mining at this site and in the surrounding area.

ENVIRONMENTAL SETTING

29. Describe the project site, prior to the proposed use, including all above and below ground developed improvements (residences, outbuildings, barns, sheds, covers, shop buildings, septic tank-leach line systems, domestic/agricultural wells, fuel storage tanks, etc.), including the size of each.

26.

- 30. Describe the slopes (% and direction) and general terrain of the subject site:
- 31. Trees: identify the type and size of any large trees on site.
- 32. Water courses: identify the type and location of any on-site or nearby water courses (rivers, canals, ditches, streams, creeks, natural drainage channels, etc.).
- 33. Describe the character and land use of the surrounding properties (orchards, vineyards, row crops, pasture, open space, water courses, railroads, roads, rural residential, subdivisions, commercial, schools, churches, vacant, city or county boundary):

DIRECTION	CHARACTER/LAND USE
North	
South	
East	
West	

34.	Liquid waste disposal (please check appropriate box):	Existing	Proposed
	Septic Tank-Leach Lines: Size of tank	gallons & length of li	nesft.
	Seepage Pit - Size		
	Community System – Name:		
	Aerobic tank - Size of tank		
35.	Water supply (please check appropriate box):	Existing	Proposed
	Domestic Well – Size of pump	Gallons per minute	
	Irrigation Well:		
	Irrigation District – Name:		
	Private Water Company – Name:		
	Community System – Name:		
<u>Note</u> :	A "Will Serve" letter must be provided from any off-si provider and must be submitted as part of this applic for all existing and/or proposed on-site domestic well	ation. In addition, water	availability information
36.	Source of energy (please check appropriate box):		
	Electricity – Company name:		
	Natural Gas – Company name:		
	Propane: Size of tank	Provider	
37.	Will the project require the development of public ser If so, describe the required development:	vice facilities (roads, sewe	ər lines, water lines, etc.)?

SUPPLEMENTAL INFORMATION FOR APPLICATION OF ANY DEVELOPMENT PROJECT

HAZARDOUS WASTE AND SUBSTANCES STATEMENT:

Per California Government Code Section 65962.5(f), before the County accepts as complete an application for any development project, the applicant or owner shall consult the State's lists of hazardous waste facilities, shall submit a signed statement to the County indicating whether the project is located on a site that is included on any of the lists. The "Identified viewed web Hazardous Waste Sites" list may be on the at http://www.envirostor.dtsc.ca.gov/public or reviewed at the Resource Management Agency Permit Center, 5961 South Mooney Blvd., Visalia, California.

Before any application can be accepted as complete by the Tulare County Resource Management Agency, the owner of the subject property, or the owner's authorized agent, must complete this form.

STATEMENT:

I have reviewed the "Identified Hazardous Waste Sites" list (which may be viewed on the web at http://www.envirostor.dtsc.ca.gov/public) dated ______, 20____, and state that:

"The site(s) of the project subject to this application ____ is / ____ is not on the "Identified Hazardous Waste Sites" list."

(If the site is on any of hazardous waste facilities lists, the applicant shall inform the County of which list, the date of the list, the regulatory identification number of the site on the list and corrective measures that will be taken to remove the site from the State list.)

CERTIFICATION:

I hereby certify that the information furnished herein presents to the best of my knowledge and belief, true and correct facts, statements, and information, and that I am the owner, or the authorized agent of the owner, of the subject property.

Signed:

Dated: _____

Surface Mining-Reclamation Plan – January 2013

OWNER'S AFFIDAVIT

(Must be signed by property owner)

STATE OF CALIFORNIA) COUNTY OF TULARE) SS.

I, (We,) the undersigned, say:

I (We) own property involved in this application and I (we) have completed this application and other documents and maps required hereby to the best of my (our) ability and the statements and information above referred to are, in all respects, true and correct to the best of my (our) knowledge and belief. I (We) declare under penalty of perjury that the foregoing is true and correct.

Executed on,	20, at		
Name:	Signature:		
Address:		State:	Zip:
Optional – additional property owner			
Name:	Signature:		
Address:		State:	Zip:

If there is an agent, title company, or prospective buyer who desires notification of the action taken on this application, please enter name here.

Name:		
Relationship:		
Address:		
	State:	Zip:
Telephone:		
FAX No .:		

In the case of applications which are subject to the authority of the Zoning Administrator, (see list of projects), the Zoning Ordinance provides that the applicant has the right to request that the Planning Commission hear the application rather than the Zoning Administrator. Please sign below if you wish to have your application heard by the Planning Commission. Note: An additional fee is required for the Planning Commission process.

Signed: _____ Date: _____

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APPLICANTS' REQUEST FOR NOTIFICATION OF PROPOSED LAND USE ACTION

NOTICE:

Under Section 65945(a) of the California Government Code, at the time of filing an application for a development permit, the applicant may make a written request to receive notice from the County of a proposal to adopt or amend any of the following plans or ordinances which may affect the proposed development permit:

- 1. A General Plan
- 2. A Specific Plan
- 3. A Zoning Ordinance
- 4. An Ordinance affecting building permits or grading permits

The applicant shall specify, in written request, the types of proposed actions for which notice is requested. Prior to taking any of those actions, the County is required to give notice to any applicant who has requested notice of the type of action proposed and whose develop0ment project is pending before the County if the County determines that the proposal is reasonably related to the applicant's request for the development permit. Notice shall be given only for those types of actions which the applicant specifies in the request for notification.

REQUEST:

- I hereby request under Section 65945(a) for the following types of actions (see [] above). Circle those that apply:
 - 2 1 3 4
- [] I hereby waive notice under Section 65945(a).

I understand that any rights to notice under Section 65945(a) will lapse at the time that final action is taken on my development project.

Signed: ______(applicant or authorized agent)

Dated:	

Permit No.:

ADDITIONAL INFORMATION REGARDING SURFACE MINING AND RECLAMATION PLAN REQUIREMENTS TULARE COUNTY RESOURCE MANAGEMENT AGENCY

EXEMPTIONS

The State Surface Mining and Reclamation Act of 1975 (SMARA) provides that the Act does not apply to any of the following activities (reference Section 2714, Public Resources Code):

- 1. Excavations or grading conducted for farming or on-site construction or for the purpose of restoring land following a floor or natural disaster.
- Prospecting for, or the extraction of minerals for commercial purposes, and the removal of overburden in total amounts of less than 1,000 cubic yards in any one location of one acre or less.
- 3. Surface mining operations that are required by federal law in order to protect a mining claim, if such operations are conducted solely for that purpose.
- Such other surface mining operations which the State Mining and Geology Board determines to be of an infrequent nature and which involve only minor surface disturbances.

Additional exemptions established by the State Guidelines (Section 3506, Title 14, California Administrative Code):

1. Prospecting and exploration for minerals of commercial value where less than 1,000 cubic yards of overburden is removed in any one location of one acre or less.

Such activities that consist of geological, geochemical and geophysical mapping; hand surface sampling of outcrops and soil; and core or other test drilling that do not involve extensive, de-vegetation or other significant environmental impact, would normally be considered exempt from the provisions of the Act.

2. Any surface mining operation that does not involve either the removal of a total of more than 1,000 cubic yards of minerals, ores, and overburden, or involve more than one acre in any one location.

ZONING COMPLIANCE

The above described uses and activities are exempt from any requirement to secure approval of a surface mining permit and/or reclamation plan; however, this does not excuse such uses from complying with all applicable zoning requirements. Some of these uses may, for example, require the approval of a Special Use Permit if such a permit is required under the Zoning Ordinance. In addition, some of the uses may be excluded from particular zones.

A more important zoning consideration is that all surface mining permits must comply with the zoning regulations applicable to the property. The Tulare County Zoning Ordinance presently permits the following described surface mining uses in only the following zones:

TYPE OF USE	ZONES ALLOWED
Borrow Pit	AE, AE-10, AE-20, AE-40, AE-80, AE-1, R-A, O, M-1, M-2, PD-F, AP, AF
Excavation and removal of rock, sand, gravel and other materials	F-1
Mining or extraction of metal, minerals, oils, gas, or hydrocarbons, together with necessary buildings, apparatus, and appurtenances incidental thereto	AE, AE-10, AE-20, AE-40, AE-80, A-1, R-A, R-0, R-1, R-2, R-3, O, P-O, P-1, C-1, C-2, M-1, M-2, PD-F, AF, AP
Mineral and hydrocarbon discovery and mining, but not including processing.	TPZ
Potash works	A-1, AE-40, AE-80, M-2, AF
Quarry and stone mill	A-1, AE-40, AE-80, M-2, AF

The above described uses are permitted only in the identified zones, and most require the issuance of a Special Use Permit under the Zoning Ordinance. However, the Zoning Ordinance provides "that no Use Permit shall be required if a surface mining permit and/or reclamation plan is required under the provisions of Section 7-25-1000 et seq. of the Ordinance Code of Tulare County". This means that the Special Use Permit requirements under the Zoning Ordinance are satisfied if compliance under SMARA is required. Remember, however, a Special Use Permit <u>may still be required</u> even if the use is exempted from SMARA as described above. The applicant should consult with the Resource Management Agency, Planning Division to determine whether or not a Special Use Permit will be required in such cases.

PROCESSING OF MINED MATERIALS

It should be emphasized that approval of a surface mining permit only constitutes an approval or entitlement for use of a surface mining operation. It does not include any approval of processing facilities for the mined materials. If such processing facilities are proposed on the same site, or in conjunction with the surface mining operation, additional permits or approvals may be required under the Zoning Ordinance. Applicants are again encouraged to consult with the Planning staff to determine what additional permits or approvals are necessary before filing the mining permit application.

DEFINITIONS

The following definitions were extracted from the SMARA and the State Guidelines (not a complete list).

"<u>Mined land</u>" includes the surface, subsurface, and ground water of an area in which surface mining operations will be, are being, or have been conducted, including private ways and roads appurtenant to any such area, land excavations, workings, mining waste and areas in which structures, facilities, equipment, machines, tools or other materials or property which result from, or are used in, surface mining operations are located.

"Operator" means any person who is engaged in surface mining operations, himself, or who contracts with others to conduct operations on his behalf, except a person who is engaged in surface mining operations as an employee with wages as his sole compensation.

"<u>Reclamation</u>" means the combined process of land treatment that minimizes water degradation, air pollution, damage to aquatic or wildlife habitat, flooding, erosion, and other adverse effects from surface mining operations, including adverse surface effects incidental to underground mines, so that mined land uses and create no danger to public health or safety. The process may extend to affected lands surrounding mined lands, and may require backfilling, grading, re-soiling, re-vegetation, soil compaction, stabilization, or other measures.

"<u>Reclamation Plan</u>" means the applicant's (operator's) completed and approved plan for reclaiming the lands affected by his surface mining operations conducted after January 1, 1976 (Reference Section 2772 of SMARA).

"<u>Surface Mining Operations</u>" means all, or any part of, the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposits, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incident to an underground mine. Surface mining operations shall include, but are not limited to:

- (a) In place distillation or retorting or leaching.
- (b) The production and disposal of mining waste.
- (c) Prospecting and exploratory activities.

"<u>Minerals</u>" means any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas and petroleum.

APPLICATION PROCESS

The following is a summary of the various Tulare County deadlines and processing requirements for surface mining permits and/or reclamation plan applications:

- 1. Not less than 30 days after filing out the application, the County Planning and Development Department must determine whether the application is complete and inform the applicant of the determination. In the event the application is found to be incomplete, the Department will specify those parts of the application, which are incomplete and indicate the manner in which they can be made complete.
- 2. If the application qualifies for a Negative Declaration under the California Environmental Quality Act (CEQA), the applicant will be informed and the application will be set for public hearing. A hearing will be scheduled before the Planning Commission not more than 90 days after the acceptance of the application as complete. The hearing may be continued from time to time.
- 3. If the application requires the preparation of an Environmental Impact Report (EIR) under the CEQA, the applicant will be informed and requested to authorize the preparation of the EIR if authorization was not previously given. The Department is not permitted to initiate work on the EIR until the applicant agrees to the preparation of the EIR. (Note: The applicant has the right to appeal the decision to prepare an EIR to the Board of Supervisors within 5 days). Once the applicant agrees to the preparation of the EIR, the EIR is completed and the fees have been paid, the Department is free to set the matter for hearing. A hearing will be scheduled before the Planning Commission not more than 30 days after completion of the Final EIR. The hearing may be continued from time to time.
- 4. Notice of the Planning Commission hearing is given at least 10 days prior to the hearing. Both the applicant and the owners of all property within 300' of the site will be given mailed notice of the hearing.
- 5. After the hearing, the Planning Commission may approve, conditionally approve or deny the proposal.
- 6. The applicant will be mailed a copy of the Planning Commission's decision within 10 days after the date the decision is made.
- 7. Any person adversely affected by the decision of the Planning Commission's decision to the Tulare County Board of Supervisors. The appeal must be in writing and filed with the Clerk of the Board of Supervisors within 10 days after the date the decision is made.
- 8. If no appeal is filed, the Planning Commission's decision is final 10 days after the date the decision is made.
- If an appeal is filed, 10 days notice of the appeal hearing before the Board of Supervisors will be given to the applicant, the applicant, and all persons who requested a copy of the Planning Commission's decision and to all owners of property within 300'.
- 10. After the hearing, the Board of Supervisors may affirm, revoke, or modify the Planning Commission's decision, or refer the matter back to the Planning Commission.
- 11. An additional appeal for certain types of projects may be filed with the State Mining and Geology Board, within 15 days of exhausting all appeal rights with the Board of Supervisors.

The County of Tulare "INDEMNIFICATION AND COST RECOVERY AGREEMENT" (must accompany this application)

Please download or print out the form from the County Web Site (located with the list of land use applications).

The Indemnification and Cost Recovery Agreement must be filled in and signed by the applicant and must be submitted as part of any land use application requiring discretionary review by the County.

This Agreement must be signed by the Applicant

Please sign the Agreement in blue ink (preferred) and submit the <u>original, signed document</u> with the appropriate land use application.

WITHDRAWAL OF APPLICATION

Should you, at any time during the processing of your application, wish to withdraw your application and request a refund of fees paid, you may do so by forwarding a letter to the Resource Management Agency making that request. Please state clearly that you no longer wish to proceed with your land use project (state the project number), and that you are requesting a withdrawal of your project and a refund of any fees that have not been expended for the processing of your application.

Please date and sign the letter and include a mailing address where you would like any refund of fees (if applicable) to be mailed. Forward the request to the attention of the project planner.

REQUEST FOR REFUND OF FEES

Resource Management Agency 5961 S. Mooney Blvd. Visalia, CA 93277

Project Number: _____

Please refund any unused fees associated with this application to the designated name and address below.

(please print name)

(Street Address, Suite/Apt. No.)

(City, State, Zip)

Signature

Date

Attachment E

KENNETH D. SCHMIDT AND ASSOCIATES GROUNDWATER QUALITY CONSULTANTS 600 WEST SHAW, SUITE 250 FRESNO, CALIFORNIA 93704 TELEPHONE (559) 224-4412

September 29, 2014

Mr. Michael C. Spata Associate Director Resource Management Agency 5961 South Mooney Blvd Visalia, CA 93277

Re: Peer Review Report and Addendums CEMEX Stillwell Quarry

Dear Mr. Spata:

I am providing comments on the peer review report on behalf of Rob Morton, Elias Rodriquez, Orville Cloud, George Clausen, Frank Callahan, Martin Rodriquez, and Tom Cairns, local residents and well owners. I have reviewed the peer review report of August 25, 2014 by Tully & Young, the report by EMKO Environmental, Inc. of February 26, 2014 (the focus of the peer review report), and the addendums of August 25, 2014 by EMKO Environmental, Inc. and Tully and Young. Following are my comments:

Overall, I agree with the thrust of the Tully & Young report, as stated on Page 16, except for the comment that "It is possible that the Report's conclusions are completely correct". This brief summary does not fully encapsulate a number of problems pointed out in the peer review report, when it is read in detail. Followof ing is a discussion of some of the primary issues.

Water-level Elevations

Elevations of water in the excavation are absolutely necessary to understand groundwater flows, and these were not provided. First, when the excavation was being dewatered, groundwater should have been flowing to the excavation. That is, the water level in the excavation should have been deeper than around the excavation. Also, when the recharge trench was operating, groundwater should have been locally moving away from the trench in both directions. Neither of these trends was indicated on five of the water-level elevation maps presented in the addendum, when both processes were reportedly occurring. For example, the map for March 2008 shows a number of water-level elevation contours (453 to 486 feet above mean sea level) perpendicular to the excavation. The problem with this is that the water surface in the

KENNETH D. SCHMIDT AND ASSOCIATES GROUNDWATER QUALITY CONSULTANTS

excavation, which is connected to the groundwater, had to be level. Thus the contours cannot be perpendicular to the excavation. The problem was not addressed in the peer review report. Also, a pre-project water-level elevation map was not provided, which is a serious deficiency. Interpretation of the water-level maps was not provided in the addendums. Of particular interest is the apparent groundwater flow toward the northwest in April 2012 and April 2014. Also, there appears to be a much flatter gradient between the Cairns Well and MW-3, than farther to the southwest, which should be explained.

Factors Influencing Water Levels

Besides flows in the Kaweah River, which are discussed in the EMKO report, periods of irrigation deliveries to the irrigated m lands southeast of the excavation shown have been provided. E though the major ditches : E percolation from irrigation Frecharge. Also pumping f: C) area should be evaluated. Although the major ditches in the area are apparently lined, deep percolation from irrigation should be a significant source of recharge. Also pumping from any active irrigation wells in this

Lake Leveling Influence

Lake leveling was not mentioned in the peer review report, but this tends to raise the water level to the west or southwest and lower it to the east or northeast of the excavation.

Lake Evaporation

Also the excavation dewatering ceased, the influence of lake \mathcal{L} evaporation would continue. This was not addressed in the peer For example, under this condition, groundw toward the excavation from all directions. review report, and this needs to be factored into the evaluation. For example, under this condition, groundwater could locally flow

Interpretation

Preparing several profiles, comparable to Figures 3-4 and 3-25 of the Final EIR, would be very useful. Two would be prepared extending from the northwest to southeast. One would extend through the excavation, the other would be between the excavation 2 and Highway 216. Another would extend from the southwest to northeast near the recharge trench and nearby private wells. The land surface, base of the alluvial deposits, depths of wells, shape of the excavation at various times, and the historical water-level data would be shown. This would provide much more context than water-level hydrographs and water-level elevation maps alone.

N Schmidt

KENNETH D. SCHMIDT AND ASSOCIATES GROUNDWATER QUALITY CONSULTANTS

Sincerely yours,

.

Kenneth D. Schmidt

KDS/cl

Appendix B:

- Part 1: August 25, 2014 Peer Review Memorandum from Tully & Young to Tulare County RMA, and attachments
- Part 2: August 25, 2014 Addendum to Peer Review Memorandum from Tully & Young to County RMA, and attachments

Part 1: August 25, 2014 *Peer Review Memorandum* from Tully & Young to Tulare County RMA, and attachments



Tully & Young, Inc. 3600 American River Drive, Suite 260 Sacramento, CA 95864



August 25, 2014

Peer Review of Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry (prepared by EMKO, February 26, 2014)

Prepared for: County of Tulare Resource Management Agency

Synthesizing Hydrology, Engineering, Law & Policy

August 2014





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Part 1 - Peer Review Findings and Conclusions Memorandum, Tully & Young, August 22, 2014

Part 2 - Attachments:

- 1. Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry, prepared by EMKO, February 26, 2014
- 2. Tully & Young, Inc. Statement of Qualifications and Resume for Greg Young, P.E.
- Recharge Trench Memorandum final to County, prepared by EMKO, August 12, 2014
- 4. Conditions of Approval conditions 46 through 55
- 5. August 5, 2014 email to Dr. Andrew Kopania from Mr. Pete Locastro
- 6. Excerpt from DellaValle monthly groundwater elevation reporting
- 7. Hydrogeologic Data Evaluation Report, Stillwell Pasture, Lemoncove, California, prepared by EMKO, June 10, 2002



MEMORANDUM

То:	Mike Spata, Associate Director Tulare County Resource Management Agency
From:	Greg Young, P.E.
Date:	August 25, 2014
Subject:	Findings and conclusions of peer review of <i>Hydrogeologic Evaluation</i> of Current Groundwater Conditions at the CEMEX Stillwell Quarry, prepared by EMKO dated February 26, 2014

The purposes of this memorandum are to (1) evaluate the findings from the peer review of the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"), and (2) present conclusions of the peer review. A copy of the Report is included as **Attachment 1**.

Background

Tully & Young, Inc., an experienced water resource planning firm in Sacramento, was contracted by the Tulare County Resource Management Agency ("County") to perform a peer review of Report in response to on-going concerns regarding localized groundwater elevation conditions. Company qualifications and Greg Young's resume are included as **Attachment 2**.

The Report was originally prepared at the request of the County "to address several written complaints received by RMA in late January 2014 regarding groundwater conditions adjacent to the CEMEX Construction Materials, Inc. (CEMEX) Stillwell Quarry..." (Report, p. 3). At that time, residents of properties adjacent to the Stillwell Quarry ("Quarry") were experiencing lowering of the groundwater in shallow domestic wells and believed the Quarry was responsible. The Report concluded that "[T]he available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities."

Because groundwater conditions have continued to be of concern on adjacent properties, the Report's conclusion has been questioned and challenged by the same local residents, and has been brought to attention of the County Board of Supervisors (see transcript from July 8, 2014 Board of Supervisors meeting). The County has requested Tully & Young review the Report in light of these challenges as it continues to work to resolve the circumstances being experienced by the local residents.

The review's focus was not limited to the materials and conclusions of the Report. To understand the underlying context as well as data and analysis in the Report, independent research of other data, reports, and materials relevant to the Quarry was undertaken, and discussions were had with County. This independent research and review of other materials, as well as communications with the County, helped place the Report's information and conclusions in context to enable an appropriate peer review. For instance, as discussed later in this memorandum, this review included the original EIR and supporting technical documents, relevant hydrologic and reservoir data, and historic satellite images.

In addition to the aforementioned review and research, the lead author of the Report, Dr. Andrew Kopania, was engaged by CEMEX to prepare additional materials as an addendum to the Report ("August Addendum"). These materials were summarized and provided to the County in a memorandum (see **Attachment 3**) and accompanying data in an email to the County dated August 12, 2014 (also included with **Attachment 3**). Though this memorandum and data was provided after a thorough review of the Report was already completed, it is relevant to the peer review effort and therefore incorporated and referenced herein as appropriate.

Governing Permit Conditions

As a starting point, the Conditions of Approval ("Conditions") for the Quarry, as adopted in 2002 by the County Board of Supervisors, were reviewed to understand the requirements placed upon the operator of the Quarry, CEMEX Construction Materials, Inc. ("CEMEX"). Conditions 46 through 55 were identified as having a primary relationship to the conditions of groundwater in neighboring wells (see Attachment 4)

During review of the Report and associated research it became apparent that many monitoring reports and associated analyses, as required by the Conditions, were never prepared or provided to the County. For instance, Condition 48 clearly states that an annual groundwater monitoring report shall be prepared, as required by the Groundwater Monitoring Plan ("Monitoring Plan"). Such reports do not appear to exist. As a further example, the Monitoring Plan states that the Quarry operator shall provide the County with reports that "will also include groundwater contour maps showing the location of each monitoring well and the current direction of groundwater flow and hydraulic gradient calculated for each monitoring event." (Monitoring Plan, p. 3). Lacking this information, several questions cannot yet be fully addressed and thus the key finding of the Report is limited.

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The August Addendum did provide some additional data and analysis regarding the requirements of Condition 48, namely, providing estimates of historic monthly pumping to dewater the facility.¹

Organization

This memorandum is organized to first provide the key finding of the peer review, which is then supported by a more complete discussion of elements of the Report and associated research.

Key Finding of Peer Review

Based upon the lack of historic data and reports to provide both context and a complete technical set of facts, the conclusions reached by the Report's cause-and-affect analysis of this incomplete set of facts appear without merit in many instances. As such, it is not possible to fully place blame on the current drought conditions or other external factors to explain the current groundwater level conditions being experienced by the subject properties. Although the drought is undoubtedly a primary contributing factor, the actions of CEMEX could have caused or at least exacerbated the degraded local groundwater conditions.

Specifically, absent water in the "V" ditch since September 4, 2013, coupled with the absence of groundwater elevation contour maps and estimates of the hydraulic gradient that should have been routinely prepared, CEMEX cannot demonstrably be excused from fault. Had this information been available, the relationships between actions of CEMEX and the groundwater conditions at the subject properties could more readily be established and understood.

Although, it should be noted, that even if water delivered to the "V" ditch, the groundwater levels under the subject properties may still have declined due to the current extreme drought conditions and other external factors. But, with an incomplete set of facts and obvious violations of Conditions of Approval, the Report cannot reach a determinant conclusion that CEMEX has no fault – even if that were the case.

Detailed Report Review

As noted above, the August Addendum provided additional data and assessment of facts in an effort to support conclusions of the Report. The data and assessment in the August Addendum is independently addressed first, as it affects the review of the six primary sections of the Report.

¹ As discussed in this memorandum on pages 4/5, the August Addendum claims the monthly power records from August 2003 through June 2014, translated to volumes of water, represent deliveries to the "V" ditch. However, as noted in Condition 48, the regular reporting should provide "data concerning (1) the locations and amounts of mine dewatering, (2) the locations and amounts of water delivered to the recharge ditch, and (3) the locations and amounts of water delivered elsewhere." Since there is no clear distinction in the data provided with the August Addendum, the data is recognized as only representing concern (1).

The Report includes six primary sections: (1) Introduction, (2) Nature of Complaints, (3) Mining Operations and Monitoring, (4) Rainfall Data for Lemon Cove, (5) Hydrologic Conditions for the Kaweah River, and (6) Summary and Conclusions. Each of these is independently addressed after the August Addendum.

August Addendum

This memorandum provided "*a discussion of the operations of the recharge trench at the CEMEX Stillwell Mine.*" The memorandum continues by citing electrical use records for the pump(s) used to provide water to the "V" ditch, pump size and flow rate information from the pump supplier, pump performance curves, and a table equating the monthly power records from August 2003 through June 2014 to gallons of water per month.

The August Addendum also included an email dated August 5, 2014 from CEMEX employee Pete Locastro that states "*Noted on the excel sheet are the dates and amounts we pumped into the north pond.*" (See Attachment 5.)

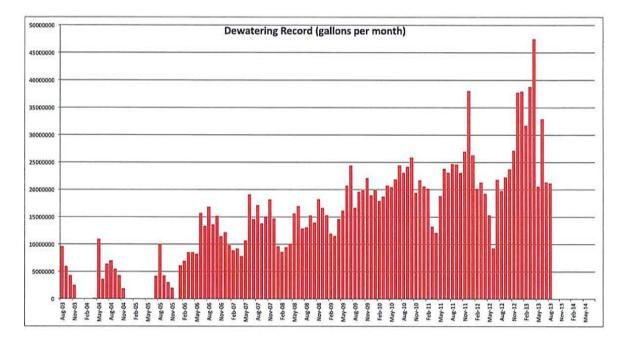
Assessment:

The August Addendum was intended to resolve the previously lacking information of historic discharges to the "V" ditch. However, though the underlying power data (and subsequent translation to gallons delivered per month) does demonstrate consistent power usage since January 2006, the representation that it also represents delivery to the "V" ditch is not conclusive and conflicts with other statements and data.

Specifically, the monthly well-level data collected by Dellavalle and represented in the Report often included notes associated with the data collection event. For instance, as shown in **Attachment 6**, notes for the monitoring wells include: "Ditch running full," "Ditch ½ full," and "No water in the ditch." If, as suspected but not confirmed, the "ditch" referenced in these notes is the "V" ditch, then there are several months when the measurement was taken and no water was in the ditch. This conflicts with the power data from the August Addendum that implies water was in the ditch in these months. Because mining operations may vary daily, it is unclear if on the day groundwater levels were measured, pumping to the "V" ditch was not occurring, but was occurring other days during the same month, or whether no water was being discharged for a longer period – even for several months in a row.

Further, the Report, assessed in more detail in the latter sections of this memorandum, specifically states: "The water levels have been measured monthly since May 2005, which is more than three years prior to the beginning of dewatering and use of the recharge trench." (Report, p. 5). This would translate to dewatering operations beginning sometime after May 2008. Yet, the August Addendum states: "Continuous dewatering and discharge to the recharge trench occurred from January 2006 until June 17, 2013..." (August Addendum p.1/2). The data from the August Addendum is presented in **Figure 1**.

The start date of dewatering activities and discharge to the "V" ditch in these two instances conflict by several years. There is no evidence provided as to which is correct. One possible conclusion is that the power records indicate power consumed by the Quarry, but do not directly translate to discharge to the "V" ditch. This possibility is supported by the email statement indicating water was pumped to the North Pond (see **Attachment 5**). The North Pond is not connected to the "V" ditch.



Finally, the August Addendum simply provides power usage records and a translation (and assumption) that the power use was only for pumping to the "V" ditch. No comparison between the timing and quantity of implied pumping to the "V" ditch is made with well level measurements articulated in the Report. In order to reach a possible conclusion that the mining operations have no fault in the current groundwater conditions under the subject properties, it would be require that some comparison of the assumed discharge timing and quantities with measured groundwater levels be conducted.

Conclusion:

The August Addendum lacks any analysis to demonstrate whether a relationship exists between deliveries to the "V" ditch and the groundwater levels underlying the subject properties. Furthermore, and probably more important, statements in the memorandum regarding power records and the power records themselves seem to conflict with other data discussed more fully in the individual Report sections below. For instance, the August Addendum's statement about "continuous dewatering and discharge to the recharge trench..." conflicts with the Report's representation of timing of dewatering activities. It is not clear which representation is correct. Also, given the notations marked by Dellavalle's laboratory personnel regarding "No water in ditch" and "Ditch

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full," coupled with the seems to indicate that, although pumping was occurring, the discharge was not necessarily to the "V" ditch. Rather, the pumping records are likely a good indication of a portion of the first required reporting item for Condition 48 – "the locations and amounts of mine dewatering." Although the "amounts of mine dewatering" may be provided, the "locations" are not.

Report Section 1.0 Introduction

This section of the Report identifies two of the primary governing Conditions: 46 and 49 and notes that they are "used as the basis for the technical evaluation of the complaints..." (Report, p. 3). This section also notes other information considered by the Report including: "the history of mining and dewatering at the Stillwell Quarry, the available data regarding water levels in neighboring wells and monitoring wells on the Stillwell Quarry property, rainfall data for Lemoncove, and hydrologic conditions on the Kaweah River." (Report, p. 3/4).

Assessment:

While the two conditions cited are vital, the Report failed to discuss Condition 48 or 55, among others.² These particular Conditions include the following:

Condition 48: In addition to the Annual Groundwater Monitoring Report required by the Groundwater Monitoring Plan, the applicant shall make available to the RMA on a monthly basis, data concerning (1) the locations and amounts of Mine dewatering, (2) the locations and amounts of water delivered to the recharge trench, and (3) the locations and amounts of dewatering delivered elsewhere. This data shall be tabulated and provided in a form acceptable to the RMA.

Condition 55: The proposed "V" ditch along the east side of the project site shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells. The trench shall be constructed to a depth sufficient to intersect the layer (substrata) of cobbles, or comparable pervious materials, that occurs locally beneath the site (a depth of approximately 6 to 8 feet). The sides and bottom of the "V" ditch shall be designed and maintained to maximize the amount infiltration necessary in establishing the groundwater mound. Water produced from dewatering the mine site shall not be pumped directly into the "V" ditch, but shall initially be pumped into a holding basin(s) to allow fines in the water to settle out and flocculation and precipitation of dissolved iron minerals to occur.

Additionally, while the other information cited as "considered" by the Report would generally be informative and useful for an evaluation such as this, the Report did not identify other considerations that could also be informative such as: (1) new wells drilled

² The August Addendum, assessed previously, meets a portion of the data requirements of Condition 48. But as noted previously, it is not clear which of the subsets of data it actually represents.

or used uncharacteristically upgradient from the neighboring wells that could contribute to groundwater conditions (e.g. to provide frost protection during extremely cold temperatures in early December 2013, or as an irrigation source in place of surface water from the Lemon Cove ditch or Foothill ditch), or (2) historic changes in water level in Lake Kaweah an its potential relationship to localized hydraulic gradients. The Report also did not reference any of the prior analysis prepared and presented in the original 2002 EIR – in particular the *Hydrologic Data Evaluation Report*, June 10, 2002 that was also prepared by EMKO (see **Attachment 7**). This particular document included extensive analysis in 2002 of the existing property's (pre-Quarry) relationship with local groundwater levels and subsurface flow and direction.

Conclusion:

As noted from reading each Condition, these also should have been part of the Report's "basis for the technical evaluation" of the complaints. Specifically, and as noted previously, (1) lacking the full compliment of data required in Condition 48 presents significant challenges to understand the relation between Quarry operations and neighboring wells, and (2) lacking physical water delivery to the "V" ditch as required by Condition 55, which has not occurred since September 2013, presents significant challenges to creating and maintaining a "groundwater mound."

Further, and as discussed below in related sections, other external factors should have also been at least noted as needing to be investigated to understand if they could be contributing factors (e.g. when the Lake level fluctuates normally, is there a corresponding affect to groundwater elevations down-gradient from the Lake's southern saddle dam?).

And finally, lack of reference to the original studies prepared to support the EIR is problematic as this information provides vital context to the pre-Quarry conditions, expected impacts, and proposed mitigation strategies that resulted in the adopted Conditions.

Report Section 2.0 Nature of the Complaints

This section of the Report simply lists the complaint letters from January 2014, references a figure and summarizes the complaints as "to do with reduced well yield or low water levels, and that the issues began one to two months prior to the end of January 2014 (i.e. late November to late December 2013)."

No assessment of this section was necessary.

Report Section 3.0 Mining Operations and Monitoring

The first portion of this section describes operations of the Quarry, noting that dewatering began in September of 2008 and that wires were stolen from the pump used to fill the "V" ditch on two occasions: (1) stolen on June 17, 2013 and replaced on June 21, 2013,

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and (2) stolen on September 4, 2013 and not replaced. No water has been pumped to the "V" ditch since September 4, 2013.

The section continues by detailing the monitoring of groundwater levels since May of 2005 and discusses analysis of groundwater levels from the individual well data. The section concludes by stating: "[T]*hus, the low water levels reported in the complaints discussed in Section 2.0 are not a recent incident and have been occurring cyclically since at least August 2011. The data clearly demonstrate that the groundwater level in the area was already dropping rapidly prior to the shutdown on September 4, 2013..."* (Report, p. 5)

Assessment:

The Report's generalized assessment of groundwater level data from individual wells is misleading and potential wrong. Lacking a common datum to reference the individual well data, and lacking clarity or assessment in the August Addendum regarding the quantities delivered to the "V" ditch as required by Condition 48, it is not possible to reach a conclusion about any relation between water delivered to the "V" ditch and the groundwater levels in the individual wells. For instance, if during the prior instances when wells were noted to have appreciable decreases (e.g. the Report draws attention to period of August 2011 until May 2012), water of sufficient quantity was not being delivered as required by Condition 55, then it is possible the lower groundwater elevation readings were a result of insufficient water in the "V" ditch and not, as the Report contends, part of cyclical decreases caused by other factors. The August Addendum does indicate dewatering activities during this period (see **Figure 1**). But if groundwater levels were dropping as noted, would increased discharges have stabilized or reduced the lowering? Condition 55 specifically states that water of sufficient quantity to maintain groundwater levels be delivered to the "V" ditch.

Essentially, lacking the fundamental data, no analysis can be completed to understand whether the amount of water delivered to the "V" ditch was "sufficient" to meet the groundwater-mounding objective. The Report, therefore, cannot conclude that water was always in the ditch since 2008 when it has no data from which to base that fact. And thus, it cannot be concluded that historic fluctuations in the water levels – with lowered groundwater levels equivalent or even greater than being experienced in January 2014 – were due to factors beyond the control of the Quarry's operation. Again, absent the vital facts, it is plausible that decreases seen in previous months correlate to periods when *insufficient* water was not being delivered to the "V" ditch. Absent the facts, no analysis can be made, thus no decisive conclusion can be reached.

Furthermore, in contrast to the Report's statement: "[T]*he water levels have been measured monthly since May 2005, which is more than three years prior to the beginning of dewatering and use of the recharge trench.*" (Report, p.5), aerial photography from June 2005 appears to show water in a newly constructed "V" ditch. The figure below is a screen shot of the June 11, 2005 aerial image showing water in the "V" ditch. The water may have been sourced from the northern pond. Though this may have been a temporary action for testing or the beginning of more routine deliveries into the "V" ditch, the appearance of water in June 2005 contrasts with statements in the Report. According to the August Addendum, dewatering did occur in June 2005.



On a related note, reviewing the monthly well data from May 2005 through July 2014 (which extends beyond the data set available at the time of the Report), various observations can be made that are at least as relevant as the statements in the Report derived from the same data. For instance:

- 1. The Cairns Well (see Report Figure 5) shows a dramatic drop in water levels between September 2013's reading and October's reading. Though this well has shown some variability in previous records, this dramatic drop between these two months appears to correlate with the stoppage of delivery into the "V" ditch.
- 2. The Morton Well (see Report Figure 4) shows a downward trend between January and August 2013 that, if projected to continue at the same rate, would drop slightly below 10 feet by November 2013. Instead, the well drops significantly by

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October, well below what would have been projected. This also corresponds to the stoppage of delivery to the "V" ditch.

3. The well data recording depth was often accompanied by a note if something relevant was encountered. For instance, the note may say "ditch was full" or "well was running," or may note that no key was available and therefore no reading taken. Many instances have no notes recorded in the spreadsheet, but that may not mean relevant factors should have been noted. For instance, in the Report's Figure 5, the Cairns well shows a series of high and low recordings starting about September of 2011 through May of 2012. There are no notes corresponding to any of these readings. Is it possible that the well was or had previously been running at the time of the readings? What other events would make the values jump up and down? The corresponding data for the Morton well (see Report Figure 4) is only lower during the period. Why did it not also experience the high and low fluctuations? Similarly, the four monitoring wells (located along the "V" ditch alignment on the upgradient side) also showed a drop during this period. But they also all have no records for several months with notes stating "no key."

These assessments could lead an evaluator of the data to different conclusions than those reached in the Report. This again is illustrative of the point that lacking all of the pertinent facts limits the ability to make decisive conclusions about cause and affect.

Finally, this section makes an important anecdotal note that states: "The quarry pit had filled with water to a depth of approximately 15 feet below ground surface, as shown in Figures 2 and 3." (Report, p. 4/5). When reviewing the 2002 hydrologic report prepared in support of the EIR, during pre-project conditions, groundwater elevations were noted to be between 3 and 6 feet below the ground surface. This illustrates a simple fact that is not assessed by the Report – that the open pit creates a different hydraulic condition than if the material were left undisturbed. In other words, with the removal of material that previously contributed to the hydraulic gradient affecting the subsurface flow of groundwater, the gradient has changed. Groundwater still flowing subsurface but upgradient from the open pit now has a new lower elevation to seek as it flows underneath the subject properties. As was originally identified and the primary reason for the Conditions, the open pit would have this affect. Thus, the "V" ditch was designed as mitigation to provide a groundwater mound (e.g. a method to maintain the pre-project hydraulic gradient). The need for a long-term solution to this issue is also recognized with the planned design of the reclaimed mine site. As planned, there will be two reclaimed lakes of different elevation. The "V" ditch or similar recharge trench is to be constructed, in conjunction with a series of weirs, to "maintain current groundwater elevations along the properties to the northeast of the project area." (Condition 52.) These facts demonstrate that during analysis of the project prior to approval, concern was expressed about the open pits creating a lower groundwater elevation and adversely

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impacting the hydraulic gradient of subsurface flow under the subject properties. The Report clearly provides evidence that the water elevation in the open pit is as was expected, yet it does not appear that the planned for mitigation, as recognized in the Conditions, is sufficiently providing a groundwater mound.

Conclusion:

The Report is too quick to reach decisive conclusions when relevant facts necessary for reaching such a conclusion is absent. Though the conclusion may still be accurate if it were to be reassessed with all relevant facts available, making such conclusions absent them is without merit. Even with the additional information provided in the August Addendum, there are not enough relevant facts and analysis to reach determinant conclusions.

The Report attempts to remove any fault from CEMEX through its interpretation of the limited groundwater elevation data and associated notes. As stated previously, the current unprecedented drought condition is a primary contributing factor to current degraded groundwater conditions at the subject properties. But absent an understanding of the relationship of groundwater mounding to the upgradient groundwater elevations, CEMEX cannot be summarily excused from fault.

Report Section 4.0 Rainfall Data for Lemon Cove

This section presents historic rainfall data for Lemon Cove. The Report states: "Although the 2013-2014 water year is not complete, the first four months of this water year have been the driest October-January period measured in Lemoncove since 1923, based on the CDEC data." This fact illustrates the severity of the drought.

No assessment of this section was necessary.

Report Section 5.0 Hydrologic Conditions on the Kaweah River

This section discusses historic flows on the Kaweah River ("River") and presents that "[H]*igh river flows can recharge the local groundwater aquifer from the area north of the Stillwell Quarry*…" (Report, p. 6). The Report also notes that "[C]*onversely, low river flows may not provide any recharge and can also allow the aquifer to drain more rapidly toward the river*." (Report, p. 6). The Report elaborates on the timing and duration of flows to the River and compares conditions from October 2010 through early February 2014, implying the likely affect to recharge during these different water years.

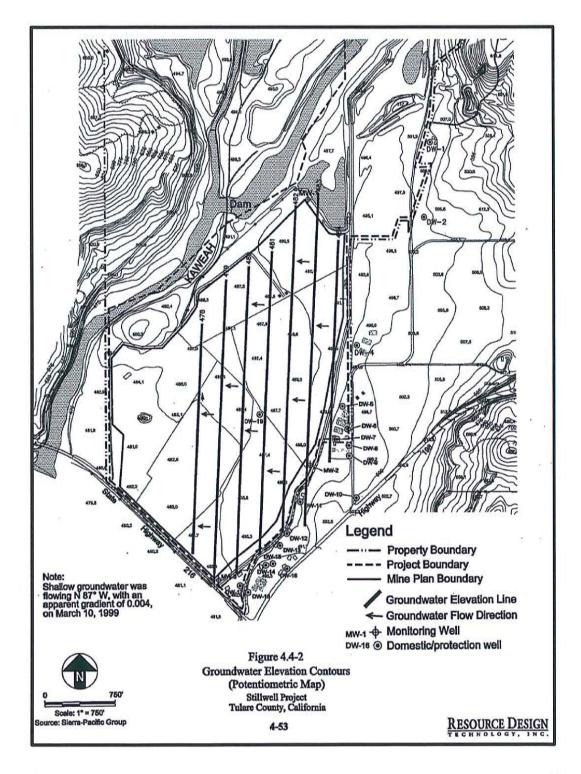
Assessment:

As detailed in the Report's Section 2, complaints about water levels began in early to late December of 2013. At that time, releases from Lake Kaweah ("Lake") had been nearly zero for at least a month. The Report's data and figures imply that that the limited irrigation releases during the summer and no flood releases during the winter months are primary factors in the lowering the groundwater under the subject properties. However, this cyclical period of flows has been routine for decades with no identified impact to groundwater levels at the subject properties. For instance, looking at the 2006 to 2007 condition, releases from the Lake became near zero by October 1, 2006 and remained as such until January 2007 (Report, Figure 9). Rainfall during this period was also below normal, comparable to the rainfall in 2012/2013, which the Report notes was part of the lead up to the current degraded condition (Report, Figure 8). When inspecting the well level monitoring data for this period, the wells on the subject properties and the monitoring wells were all stable, with no apparent impact from the near zero flows and limited rainfall for October 2006 through January 2007. It is important to note that excavation of the Quarry had not yet begun as of that period, according to the Report. In contrast, the August Addendum indicates that dewatering began on a continuous basis beginning in January 2006 (see **Figure 1**) – which again raises questions about contradictory statements between the Report and the August Addendum.

The Report also states that the River functions to recharge the local aquifer from the north. However, this appears to be in contrast to a few other previously provided facts – namely the analysis to support the EIR. The EIR's hydrologic study states the following with regard to River recharge:

- "According to the property owner, if riparian water is not provided to the northern ponds, the ponds would become dewatered very rapidly. In addition, the owner reports that once the ponds are dewatered, it would take a very long time to recharge the ponds with groundwater inflow from the upgradient direction and lateral inflow from the Kaweah River through the geologic material present between the river and the ponds. Thus the primary source of water with the northern ponds is riparian water that is diverted from the Kaweah River." (p. 10, Section 3.3, Hydrologic Data Evaluation Report, EMKO, June 10, 2002, see Attachment 7)
- 2. "Thus the groundwater table will be higher than the water level in the river, preventing the flow of water from the river to a dewatered pit during the mining operations." (p. 14, Hydrologic Data Evaluation Report, EMKO, June 10, 2002)
- "Therefore, the water available to the neighboring wells will remain the same and will come from groundwater flow entering the neighboring properties from upgradient, which is the same source of water currently entering these wells." (p. 15, Hydrologic Data Evaluation Report, EMKO, June 10, 2002)
- 4. "In addition, use of a cut-off wall to prevent inflow from the Kaweah River during dewatering is unnecessary, as discussed above in Section 3.3. Specifically, when the Northern Ponds are pumped for irrigation, little or no water percolates in the ponds from the river." (p. 15, Hydrologic Data Evaluation Report, EMKO, June 10, 2002)

5. Figure 4.4-2 presented in the 2002 EIR (EIR p. 4-53) graphically represents the groundwater flow direction as east to west across the Quarry to the River, with no flow coming from the River from the northern area. A copy of this figure is included below.



As is very apparent from the analysis in 2002, the River does not contribute recharge to the aquifer. However, during pre-project conditions, it likely had an influence on the hydraulic gradient and flow conditions that underlay the subject properties – essentially a mounding affect. This fact seems to be apparent since the Quarry's mitigation to address concerns about groundwater levels dropping under the subject properties was to build the "V" ditch to mound water and maintain hydraulic gradients.

Conclusion:

The current unprecedented drought conditions are having an effect throughout the state on a multitude of factors such as reservoir elevations, stream flows, recharge to groundwater and groundwater levels. However, at the time of the complaints the severity of the current drought was not yet fully apparent – as it was January and wells were seeing problems starting at least the prior month.

When looking at the historic near-zero flow conditions similar to that in 2012 and 2013 with low rainfall, coupled with statements about the limited, if any, recharge benefit from the River, the Report's implied conclusion that conditions in late 2013 and January 2014 create a condition severely different than experienced in the past seems baseless.

Similar to every other conclusion of this peer review, the absence of all of the pertinent facts – especially routine representations of groundwater contours and hydraulic gradient estimates – make it extremely difficult to evaluate the relationships of the River and rainfall to groundwater elevations under the subject properties. As such, the Report should not make decisive statements that excuse CEMEX from any fault.

Report Section 6.0 Summary and Conclusions

This section restates a few key facts, and then begins a series of summary statements of its prior evaluation and conclusions. The Report includes two key statements in this section:

- 1. "The declining trend in 2013 began as early as February, six months before the discharge of water to the recharge trench was stopped. There is not a correlation between the cessation of discharge to the recharge trench and the water levels in the wells." (Report, p. 8).
- "It is also worthwhile to note that, had the data supported the opposite conclusion, two of the potential remedies identified in Condition of Approval No. 49 are to reduce the amount of pit dewatering, or if necessary, cease mining operations. Both of these conditions have existed at the site since September 2013." (Report, p. 8).

Assessment:

The assessment of each section, as detailed above, is relevant to the summary statements of the Report. Please refer to those prior assessments for further detail.

With regard to the two key statements made in this Section, the following is offered for consideration:

- The current drought very likely has had an adverse impact on localized groundwater conditions. Whether due to other external factors from higher pumping by other groundwater users even further upgradient and less inflow from the normal recharge sources, the groundwater levels would likely decline. This trend, as noted by the Report, appears to have begun by the spring of 2013. However, because pertinent reports were not prepared and provided to the County and the water discharges to the "V" ditch were stopped in September, the rate of decline very well could have been exacerbated by the actions of CEMEX. The Report cannot make decisive statements that there is not a correlation between discharge to the "V" ditch absent further understanding of what conditions would have been had sufficient water been in the "V" ditch as was required by Condition 55.
- 2. The Report clearly leaves out key text from Condition 49 as it attempts to imply that the same degraded groundwater conditions would occur if the remedy of ceasing operations or reducing the amount of pit dewatering were imposed. Condition 49 clearly states: "If a significant problem...be caused by mining activities, then immediate action must be taken to correct the condition, which may include (but is not limited to) modifying the recharge ditches to provide more recharge capacity, reducing the amount of pit dewatering, or if necessary, ceasing mining operations." The first focus is on modifying the recharge ditch, but the Condition also leaves open any option with the included parenthetical. When also considering Condition 55's requirement that "sufficient" water be discharged to the "V" ditch, degraded groundwater conditions could potentially be resolved by simply increasing the quantity of discharge. However, this resolution option appears to not have been recognized by the Report either.

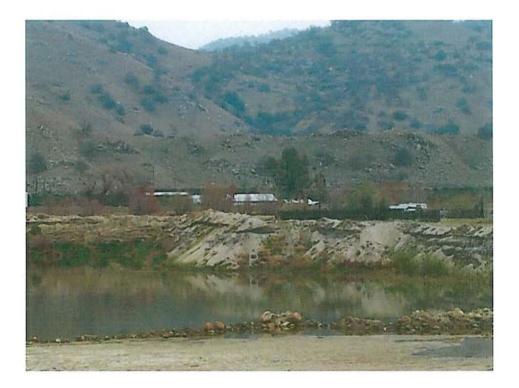
Furthermore, ceasing mining operations would trigger reclamation actions as detailed in the Quarry's permit conditions, such as Condition 52. These reclamation actions included flowing water between two lake elevations through a recharge ditch, using a series of weirs, to assure groundwater elevations on the subject properties were maintained. Adding this statement, which essentially argues that remedies to the current degraded groundwater conditions would result in the same degraded conditions, provides no value to the Report. Rather, by omitting part of the Condition, questions can be raised about the overall evaluation and its conclusions.

Conclusion:

The Report's overall evaluation is based on an incomplete set of facts. Thus, the conclusion that the Quarry operations are not at fault is without merit. It is possible that the Report's conclusions are completely correct. But, absent relevant data, coupled with questions about the overall evaluation in the Report, as detailed in the sections above, it is difficult to say CEMEX is without fault.

Attachment 1

Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry Tulare County, California



Prepared by:

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February 26, 2014

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Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry Tulare County, California

1.0 INTRODUCTION

This report has been prepared at the request of Tulare County Resource Management Agency (RMA) to address several written complaints received by RMA in late January 2014 regarding groundwater conditions adjacent to the CEMEX Construction Materials, Inc. (CEMEX) Stillwell Quarry near Lemoncove, California (State Mine ID 91-54-0034). The following Conditions of Approval were adopted by the Tulare County Board of Supervisors as part of the Conditional Use Permit for the Stillwell Quarry:

46. Prior to commencement of mining, the applicant shall prepare and implement the June 2002 Groundwater Monitoring Program adopted for this project. The purpose of the monitoring plan shall be to assess the effectiveness of the V-ditch design in maintaining groundwater levels in wells along the east and southeast boundary of the site and in monitoring the quality of water supplying recharging (sic) the local aquifer. All groundwater monitoring and reporting shall be done in accordance with the approved plan. Any property owner with a water well (or water wells) located within a ½ mile radius of the property boundaries may participate in the groundwater monitoring program. The project applicant shall notify all owners with wells within ½ mile of the property boundaries of the opportunity to participate in the groundwater monitoring program. Participation in the program requires that the wells be accessible and in a condition that allows them to be tested on a regular basis.

And,

49. The project shall not affect the water level, yield, or quality of any well*, both during the mining operations and subsequently as a reclaimed site. Upon receipt of a written complaint from any owner of a pre-existing well which details an alleged impact to the well's water level, yield, or water quality, the RMA shall request a report from a licensed hydrogeologist explaining the problem. If a significant problem can be professionally demonstrated by a licensed hydrogeologist to be caused by mining activities, then immediate action must be taken to correct the condition, which may include (but is not limited to) modifying the recharge ditches to provide more recharge capacity, reducing the amount of pit dewatering, or if necessary, ceasing mining operations. (* As used herein, an impact to a well shall not be deemed to have occurred if the well water level, well yield, and quality are within ranges of existing conditions specified in the EIR).

Conditions of Approval Nos. 46 and 49 are used as the basis for the technical evaluation of the complaints received by the RMA. The technical evaluation presented below considers the history of mining and dewatering at the Stillwell Quarry, the available data regarding water levels in neighboring wells and monitoring wells on the Stillwell Quarry

property, rainfall data for Lemoncove, and hydrologic conditions on the Kaweah River.

2.0 NATURE OF THE COMPLAINTS

Table 1, below, summarizes the complaints received by RMA in January 2014.

Table 1. January 2014 Complaints					
Owner	Address	Date	Nature of Complaint		
Packard	33511 1/2 Sierra Dr.	1/30/14	For last 2 months, well goes dry quickly		
Morton	33511 Sierra Dr.	1/30/14	Well going dry, "pumping air" for over a month; well 17 ft deep, water level at 14 ft		
Cloud	33481 Sierra Dr.	1/30/14	Well running dry and "pumping air"		
Rodriguez	33513 Sierra Dr. #A	1/29/14	Pump pulling in air due to lack of water, for about a month		
Cairns	24822 Ave. 338	1/31/14	Well is pumping properly; concern for neighbors		

Figure 1 illustrates the location of the existing quarry excavation, the recharge trench, the 24822 Avenue 338 property, and the 33481 to 33513 Sierra Drive properties. Figure 1 was prepared from a screen-capture image from Google Earth. The imagery date for the aerial photograph in Figure 1 is June 15, 2011.

All of the complaints received by RMA state that the well issues have to do with reduced well yield or low water levels, and that the issues began one to two months prior to the end of January 2014 (i.e. late November to late December 2013).

3.0 MINING OPERATIONS AND MONITORING

According to information provided by CEMEX (Pete LoCastro, plant manager, personal communication, February 13, 2014), dewatering at the Stillwell Quarry began in September 2008. Water from the mining excavation was pumped into a holding basin to allow fines to settle out. The water in the holding basin was then pumped to the recharge trench. Pumping to the recharge trench occurred continuously until June 17, 2013, when the wiring to the pumps was stolen. The wiring was replaced and the pumps restarted on June 21, 2013. The wiring was stolen a second time on September 4, 2013. A decision was made at that time to leave the pumps off and to cease dewatering of the Stillwell Quarry.

A site reconnaissance of the Stillwell Quarry was conducted on February 11, 2014 with Henry Dong of RMA and Peter LoCastro and Ronald Wilson of CEMEX. At that time, the cut wires at the electrical boxes serving the pumps were observed and no water was being pumped from the quarry pit or into the recharge trench. The quarry pit had filled February 26, 2014 Page 5

with water to a depth of approximately 15 feet below ground surface, as shown in Figures 2 and 3.

Consistent with Condition of Approval No. 46, a groundwater monitoring program has been conducted since 2005 by DellaValle Laboratory, Inc. for CEMEX. The monitoring program includes measurement of groundwater levels in nine private wells near the quarry and four monitoring wells at the quarry site. The water levels have been measured monthly since May 2005, which is more than three years prior to the beginning of dewatering and use of the recharge trench. Of the five complaint letters received by RMA (see Section 2.0), only the properties at 33511 Sierra Drive and 24822 Avenue 338 have elected to participate in the groundwater monitoring program. Figure 4 shows the water levels that have been measured in the well at 33511 Sierra Drive. Figure 5 shows the water levels that have been measured in the well at 24822 Avenue 338. Figure 6 shows the water levels that have been measured in the four monitoring wells at the quarry site.

Figures 4, 5, and 6 show that the water levels in the neighboring wells and the onsite monitoring wells were relatively stable from 2005 through the middle of 2011. From approximately August 2011 until May 2012, the water levels in the wells decreased appreciably. The water levels subsequently recovered, peaking in January 2013 at levels that were within the same range as those that were measured in the wells from 2005 through early 2011. Since January 2013, however, the water levels have consistently declined in each of the wells shown on Figures 4, 5, and 6. In May 2012 and October 2013, the water level in the well at 33511 Sierra Drive (Figure 4) was actually slightly lower than the level measured in January 2014.

The data on Figures 4 and 5 indicate that the most rapid drawdown in the water levels in the wells at 33511 Sierra Drive and 24822 Avenue 338, respectively, began in August 2013, and that by October 2013 the water levels had stabilized and even recovered slightly.

The data from the groundwater monitoring program, as shown in Figures 4, 5, and 6, indicate that declines in the water levels in the wells adjacent to the Stillwell Quarry occurred from August 2011 to May 2012, and again from January 2013 to the present. The most recent water levels measured in the wells is comparable to the levels measured in May 2012 and again in October 2013. Thus, the low water levels reported in the complaints discussed in Section 2.0 are not a recent incident and have been occurring cyclically since at least August 2011. The data clearly demonstrate that the groundwater level in the area was already dropping rapidly prior to the shutdown on September 4, 2013 of the pumps used for dewatering and for providing water to the recharge trench.

4.0 RAINFALL DATA FOR LEMONCOVE

Rainfall measurements have been collected in Lemoncove since 1905. The data are available from the California Data Exchange Center (CDEC) website at <u>www.CDEC.water.ca.gov</u>, under the station name LMC.

Figure 7 shows the rainfall at Lemoncove from 1905 through Jan 2014. The rainfall data are plotted for each "water year". A water year is the period from October 1 through September 30 of the subsequent year. A water year provides a better representation of the seasonal rainfall patterns in California than does a calendar year. As indicated on Figure 7, the average water year rainfall in Lemoncove is 14 inches per year for the 110-year period of record.

Figure 8 shows the water year rainfall in Lemoncove from 2000 through Jan 2014. Figure 8 demonstrates that the last two water years have been two of the driest ever recorded. Although the 2013-2014 water year is not complete, the first four months of this water year have been the driest October-January period measured in Lemoncove since 1923, based on the CDEC data.

5.0 HYDROLOGIC CONDITIONS ON THE KAWEAH RIVER

The Kaweah River runs along the north and west sides of the Stillwell site. Flows within the river are expected to have an effect on groundwater levels in the area, as local rainfall and the Kaweah River are the only potential sources of groundwater recharge in the Lemoncove area. High river flows can recharge the local groundwater aquifer from the area north of the Stillwell Quarry (see area labeled "Kaweah River" on Figure 1), and minimize discharge from the aquifer to the river farther downstream. Conversely, low river flows may not provide any recharge and can also allow the aquifer to drain more rapidly toward the river.

Average daily flow data for the Kaweah River below Terminus Dam is available from the CDEC website (www.CDEC.water.ca.gov) for Station TRM. The average daily flow data from 1994 through February 9, 2014 were obtained for this evaluation, and are shown on Figure 9. The data indicate that there are two primary flow periods in the river each water year. During the winter, flood control releases may occur for short durations, typically between November and February. The predominant flow period, however, occurs during the summer months, when large volumes of water are released from the dam for irrigation deliveries. The irrigation releases typically occur for longer durations and at higher flows than winter flood control releases, often extending from March through September. However, during dry years, both the flood control and irrigation releases can be substantially curtailed. These variations can be seen by comparing the river flows over the past three to four years.

The 2010-2011 water year was an exceptionally wet year, with total rainfall of 21.86 inches, more than 56 percent above average. Figure 10 shows the flows in the Kaweah

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River for the 2010-2011 water year, and extending into early 2012. Flood releases occurred almost constantly from early November 2010 through February 2011, with a peak rate of almost 1,800 cubic feet per second (cfs). Irrigation releases occurred continuously from early March 2011 until the first week of October 2011, with a peak rate of almost 3,000 cfs.

The 2011-2012 water year was a below-normal year, with total rainfall of 11.68 inches, or about 17 percent below average. Figure 11 shows the flows in the Kaweah River for the 2011-2012 water year, and extending into early 2013. Flood releases occurred intermittently from early November 2011 into mid-December 2011, with a peak rate of about 500 cfs. Irrigation releases did not begin until mid-May 2012 and were terminated by mid-August 2012, with a peak rate of about 2,200 cfs briefly reached.

The 2012-2013 water year was even drier than the prior year, with total rainfall of only 7.30 inches, or 48 percent below average. Figure 12 shows the flows in the Kaweah River for the 2012-2013 water year, and extending into early February 2014. There were two very brief flood releases, one in mid-December 2012 and another at the end of January 2013. Although the peak flood release reached as high as 1,100 cfs at the end of January 2013, that release period occurred for only seven days. Irrigation releases did not begin until May 2013 and were terminated before the end of July 2013, with a peak rate of only 1,000 cfs.

Figure 12 also shows that there have not been any flood control releases since the beginning of the 2013-2014 water year through February 9, 2014.

6.0 SUMMARY AND CONCLUSIONS

This technical report has been prepared at the request of Tulare County RMA in accordance with Condition of Approval No. 49 for the CEMEX Stillwell Quarry near Lemoncove, California. In late January 2014, RMA received five complaint letters from residents located to the east of the Stillwell Quarry and the associated recharge trench. Four of the letters allege that the cessation of discharge to the trench is causing a decrease in groundwater levels and a decrease in well yield. The fifth letter states that effects have not been noted in that owners well. The complaints state that the decreasing well yields have been an issue for the past one to two months.

Dewatering of the Stillwell Quarry, and pumping of water to the recharge trench, has been occurring since September 2008. On September 4, 2013, theft of the wiring to the discharge pumps occurred for a second time. At that time, dewatering activities and discharge to the recharge trench ceased.

Consistent with Condition of Approval 46, CEMEX has been conducting a groundwater monitoring program at the Stillwell site since May 2005. Only two of the property owners

that submitted letters to RMA in January 2013 elected to participate in the groundwater monitoring program, and only one of those two owners has indicated that his well is experiencing a diminishing yield. The data from the groundwater monitoring program shows that declining water levels in the wells occurred from August 2011 to May 2012, and again from January 2013 to the present. The January 2014 water levels measured in the wells is comparable to the levels measured in May 2012 and again in October 2013. Thus, the low water levels reported in the letters to RMA are not a recent incident and have been occurring cyclically since at least August 2011. The data clearly demonstrate that the groundwater level in the area was already dropping rapidly prior to the September 4, 2013 shutdown of the pumps used for dewatering and for providing water to the recharge trench. The data also show that since October 2013, the water levels in the wells have actually increased slightly.

Evaluation of historical rainfall data for Lemoncove shows that the last two water years have been two of the driest ever recorded. In addition, the first four months of the current (2013-2014) water year have been the driest October-January period measured in Lemoncove since 1923.

An evaluation of hydrologic conditions on the Kaweah River demonstrates that releases from Terminus Dam and flows within the river have been diminishing over the last three water years and that there have not been any releases to the river above base-flow levels since July 2013. These hydrologic conditions on the Kaweah River indicate that groundwater recharge has been decreasing for several years and that there has likely been little or no recharge of groundwater for at least the last six months.

Based on the data presented in this report, the declining water levels in the wells in the Lemoncove area occurred in 2012, and in 2013. The declining trend in 2013 began as early as February, six months before the discharge of water to the recharge trench was stopped. There is not a correlation between the cessation of discharge to the recharge trench and the water levels in the wells. Evaluation of local rainfall and river flow data shows that the Lemoncove area has been experiencing the most severe drought conditions ever recorded in the area. Substantially diminished rainfall amounts and curtailed flows in the Kaweah River have reduced, if not eliminated, local groundwater recharge. The historically low rainfall and river discharge amounts are the most likely cause of the lower groundwater levels observed in the wells in the wells in the area.

In accordance with Condition of Approval No. 49, RMA has requested this report, which was prepared by a licensed hydrogeologist. The available data and documentation demonstrate that the concerns identified in the letters received in late January 2014 are not caused by mining activities. It is also worthwhile to note that, had the data supported the opposite conclusion, two of the potential remedies identified in Condition of Approval No. 49 are to reduce the amount of pit dewatering, or if necessary, cease mining operations. Both of these conditions have existed at the site since September 2013.

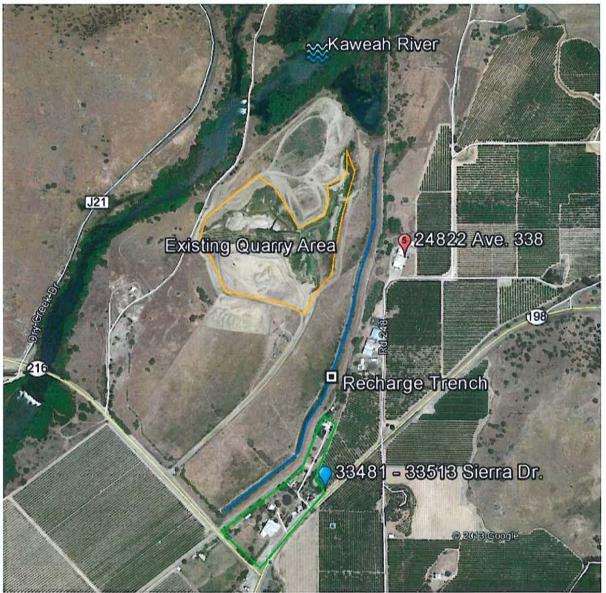


Figure 1. Aerial map of Stillwell Quarry area.

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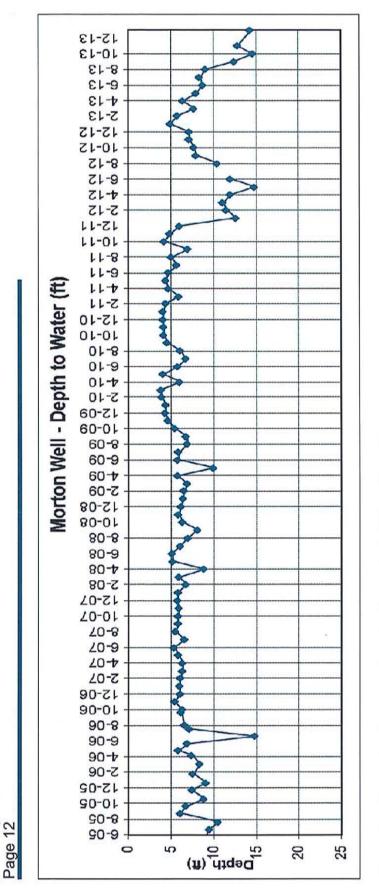


Figure 2. View looking east across Stillwell Quarry pit on February 11, 2013. The buildings in the background are at the 24822 Avenue 338 property.

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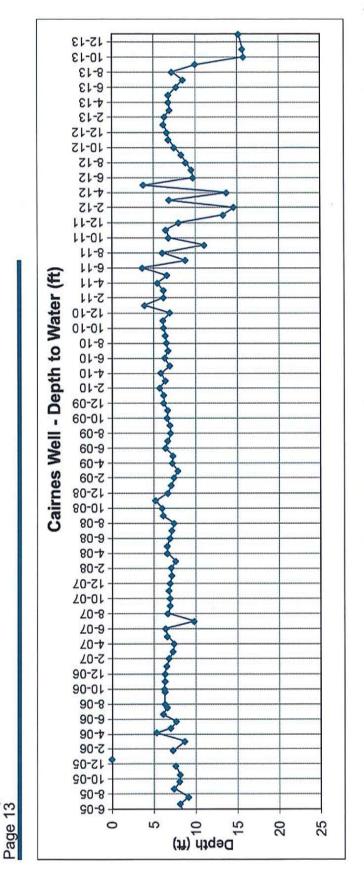


Figure 3. View looking southeast across the Stillwell Quarry pit on February 11, 2013. The buildings in the background are located approximately ¼ mile north of the 33513 Sierra Drive property.

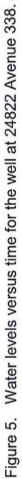


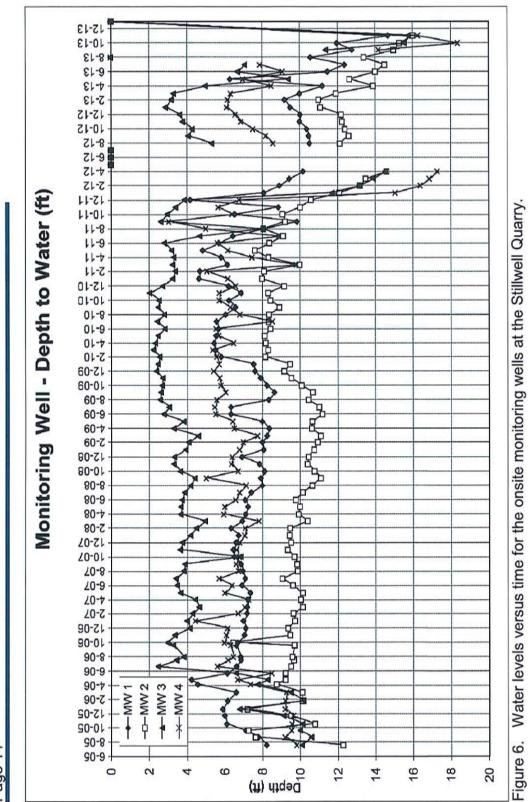


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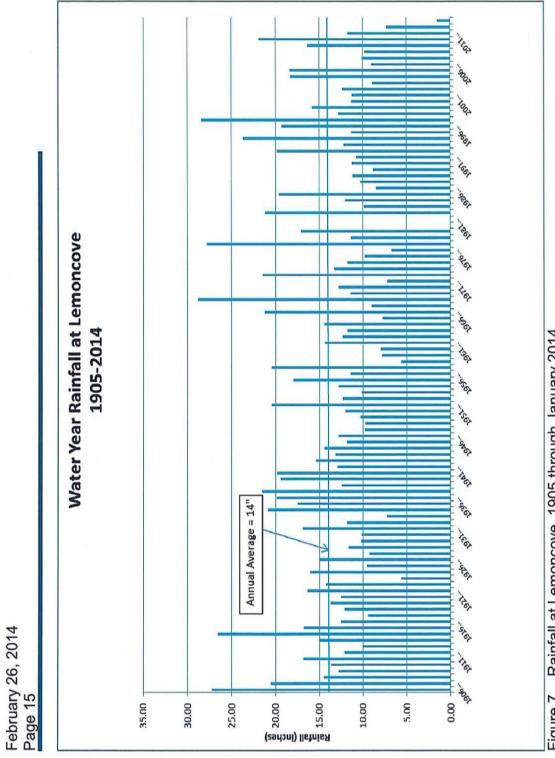
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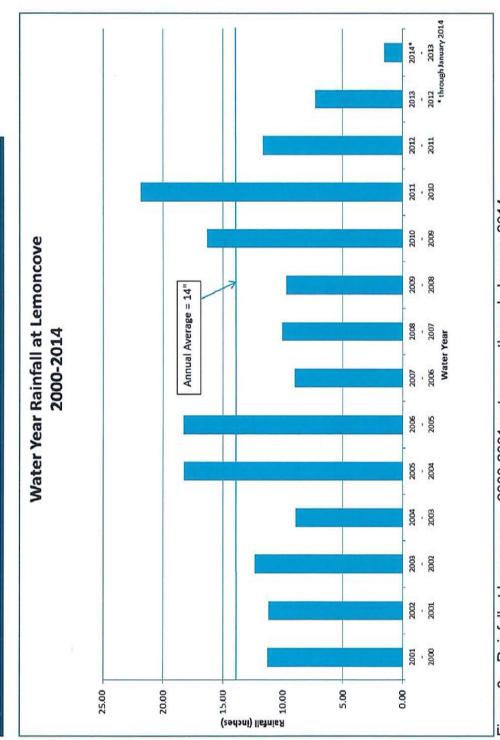


Figure 8. Rainfall at Lemoncove, 2000-2001 water year through January 2014.

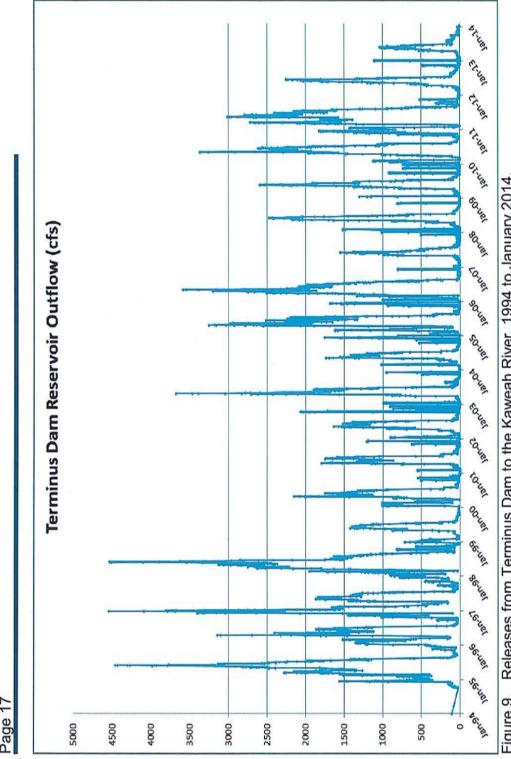


Figure 9. Releases from Terminus Dam to the Kaweah River, 1994 to January 2014.

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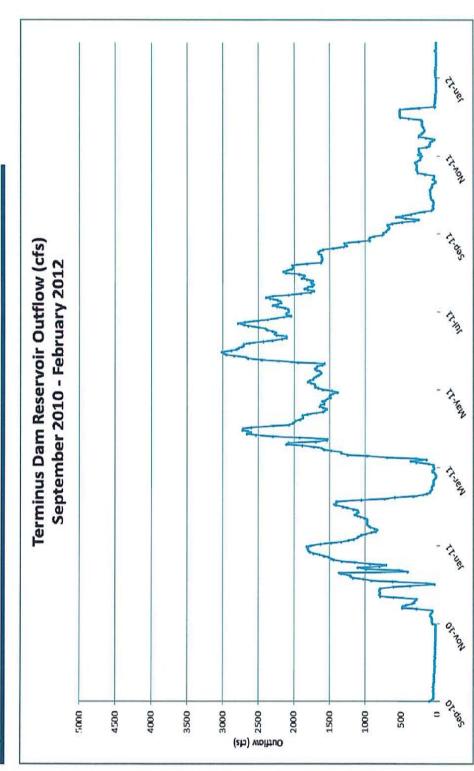
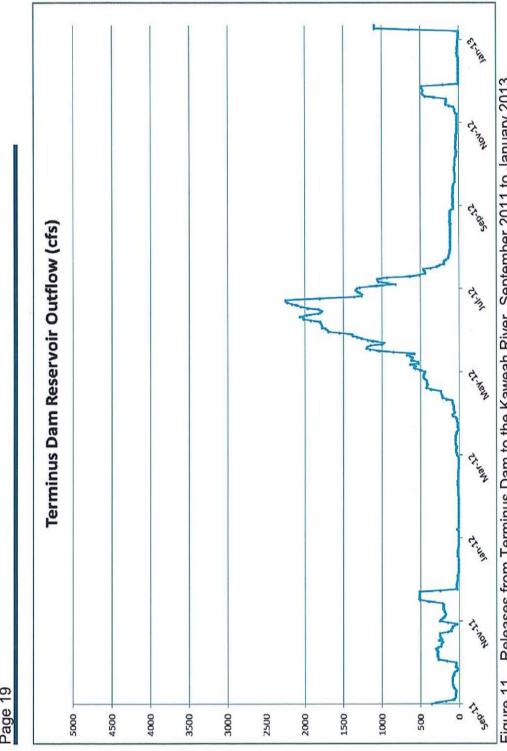


Figure 10. Releases from Terminus Dam to the Kaweah River, September 2010 to January 2012.





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Figure 12. Releases from Terminus Dam to the Kaweah River, September 2012 to January 2014.

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Attachment 2

STATEMENT OF QUALIFICATIONS

Prepared for: Tulare County

AUGUST 2014



3600 American River Drive Suite 260 Sacramento, California 95864 P: 916.669.9357 F: 916.669.9358

Introduction

Tully & Young thinks comprehensively. We artfully integrate legal, economic, political and technical elements into all of our water resource planning and management investigations. We assist our clients in seeking workable solutions that meet their fundamental water management objectives - whether resolving conflicts, preparing for future unknowns, or expanding value from existing and new water assets. We help our clients achieve these objectives through collaboration with other consultants, stakeholders, experts and the public - to ensure information is available at the necessary level of detail to identify, assess, and implement dynamic water resources management solutions.

Tully & Young brings its comprehensive water management experience to every client challenge. Like a game of chess, a water manager must be able to anticipate and counter the "moves" of local, regional, state and federal regulations; changes in natural hydrology, climate and groundwater conditions; regional competition and joint use of shared water resources; local and regional land use changes, developments, and plans; and project funding opportunities. (See Figure 1). Our experience helps our clients win this game. We have developed comprehensive water management plans; negotiated complex agreements; drafted and defended environmental, technical and legal documents; and assessed the legal, technical, political and economic underpinnings of projects and water transactions.

Figure 1 - Strategic Water Management - Balancing the legal, technical, political and economic drivers



STRATEGIC WATER RESOURCE PLANNING - BALANCING THE LEGAL, TECHNICAL, POLITICAL AND ECONOMIC DRIVERS



Experience and Expertise

Tully & Young has the experience, talent, and reliability that our clients need. We are a multi-disciplined water resources management and consulting firm with the relevant skill and experience to resolve multi-faceted water resource management issues.

Since our firm's inception, we have served over 50 different clients in California through hundreds of projects. Most of our clients have active projects within the last two years and always request that Tully & Young propose on follow-up tasks and new projects. Our repeat business with existing clients demonstrates our understanding of complex water management issues and the quality of our work. Quality work product is critical for our small business' survival.

Tully & Young synthesizes the legal, economic, political and technical elements that permeate all water resource management challenges.

Tully & Young's strategic water management experience includes regional, statewide, national, and international matters. We have worked on interstate and international water issues, California Delta and statewide planning issues, regional strategic planning, and private client planning and strategy development. Our experience spans California's four corners and transverses all levels of government and private business. The following pages detail the breadth and depth of our comprehensive water planning expertise.

Statewide and Regional Water Management

Tully & Young, Inc. has worked on water management issues that permeate every front in California's "water wars." For instance, our understanding of the Law of the River, California Bay-Delta issues, and regional strategic planning efforts are invaluable to all of our client's water management needs. As described below, we have a comprehensive understanding of the California's water policy drivers, water rights and regulations, technical water storage and conveyance system operations, and general water governance structure.

Comprehensive Understanding of Water Policy Drivers

As a starting point, Tully & Young has extensive knowledge and understanding of California's water policy drivers – with a prime example being the challenge to find lasting solutions to Bay-Delta issues. These drivers include maintaining statewide supply reliability, identifying and isolating stressors to the Delta ecosystem, managing land development and population centers, and maintaining fisheries and other regulated species and their habitats. Given diverse set of stakeholders, navigating and solving complex policy issues requires technical, legal and political acumen. Tully & Young, Inc. possess these skills and has been summoned to numerous Bay-Delta forums to help find solutions. And these skills are applicable to other interstate and regional efforts like our experience and work in the Colorado River (the Law of the River), the Klamath River, and the Truckee River.



Tully & Young's comprehensive understanding of California's water policy drivers was evident in its work for the Delta Vision process. Tully & Young, Inc. was the lead consulting firm in that effort. Gwyn-Mohr Tully and Greg Young "championed" Delta Vision stakeholder work groups, assembled and moderated panels at Delta Vision Task Force meetings, and developed workable goals and objectives for consideration by the Delta Vision Task Force, the public, and the California Legislature. Tully & Young's highly educated and experienced staff also assisted in developing Delta Vision documents and solutions.

Tully & Young's diverse client base and repeat client business in complex water planning issues is further testimony to our ability to understand the water policy drivers that affect water management actions. Tully & Young's clients have included: urban and agricultural water purveyors throughout California; urban, agricultural and environmental advocacy groups; State and Federal public agencies; and private corporations and individuals. We have addressed a myriad of complicated issues such as: assessing statewide water transfer policy, developing legislative and regulatory language, and developing solutions to govern the Delta. We are well versed in all of California's key water policy drivers.

Water Rights and Regulations

Tully & Young, Inc. possess a thorough understanding of California's water law and regulations. Often in policy and technical settings, the underlying legal and regulatory rules are misinterpreted or completely overlooked. Our experience in water transfers demonstrates how this oversight may arise. For instance, a water transfer requires that a seller have a transferable water right and that a buyer has the legal ability to use the seller's water right. Each type of water right or contract is subject to a different set of laws and regulations. These laws and regulations must be clearly understood in order to perfect the transfer in the appropriate regulatory setting. For instance, a groundwater substitution transfer based on a post-1914 appropriative water right requires a deep understanding of not only the SWRCB's water transfer process, but also on the through-Delta conveyance issues in the Delta, the operations of the State and Federal facilities in play, and the regulatory constraints on available groundwater supplies. Accordingly, a policy advocating water transfers must account for the legal and regulatory nuances that impact the practical issue of actually executing a water transfer. Tully & Young are experts in investigating and resolving these types of issues.

Tully & Young has examined and assessed water rights in nearly all of its projects. Besides providing an historical overview of California's water rights system for the Delta Vision project and writing an Amicus Brief in the California Supreme Court's *Barstow v. Mojave* case on the underpinnings of California water law, our firm has specifically examined all types of water rights and contracts in work with municipalities, agriculture interests, and many private clients throughout the Central Valley. Tully & Young has examined pre-1914 appropriative rights, riparian water rights, and State Water Resources Control Board issued appropriative rights. Tully & Young has also been asked to assist in facilitating SWRCB



Water Permit extensions and modifications in the context of ongoing urban water development projects.

Tully & Young has also examined Central Valley Project contracts, State Water Project contracts, the relevant law related to each (i.e. the Central Valley Project Improvement Act (CVPIA) and Reclamation Law), as well as the Colorado River Compact (i.e. "The Law of the River"), and conducted legislative history reviews of the San Luis Unit and the San Felipe Division as it relates to San Luis Reservoir construction and operations. And Tully & Young has examined the Coordinate Operating Agreement as it relates to integrated State and Federal water operations.

Tully & Young's unique and thorough understanding of water rights and regulations helps our clients further their technical and policy objectives.

In addition to the specific items mentioned above, Tully & Young has also researched the Reasonable Use Doctrine under Article X, Section 2 of the California Constitution and various regional water supply agreements such as the Water Forum Agreement in the American River Drainage that modifies reliability in underlying water rights and contracts. Tully & Young has investigated issues associated with the Public Trust Doctrine and Endangered Species Act as applicable to water rights in California.

Tully & Young is also well versed in the nuances of California's groundwater law as it applies to overlying users, groundwater appropriators, and underflow. Tully & Young has worked extensively on water rights issues with numerous local agencies with jurisdiction over groundwater in developing workable policy to better conjunctively manage all its water resources, including CVP contract supplies.

This detailed understanding of federal law and California water law is critical in assessing and implementing sound technical analyses and good water policy. Tully & Young uses its knowledge in this area to develop legally defensible technical documents that further our clients' policy objectives.

Technical Competence and System Understanding

Tully & Young's technical expertise complements its legal and regulatory expertise. In order to best help our clients develop and achieve their policy objectives, Tully & Young must fully understand the technical details of system operations and obligations – and understand these issues in the context of how other water interests operate to move water locally, regionally, and around the state. The uniqueness of Tully & Young is its ability to combine the technical expertise with the legal and regulatory expertise.

Tully & Young has developed a broad-based technical understanding of numerous water supply systems that allows rapid and effective application of technical information to our



STATEMENT OF QUALIFICATIONS 5

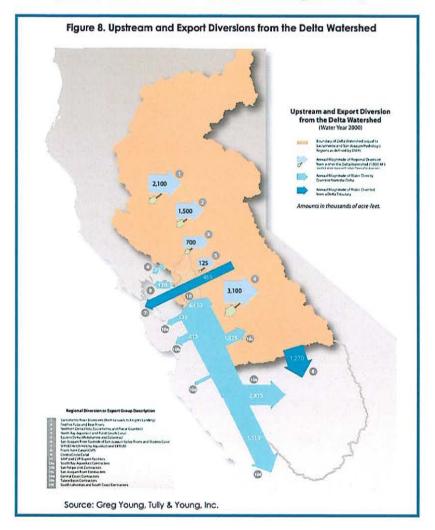
clients' problems. For instance, as part of the Delta Vision process, Tully & Young synthesized an extensive amount of technical data throughout the Delta watershed and developed a unique graphic (see **Figure 2** next page) to quickly represent the relative magnitudes and locations of water diversions throughout the state. Tully & Young's graphic has been adopted and used in numerous forums outside the Delta Vision process and has been defended in every application. For instance, Tully & Young was asked to assess further data and modify this graphic as part of the State Water Resources Control Board Delta Flow Criteria Hearings.

Tully & Young is also fully versed in demand and conservation analyses for both urban and agriculture demands. Tully & Young is active in implementing both the urban water conservation related to the 20 by 2020 rules as well as the agricultural conservation discussions relevant to SBx7-7. In the urban setting, this knowledge plays a vital role in helping clients prepare CEQA/NEPA compliant documents, assessing the reliability of water supplies under defined demand conditions, and adopting formal documents as required by state mandates, such as §10610 of the California Water Code, et. seq. (the Urban Water Management Planning Act). In the agriculture setting, this knowledge will help determine upstream supplies that can be made available from agriculture conservation practices, the application of these practices to water transfers, and the regulatory and policy infrastructure necessary to implement these actions. Furthermore, our technical understanding has been instrumental in helping the California Department of Water Resources develop new agricultural water measurement regulations and develop a methodology to quantify the efficiency of agricultural water use – both requirements of State legislation passed in November 2009 as part of the SBx7-7 statutes.

Our technical understanding of water issues is not limited to supply analyses and demand calculations. Tully & Young understands California's water conveyance system and the operations of that system in different year types under different hydrological and regulatory conditions. Our work with CALFED's surface water storage program, Santa Clara Valley Water District's Low Point Improvement Project, Reclamation's assessment of opportunities to participate in south-of-Delta water banking at Semitropic, and our execution of water transfers requires real-time, practical understanding of California's conveyance systems.



Figure 2 – Graphic created for the Delta Vision Blue Ribbon Task Force (source: 2007 Delta Vision Strategic Plan)



Specifically, for the CALFED surface storage program, Tully & Young facilitated the development of common assumptions to be used across the independent storage investigations – assumptions that were critical drivers in various water system models such as CALSIM II and LCPSIM. Absent these commonalities, each project was exposed to outside challenges about inconsistencies and misrepresentations in documents that were being used to assess enormous capital investments and to shape public policy. Tully & Young's understanding of California's conveyance system and operations will play an integral role in helping Reclamation assess workable solutions to complex water problems.

Tully & Young has also worked on technical issues that cross interstate boundaries. Our work with Imperial Irrigation District was essential in that District's effort to transfer water derived from the Colorado River. Moreover, our technical work with the City of Yreka and the Klamath River has helped facilitate the client's needs as the Klamath River Agreement



and dam removal projects are developed and executed. And last, our experience with the Colorado River related to facilitating interstate water transfers between Upper Basin States and Lower Basin States under the entire body of law know as "The Law of the River" aided the Southern Nevada Water Authority's strategic planning efforts.

Water Governance

Tully & Young is well versed in the complexities of water governance throughout California and the West. As the authors of the Delta Governance context memo that was developed for the Delta Vision Blue Ribbon Task Force, and as the "champion" of the Delta Vision stakeholder work group on Delta Governance, Tully & Young holds an understanding of governance issues that most other consulting firms do not possess. Tully & Young's work on Delta Governance in the Delta Vision process was the underlying work product that resulted in the adopted legislation SBx7 1 – which created the Delta Stewardship Council and Delta Plan. Many elements included in the legislation reflect the recommendations of the Delta Vision Blue Ribbon Task Force as presented in their 2008 Delta Vision Strategic Plan.

The governance recommendations in the Strategic Plan reflected the coordinated efforts of numerous individuals as part of the Governance group. The concept of the Delta Plan – the cornerstone of the governance structure – was developed by Gwyn-Mohr Tully and Mr. Byron Buck. The idea of the Delta Plan as a central governing document for Delta activities (and the 130 other public agencies in the Delta) was the primary component of the Legislature's development of a new governance scheme. In addition, Tully & Young investigated the authorities of the proposed governance structure under the Coastal Zone Management Act and other Federal and State laws. Tully & Young also helped define the powers and limitations of the Delta Stewardship Council as well as the structure and functions of the Delta Conservancy.

Though Tully & Young has a deep understanding of Delta governance, it also possesses complimentary understanding of the other governance issues impacting the California and the West. For instance, Tully & Young has tracked developments under the Endangered Species Act and the Wanger decisions that have fueled participation in the BDCP and the State Water Resources Control Board Delta Flow Criteria. Tully & Young has also tracked developments related to expansion of the Primary Zone in the Delta and the implications that this expansion may have in undertaking broad-based conveyance changes. And Tully & Young assessed the water supply opportunities related to mitigation efforts associated with the BDCP efforts. This sampling of issue directing and monitoring water governance activities illustrates Tully & Young's understanding of the governing complexities that impact Reclamation's water supply reliability and conveyance.

Local and Project-Specific Planning and Implementation

Local and project-specific planning and implementation projects require a blend of expertise of local, regional and statewide elements and issues. Tully & Young's broad legal, political, and technical experience in this area best serves our clients' ongoing needs.



Planning Compliance Documents

As previously illustrated in **Figure 1**, strategic water resource planning is like a game of chess – the water manager must be able to anticipate and counter the regulatory and climatological "moves" in the game. By preparing comprehensive planning documents for local and regional agencies, such as an Urban Water Management Plan (UWMP), and developing innovative strategies (e.g. a Water Asset Management Strategy), a water purveyor can better evaluate new opportunities, position itself to respond to a dynamic water planning future, and financially gain from its water assets.

Tully & Young specializes in preparing water planning documents and evaluating water assets. As an example, the UWMP can provide a manager with a reliable game plan that can be confidently referred to over and over as the conditions in the water management game change while simultaneously positioning the water purveyor to leverage water assets for financial gain. In this context, a good UWMP will not only meet DWR's "check-the-box" requirements, but also establish long-term water planning assumptions and goals, secure water rights and contracts, and empower the District to manage the dynamic nature of water supplies and demands – especially as applied to long-term water conservation planning. In addition, well-thought planning and well-drafted documents position the District to potentially leverage water assets for financial benefits and to obtain project funding from a variety of sources (not just State grant funds).

Tully & Young also specializes in researching and developing technical documents that support CEQA and NEPA – from addressing the California Supreme Court's ruling in *Vineyard Area Citizens for Responsible Growth v. Rancho Cordova* in water impacts analyses in CEQA/NEPA documents, to providing legally supportable analyses to assist with Specific Plans, General Plans and other CEQA-specific activities. For instance, Tully & Young specializes in drafting SB 610 Water Supply Assessments in accordance with Water Code Section 10910, et seq. These assessments must be developed by water purveyors in accordance with the legal requirements and also provide the baseline technical assessment for a land use agencies' environmental impact analysis for a specific project's water supply. Several court cases, including *Center for Biological Diversity v. County of San Bernardino*, have reinforced the need for SB 610 Water Supply Assessments for small projects and developments. Tully & Young's in-depth understanding of the SB 610 Water Supply Assessment law as related to CEQA projects is unique and comprehensive.

In short, Tully & Young understand the minutia and nuances of the water management game and we assist our clients in addressing the game's numerous legal and technical plays. Our understanding of not only the CEQA/NEPA requirements and documents but also the links those documents have to other external documents, technical evaluations, and political actions are unparalleled in the water consulting business.



Water Transactions

Tully & Young's understanding of water rights also helps facilitate water transfers. Tully & Young has successfully implemented numerous water transfers that have provided financial gain for our clients. For instance, our understanding of the nuances of CVP Contract water rights and Reclamation law allowed a client to transfer CVP water in a hydrologically wet year with very little regulatory approvals and interference even when their counsel advised "it was impossible." The use of provisions in the CVPIA helped fast-track the transfer to inwatershed users and provide real dollars to our client.

Tully & Young has helped other clients transfer their water supplies under various forms of water rights and through convoluted regulatory structure and complex conveyance system. We have facilitated groundwater substitution transfers, reservoir reoperation transfers, and instream flow dedications.

Our relationships with state and federal personnel and with potential buyers as well as our understanding of the water transfer regulations allowed us to facilitate a water transfer for Sacramento Suburban Water District in 2009, 2010 and again in 2013 – the first conjunctive use water transfer from an urban purveyor in California's history. Typically spanning six to nine months from the decision by a seller to proceed to the start of a transfer, our experience and relationships kept the process moving toward success for both the buyer and the seller.

Tully & Young team's comprehensive understanding of water rights and the regulatory nuances has helped our client's maximize the asset value of their water resources.



Project Experience

Since our founding in 2004, we have been involved in numerous strategic water management efforts ranging from those with statewide and interstate implications to those with a primarily local focus. This wide-ranging experience and understanding is vital to aid our clients in the water management and planning endeavors. As illustrated in **Figure 3**, Tully & Young has comprehensive experience related to all types of strategic water planning fatal flaw analyses to understand the usefulness and potential vulnerabilities of existing data and public documents, gives us a unique understanding of the importance of drafting a good technical planning documents.

Selected Reference Projects

The following selected references highlight the land use and water supply integration that is critical to successful water management planning. An abbreviated listing of other clients and projects is included following these referenced projects to demonstrate the range of clients and projects served by Tully & Young.

2005 and 2010 UWMP, SB 610s, Water Supply Management Strategy – City of Folsom Over the past six years, the City of Folsom hired Tully & Young to conduct extensive water supply and demand investigations, prepare various documents to support policy decisions and CEQA compliance, and assist with various complex water-related negotiations and water transfers. Through various efforts, we have researched the City's pre-1914 water rights, CVP contract supplies, obligations under regional water supply agreements, local agency contract supplies, the potential for reuse under existing state law and acquisition of new supplies to meet growing demands. We have recommended and implemented strategies for EIR/EIS compliance in the context of project developments and are guiding internal effort to develop the 2010 UWMP. We assisted in the identification and acquisition of new supplies to meet development needs and legal requirements. We are still active in major project development including conjunctive use projects, legislative advocacy, and long-term regional planning.

Strategic Planning and Support Services – Delta Vision Blue Ribbon Task Force, California Resources Agency

Tully & Young was recruited as the lead consultant team to assist the Delta Vision staff with preparing topic-specific context memos for presentation to the Delta Vision Blue Ribbon Task Force. During 2007, we drafted two iterations for each of the following context memos: (1) Sustainability, (2) Delta Water Management Governance Structure, and (3) Water Supply and Water Quality. Additionally, we were requested to assist with an array of tasks including (1) assembling and moderating panels in front of the Task Force, (2) identifying critical policy issues, (3) reviewing and objectively assessing stakeholder comments on early drafts of the Delta Vision, (4) preparing objective, informative white papers to help with policy direction decisions, and (5) preparing several technical graphics included in the final Delta Vision documents.







Elements of an UWMP engineering and planning documents NEW Summarize Water and Gov't code statues and case law in concert with legal team Comprehensive fatal flaw analysis Develop and evaluate new supply options (recycle, desal, transfers) Per-capita baseline determination Evaluate water supply reliability under normal and dry conditions political and economic elements Prepare compliant UWMP, SB 610 WSA or General Plan WSE documents, or GMPs Develop policies and temporary Supply and demand integration for normal and dry years Develop and evaluate demand determination and projections assessment and quantification and 2020 target identification of existing UWMPs, GMPs, contracts and agreements Conservation opportunity Integrate legal, technical, Comprehensive demand Review of water rights, measures Develop and evaluate shortage provisions management Sacramento Hydrologic Region City of Folsom 0 0 • • • 0 • • 0 • 0 • • • • 0 0 0 0 0 0 City of Yreka Placer County Water Agency • • • 0 • • 0 • 0 City of Oroville 0 0 0 • 0 City of Colusa 0 0 0 0 0 0 0 0 0 City of West Sacramento 0 0 0 • 0 0 Ö **Carmichael Water District** 0 0 0 0 0 0 0 0 0 0 0 0 0 0 • 0 0 0 0 0 • • • Amador County Water Agency South Feather Water and Power • 0 0 Sutter Pointe (for Sutter County) 0 0 0 0 0 0 0 0 El Dorado Irrigation District 0 ۲ 0 0 • 0 • 0 0 Foster Enterprises 0 0 0 0 0 0 ۰ Sacramento County Water Agency 0 • 0 0 0 City of Lincoln 0 0 • 0 • 0 0 0 • 0 • 0 • • City of Taft 0 0 • 0 • • • 0 West Kern Water District • 0 0 0 Ö Buena Vista Water Storage District 0 • 0 • 0 0 ۲ 0 • 0 0 0 City of Lathrop 0 City of Manteca • • 0 • Bakersfield Metro Area/City of Bakersfield 0 • 0 • 0 • California Water Services Company 0 0 • • East Niles Community Services District North of the River Municipal Water District 0 0 0 County of Tulare 0 0 0 0 0 0 0 0 Oildale MWC. Vaughn MWSC, Lamont PUD 0 0 KCWA I.D. 4 0 0 Kern Delta Water District 0 0 County of Madera 0 0 0 0 0 0 0 0 0 0 0 City of Fresno • • City of Clovis Semitropic Water and Storage District 0 • 0 City of Cloverdale • • . . . • 0 City of St. Helena 0 0 0 0 • 0 Sonoma County Waste Management Agency 0 • • 0 City of Hollister 0 0 0 San Benito County Planning/SBCWD 0 0 0 Santa Clara Valley Water District 0 O C 0 0 0 0 Ö Sunnyslope County Water District 0 0 • • • ۲ 0 • • • 0 White Rock Club 0 • Grenada Irrigation District 0 0 0 Northern California Water Association 0 Sacramento Area Council of Governments ۲ 0 0 • 0 0 California Farm Bureau Federation 0 The Nature Conservancy 0 0 0 0 City of Sacramento (Water Forum) 0 0 0 U.S. Bureau of Reclamation • California Resources Agency (for Delta Vision) • 0 0 0 0 0 • 0

Water Planning and Related Experience



Tully & Young Comprehensive Water Planning

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By Spring of 2008, Greg Young and Gwyn-Mohr Tully were selected as "technical support leads" for two of four critical work areas for the Delta Vision Strategic Plan development: Water Supply and Reliability, and Governance and Strategic Finance. In this capacity, Mr. Young and Mr. Tully led stakeholder workgroups, directed fact-finding, testified before the Governor's Delta Vision Blue Ribbon Task Force, and drafted portions of each of the four draft strategic plans prior to the Task Force's final document.

2010 UWMP, IRWP Update, and Water Rights EIR Support – Placer County Water Agency Tully & Young was hired to prepare a multifunctional Urban Water Management Plan (UWMP) that integrated the objectives of state-mandated UWMP statutes with efforts to protect existing water rights while also anticipating the dynamic future of multiple retail agencies. An important element of the work was to provide a supportable basis for future demand conditions, incorporating growth forecasts and new mandated conservation requirements. These future demands became the foundation for protecting water rights in PCWA's effort to extend a critical water right permit. Tully & Young's continued work integrating the legal, political and technical elements of the Integrated Regional Water Plan, and the UWMP into the EIR effort help PCWA strategically plan and manage limited resources to meet an ever-expanding population.

Water Asset Marketing Strategy – Sacramento Regional County Sanitation District

Tully & Young's expertise in water rights and water transfers was instrumental in leading a high-caliber team – CH2M Hill, AECOM and WestWater Research – chosen by the District to develop a strategy to find value in existing and future treated wastewater effluent. Tully & Young has led the District's team to define opportunities, frame issues related to plausible transfer opportunities, and understand potential impacts that may lead to restrictions in such opportunities. With a multifaceted vision to sustain regional water supplies, benefit current and future ratepayers and enhance the environment, Tully & Young is guiding the District through a complex and unprecedented area, allowing the District to work toward its ultimate goal – financial gain from its water assets.

Water Supply and Demand Evaluation – Bakersfield Metropolitan Area

Tully & Young was asked to prepare a water supply and demand analysis to support the Bakersfield Metropolitan Area's General Plan Update that covered the entire City of Bakersfield as well as large urban and agricultural lands in Kern County. Tully & Young synthesized the water supply picture in the region that included over 30 different water entities from groundwater storage districts to retail water agencies. We analyzed and integrated numerous UWMPs and other planning documents in conducting the investigation. We provided the client with a detailed picture of the current and future regional water situation as well as an analysis of future water supply issues that may implicate long-term water supply reliability in the Bakersfield Metropolitan Area – especially as it related to availability of State Water Project contract supplies. Our assessment included an evaluation of dry year issues and water right vulnerabilities.



Santana Ranch SB 610 WSA – Sunnyslope County Water District, San Benito County Tully & Young prepared a compliant Water Supply Assessment to accompany the Specific Plan being completed for a 300-acre development just east of Hollister, California. As part of this work, Tully & Young completed regional groundwater conditions analyses, prepared Central Valley Project (CVP) water supply reliability analyses, and analyzed the water supplies and demands of other planned developments to objectively assess the sufficiency of water supplies for the project. A critical aspects of this work included reviewing the data and assumptions included in the City of Hollister UWMP to determine congruence or variations from assumptions and characterizations of the regional water supply and demand conditions. Tully & Young's assessment of the reliability of the CVP water supply in the context of the groundwater conditions in the region was instrumental in the SB 610 WSA analysis. Tully & Young was also instrumental in preparing the water analysis in the project level EIR for the development and responding to comments.

Austin Quarry SB 610 Water Supply Assessment - Vulcan Materials, Inc.

Tully & Young prepared an SB 610 WSA for a new quarry operation in the Central Valley. This WSA addressed the adequacy of surface and subsurface water supplies as well as quarry operational demands. In addition, we assisted the client in assessing the reliability of water supplies and integrating the water supply analysis into the project EIR in compliance with the California Supreme Court's *Vineyard* decision. This project is still ongoing.

Carmichael Water District - Water Management Strategy and 2010 UWMP.

Tully & Young was hired by Carmichael Water District to conduct a complete overview of the District's water rights and asset opportunities. The Project included assessing all of the legal nuances associated with the District's numerous water rights, assessing technical issues that affected the legal issues, and advising on the uses and marketability of the District's water assets. Tully & Young also completed the District's 2010 UWMP as part of this analysis. This project is still ongoing.

Site 40 Compost Facility SB 610 Water Supply Assessment – Sonoma County Waste Management Agency

With recent court rulings clarifying the trigger for completing a SB 610 Water Supply Assessment, the Sonoma County Waste Management Agency determined the need to prepare an assessment for a proposed 50 acre green-waste composting facility. Tully & Young was selected to support the EIR consultant and prepare the WSA. Unique circumstances involving historic water rights, limited groundwater and availability of recycled water required a comprehensive strategy to be developed on the planned water supply and the subsequent analysis of impacts of supply alternatives in the accompanying EIR. Tully & Young led the strategy development, outlining the varied degrees of risk under differing scenarios and assisted the EIR consultant in identifying and evaluating supply alternatives.



Other Experience

In addition to the specific project references above, the list below further indicates our breadth of experience that benefits each of our future clients.

- *El Dorado Irrigation District*: Four separate Water Supply Evaluations, one each for the Village of Marble Valley Specific Plan, the Lime Rock Valley Specific Plan, the Central El Dorado Hills Specific Plan and the Dixon Ranch Residential Project
- Lewis Operating Corp: Water Supply Evaluation to support CEQA documentation for Arboretum Specific Plan (bridging County-supplied SB610 WSA)
- County of Madera: Gunner Ranch Project SB 610 WSA
- Amador Water Agency: Wicklow Way SB 610 WSA
- Lennar Homes: Sutter Point SB 610 WSA
- Department of Water Resources: Upper San Joaquin River Storage Investigation Conjunctive Use Opportunities; and Technical Support for Agricultural Water Use Efficiency Provisions under SBx7 7
- City of Taft: General Plan EIR Water Supply Evaluation
- City of West Sacramento: 2010 through 2014 Water Transfer Services and Water Management Strategy Consulting Services
- Bureau of Reclamation: Mokelumne River Water Storage and Conjunctive Use Project (MORE Project)
- Sacramento Area Water Forum: Dry-year Implementation Procedures
- Santa Clara Valley Water District: San Luis Low Point Improvement Project; Groundwater Management Strategy; and Proposition 218 Implementation
- The Nature Conservancy: San Joaquin River Migratory Bird Habitat Project; Cosumnes River Pre-Wetting Project; Water Rights Reporting and Filings; and Shasta River and Mill Creek water rights investigations
- Numerous public and private clients: Assistance with water supply and demand issues, opportunities in General Plan Updates and Specific Plan CEQA compliance analyses, and water transfers including (but not limited to): County of Tulare, City of Yreka, City of Cloverdale, City of Colusa, City of Oroville, Sacramento Regional County Sanitation District, Richland Planned Communities, SunCal Companies, AKT, Lennar, Gunner Ranch, The Charles Orwick Trust, Williams and Chunn Ranch, White Rock Club, Mohr-Fry Ranches, Smith Family Trust, Bear Creek Association and Granite Construction Company.



Greg Young, P.E.

Distinguishing Qualifications

- Co-founder of Tully & Young, Inc.
- Extensive expertise in water resource planning and engineering
- Leader in water supply assessments
- Valued collaborator and strategic advisor

General Experience and Qualifications

Mr. Young is a registered civil engineer with over 23 years of extensive experience in strategic water resource engineering and planning. Mr. Young has spent much of his career helping clients develop workable solutions that meet their fundamental water planning objectives. Mr. Young's experience and skill gained from his extensive work throughout California on projects ranging from the Delta Vision Blue Ribbon Panel (a state legislated body) and the CALFED Bay-Delta Program to first-in-kind urban conjunctive use water transfers, enables development of creative and comprehensive solutions. Mr. Young provides expertise to local water purveyors, municipalities, non-profits and private interests on a range of matters from water management strategies to UWMPs, to aiding clients with the purchase or sale of water assets.

Specific Project Experience

Principal, 2010 UWMP and IRWP Update for Placer County Water Agency, Auburn, California. Leading efforts to prepare a multifunctional Urban Water Management Plan (UWMP) that integrates the objectives of mandated UWMP statutes with efforts to protect existing water rights while anticipating the dynamic future of multiple retail water agencies. As technical lead, focus was directed on providing a supportable basis for future demand conditions, while incorporating growth forecasts and conservation requirements.

Project Manager, Semitropic Phase II Groundwater Banking Project, Sacramento, California. Directed Reclamation project to evaluate federal participation in a proposed groundwater banking project in the Tulare Basin. Facilitated multi-party party work sessions to define project attributes, address constraints, and negotiate modifications. Prepared and directed completion of a Special Study to document answers to questions raised in Phase 1.

Principal Strategist, Moderator, and Author for Delta Vision, Sacramento, California. Acting as technical lead for strategic planning efforts associated with water supply and reliability. Drafted and developed technical materials and memorandums to support the Delta Vision Blue Ribbon Task Force, moderated panel discussions, provided strategic assistance to Delta Vision staff and management, and led development of materials for the 2007 Delta Vision and 2008 Strategic Plan, including defining an array of options to improve water supply portfolios and improve water supply reliability throughout California.



ACTIVE REGISTRATION

Registered Engineer: CA

EDUCATION

B.S., Agricultural Engineering, California Polytechnic State University, San Luis Obispo 1990

RELEVANT EXPERIENCE

- Synthesizing hydrology, engineering, law and policy
- Coordinating and facilitating complex water management and planning efforts
- Comprehensive understanding of agricultural water use and trends
- Policy assessment and development
- In-depth technical understanding of California water facilities and management
- Extensive knowledge and application of State water rights, CVP law and various applicable regulations
- Successful water transactions
- SB610 Water Supply Assessments and UWMPs

[more...]





Greg Young, P.E. Founding Principal, Tully & Young, Inc. (page 2)

Project Manager, CALFED Surface Storage Investigation's Common Assumption Effort, Sacramento, California. Led a multi-year, multi-agency effort to establish common baseline conditions, tools, policies, and protocols for the multiple individual surface storage investigations underway by state and federal water agencies.

Principal Strategist and Author, Tulare County General Plan Update and EIR, Visalia, California. Provided strategic policy development and primary assessment of supply and demand conditions to form the basis for environmental analysis of contemplated land use and policy changes. Developed new water management policies for adoption by the County. Presented analyses and findings at workshops for the County Board of Supervisors, the Planning Commission, and the Water Commission

Project Manager, Water Asset Marketing Services, Sacramento County Regional Sanitation District, Sacramento, California. Provided strategic policy development and primary assessment of water marketing opportunities; manage multi-team investigation into large-scale long-term water sales; lead efforts to identify opportunities, model impacts, obtain agreements and successfully complete future transactions.

Project Manager, 2009, 2010 and 2013 Short-term Water Transfers, Sacramento Suburban Water District, Sacramento, California. Formulated protocols and quantification methods for first-of-its-kind urban conjunctive use transfer. Worked closely with DWR and SWRCB staff to shepherd each year's temporary transfer through extensive oversight and approval processes.

Program Manager, SB 610 Water Supply Assessments, El Dorado Irrigation District, Placerville, California. Led development of required water planning documents, working directly with the water purveyor, the landuse authority and the developers to assure consistency in project descriptions, use of foundational assumptions, and overall analysis. Shepherd through approval process, including Board presentations and staff reports.

Lead Consultant, CALFED Water Transfer Program and Water Conservation Program, Sacrament, California. Led efforts to define and assess two separate CALFED program areas: Water Transfers and Conservation. Tasks included facilitating all stakeholder outreach, developing technical appendices and crafting elements for inclusion in the Programmatic EIR/S Record of Decision in 2000.





Attachment 3

Subject: CEMEX Stillwell Dewatering and Recharge Trench Pumping Rates

Date: Tuesday, August 12, 2014 2:20:50 PM PT

- From: Andrew Kopania
- To: Michael Spata, Aaron Bock, Charles Przybylski, Greg Young

CC: GordonBrown, pete.locastro@cemex.com, Ron Wilson, Mitchell Pat, Allison Reynolds

Michael and Greg:

Attached please find the documentation that we have compiled regarding the rates of dewatering and pumping to the recharge trench at the CEMEX Stillwell site. We are also in the process of preparing all of the waterquality testing documentation. Last week all of the well locations were surveyed by a licensed surveyor and I will be preparing groundwater contour maps as soon as we complete a new base map using the surveyed coordinates.

Please do not hesitate to contact us if you have any questions on the attached information.

Sincerely, Andy Kopania EMKO Environmental, Inc.

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)939-0133 akopania@sbcglobal.net

MEMORANDUM

August 12, 2014

To: Michael Spata, Tulare County RMA Greg Young, Tully and Young

Cc: Aaron Bock, Tulare County RMA Charles Przybylski, Tulare County RMA Gordon Brown, CEMEX Ronald Wilson, CEMEX Pete LoCastro, CEMEX Pat Mitchell, Mitchell Chadwick

From: Andy Kopania

Subject: Recharge Trench Operation and Water Discharge Volumes <u>CEMEX Stillwell Mine</u>

This memorandum provides a discussion of the operation of the recharge trench at the CEMEX Stillwell Mine. This information has been summarized from available records based on the information request in the July 24, 2014 electronic mail message from Aaron Bock and our meeting and teleconference on August 4, 2014. The following documents are provided as attachments to this memorandum:

- Summary of Southern California Edison electrical usage records for the pump(s) used to provide water to the recharge trench (file name: RMC Pacific Usage History 2003 to Present.pdf).
- 2. Pump size and flow rate information from the pump supplier (file name: Pump Size and Flow Rate email.pdf).
- 3. Performance curves for the installed pump (file name: Tsurumi 30hp KRS-822 pump performance curve and data.pdf).
- 4. Table 1 showing the conversion of the monthly kilowatt-hours (KWH) billed to hours operated and total gallons pumped to the recharge trench (file name: Water Pumped to Recharge Trench.xlsx).

Dewatering of the Stillwell Mine and discharge to the recharge trench began in August 2003 with sporadic operation through 2005, based on the electrical usage records. Continuous dewatering and discharge to the recharge trench occurred from January

{00014963;1 }

August 12, 2014 Page 2

2006 until June 17, 2013, when the wiring to the pumps was stolen. The wiring was replaced and the pumps restarted on June 21, 2013. The wiring was stolen a second time on September 4, 2013. Dewatering of the mine and discharge to the recharge trench has not occurred since September 4, 2013.

The pump motor is 30 horsepower (22 KW). The pump was selected to discharge 1,000 gallons per minute (gpm) to the recharge trench, based on approximately 70 feet of total head, at an efficiency of 62 percent. A second identical pump was added in November 2011. Both pumps were operated off the same electrical meter.

According to CEMEX personnel, water pumped into the trench would percolate into the subsurface. Water did not discharge to the land surface at the southwest end of the trench. The attached Table 1 (file name: Water Pumped to Recharge Trench.xlsx) presents the billed KWH for each month, the equivalent hours of pump operation, and the calculated total gallons of water pumped into the recharge trench each month. Use of electrical usage records provides an estimate of the water quantities pumped, but due to uncertainties in the actual head and efficiency in the field the quantities are approximate. However, the variation in KWH billed is an accurate representation of the magnitude of the variation in water pumping from month to month.

Due to heavy rainfall in early 2011¹, a portable diesel-fueled water pump was used to dewater the mine excavation from January 2011 through April 2011. According to CEMEX personnel, the diesel water pump was operated 24 hours per day, 6 days per week at a rate of 600 gpm. Water from the diesel water pump was discharged to a historic aggregate mining pit, referred to as the North Pond, which is located to the northwest of the existing mine excavation. Water from the diesel pump was not discharged to the recharge trench and there is no surface connection that would allow water from the North Pond to flow into the recharge trench. Water removed from the mine excavation by the diesel pump is not included in the monthly totals presented in Table 1.

Pumping from the mine excavation is conducted to meet the dewatering needs of the mining operation. During periods of low groundwater elevations, or when mining was not occurring below the groundwater table over a large area, the rate of dewatering was relatively low or zero. During periods when groundwater elevations were high, or there was excessive precipitation, the rate of dewatering was relatively high.

¹ The 2010-2011 water year had the seventh highest rainfall total recorded at Lemoncove since 1905. The rainfall total of over 21.8 inches was more than 150 percent of the long-term annual average of 14 inches. See Figure 7 of the February 26, 2014 *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry, Tulare County, California* by EMKO Environmental, Inc. {00014963;1 }

Account Profile Information

	Customer / Account Information	
M C PACIFIC MATERIALS INC	Customer Number:	0-912-9797
PALKOLL OFNITED BRANK	Customer Account Number:	24-862-4884
	Service Account Number:	022-4659-04
LEASANTON, CA 94566	Installed Service Number:	0015-382-22
M C PACIFIC MATERIALS INC	Site Number:	00013-39-22
	Pramiae ID:	3176058
	L. R. Number:	0
EMNCOVE, CA 93244	Old CIS Number:	58-51-878-5995-07
2	601 KOLL CENTER PKWY LEASANTON, CA 94566	M C PACIFIC MATERIALS INC Customer Number: 601 KOLL CENTER PKWY Service Account Number: LEASANTON, CA 94566 Installed Service Number: M C PACIFIC MATERIALS INC Silte Number: 2948 PLANT LR, Number: EMNCOVE, CA 93244

Service Account Properties

Account Status: ACTIVE Annual kWh Usage: 25,203 Annual Max kW: Direct Access: NO 42 Facility SIC: Annual Max kVa: 1442 21 Meter Number: Annual Max kVar: 256000054197 0 Motor Phase: Power Factor: 3 100.0 Service Voltage: 480 Annual Billed Total: \$4,366.11 * Average Cents/kWh: \$0.17324

Annual Summary

Billing Summary

Data displayed in this report is current as of the date of the most record billing paried scen in the Billing Summary section below. Account activity subsequent to this date may impact the data presented in this report.

* The average cents/kWh value is determined by dividing the total bill amount by the total pill amount, and therefore the average cents/kWh, contains all charges including, but not limited to, energy charges, domand charges, service charges, late payment charges, and applicable taxes.

Foad Date	Days		Tarif	kwn Us age	Max KW	Load Factor	LPC Amount	Cily Tax	Conts / XWIN	Bill Am cunt
06/12/2014	30	PA-1		0	18	0.00	\$0.00	\$0.00	\$0.00000	\$79.92
05/13/2014	29	PA-1		0	18	0.00	\$0.00	\$0.00	\$0.00000	\$80.68
04/14/2014	32	PA-1		0	22	0.00	\$0.00	\$0.00	\$0.00000	\$80.68
03/13/2014	30	PA-1		0	38	0.00	\$0.00	\$0.00	\$0.00000	\$80.68
02/11/2014	29	PA-1		0	40	0.00	\$0.00	\$0.00	\$0.00000	\$80.68
01/13/2014	33	PA-1		0	40	0.00	\$0.00	\$0.00	\$0.00000	\$78.35
12/11/2013	33	PA-1		0	40	0.00	\$0.00	\$0.00	\$0.00000	\$76.01
11/08/2013	30	PA-1		0	41	0.00	\$0.00	\$0.00	\$0.00000	\$74.65
10/09/2013	29	PA-1		0	40	0.00	\$0.00	\$0.00	\$0.00000	\$75.37
09/10/2013	33	PA-1		0	40	0.00	\$0.00	\$0.00	\$0.00000	\$75.65
08/08/2013	29	PA-1		12,548	42	0.43	\$0.00	\$0.00	\$0.14221	\$1,784.44
07/10/2013	32	PA-1		12,655	21	0.77	\$0.00	\$0.00	\$0.14216	\$1,799.00
06/08/2013	29	PA-1		19,464	22	1.30	\$0.00	\$0.00	\$0.13974	\$2,719.94
05/10/2013	30	PA-1		12,211	22	0.79	\$0.00	\$0.00	\$0.14195	\$1,733.35
04/10/2013	28	PA-1		28,138	22	1.94	\$0.00	\$0.00	\$0.14561	\$4,097.21
03/13/2013	32	PA-1		22,956	41	0.72	\$0.00	\$0.00	\$0.14959	\$3,434.01
02/09/2013	29	PA-1		18,771	28	0.97	\$0.00	\$0.00	\$0.15030	\$2,821.24
01/11/2013	31	PA-1		22,435	43	0.70	\$0.00	\$0.00	\$0.14131	\$3,170.19

This rate analysis is based on applicable Southern Catifornia Edison (SCE) interand is provided to illustrate potential bill impacts to help you evaluate your current rate and/or compare alternative SCE rates or rate options. While this rate analysis provides a counter rate calculations, it is based on certain assumptions for mage and applicable rate factors. The results of this analysis are based on actual historical energy consumption and/or assumptions about future energy consumption proteins and anounts. SCE can reicher predict nor guarantee any actual east savings or increases due to the changes to tage variables or applicable rate factors such as opening hours, equipment, k Var charges, weather patterns, savice voltage, fam service levels, taxes, and added facilities charges to these numerous variables will affect actual costs. This rate analysis is intended to compare selected rate solutions about this analysis or your available rate options. If you have a SCE account representative, please contact your SCE for more information about this analysis or your available rate options.

Date Prepared:

(Most recent 12 Months)

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Billing Summary (continued)

Data displayed in this report is current as of the data of the most recent billing period seen in the Billing Summary section below. Account activity subsequent to this date may impact the data presented in this report.

*The average cents/kWh value is determined by dividing the total duant by the total quantity of kWh usage. The total bill amount, and therefore the average cents/kWh, contains all charges including, but not limited to, energy charges, demand charges, service charges, late psyment charges, and applicable taxes.

Rend Date	Days		Tarif	KWh Usage	Max KW	Lood Factor	LPC Amount	City Tax	Cents / KWh	Bill Am cunt
12/11/2012	33	PA-1		22,328	43	0.65	\$0.00	\$0.00	\$0.13734	\$3,066.51
11/08/2012	28	PA-1		16,054	22	1.07	\$0.00	\$0.00	\$0.13854	\$2,224.17
10/11/2012	31	PA-1		14,075	32	0.59	\$0.00	\$0.00	\$0.13913	\$1,958.24
09/10/2012	33	PA-1		13,183	49	0.34	\$0.00	\$0.00	\$0.13946	\$1,838.44
08/08/2012	29	PA-1		11,726	24	0.71	\$0.00	\$0.00	\$0.14175	\$1,662.13
07/10/2012	32	PA-1		12,938	32	0.52	\$0.00	\$0.00	\$0.14173	\$1,833.73
06/08/2012	30	PA-1		5,484	24	0.32	\$0.00	\$0.00	\$0.14778	\$810.40
05/09/2012	29	PA-1		9,091	24	0.55	\$0.00	\$0.00	\$0.14259	\$1,296.33
04/10/2012	29	PA-1		11,429	24	0.67	\$0.00	\$0.00	\$0.14108	\$1,612.40
03/12/2012	32	PA-1		12,651	24	0.68	\$0.00	\$0.00	\$0.14051	\$1,777.61
02/09/2012	29	PA-1		11,966	24	0.72	\$0.00	\$0.00	\$0.14082	\$1,685.00
01/11/2012	32	PA-1		15,586	24	0.84	\$0.00	\$0.00	\$0.13994	\$2,181.06
12/10/2011	30	PA-1		22,510	24	1.31	\$0.00	\$0.00	\$0.13874	\$3,122.98
11/10/2011	34	PA-1		15,970	22	0.88	\$0.00	\$0.00	\$0.14066	\$2,246.40
10/07/2011	28	PA-1		13,663	20	1.01	\$0.00	\$0.00	\$0.13444	\$1,836.84
09/09/2011	31	PA-1		14,569	24	0.80	\$0.00	\$0.00	\$0.13387	\$1,950.4
08/09/2011	31	PA-1		14,639	25	0.80	\$0.00	\$0.00	\$0.13307	\$1,948.0
07/09/2011	29	PA-1		13,682	27	0.72	\$0.00	\$0.00	\$0.13300	\$1,819.6
06/10/2011	30	PA-1		14,127	25	0.78	\$0.00	\$0.00	\$0.13726	\$1,939.1
05/11/2011	30	PA-1		11,172	25	0.62	\$0.00	\$0.00	\$0.14199	\$1,586.3
04/11/2011	30	PA-1		7,188	25	0.41	\$0.00	\$0.00	\$0.14426	\$1,036.9
03/12/2011	31	PA-1		7,844	25	0.43	\$0.00	\$0.00	\$0.14465	\$1,134.6
02/09/2011	29	PA-1		11,966	26	0.67	\$0.00	\$0.00	\$0.14198	\$1,698.9
01/11/2011	32	PA-1		12,216	27	0.58	\$0.00	\$0.00	\$0.14074	\$1,719.2
12/10/2010	30	PA-1		12,886	27	0.67	\$0.00	\$0.00	\$0.14032	\$1,808.1
11/10/2010	29	PA-1		11,523	26	0.65	\$0.00	\$0.00	\$0.13773	\$1,587.0
10/12/2010	32	PA-1		15,319	20	0.99	\$0.00	\$0.00	\$0.13943	\$2,135.9
09/10/2010	30	PA-1		14,329	25	0.81	\$0.00	\$0.00	\$0.14061	\$2,014.7
08/11/2010	30	PA-1		13,667	25	0.77	\$0.00	\$0.00	\$0.14180	\$1,938.0
07/12/2010	32	PA-1		14,477	24	0.78	\$0.00	\$0.00	\$0.13944	\$2,018.6
06/10/2010	30	PA-1		12,969	24	0.74	\$0.00	\$0.00	\$0.14131	\$1,832.6
05/11/2010	29	PA-1	*	12,138	24	0.71	\$0.00	\$0.00	\$0.14088	\$1,710.0
04/12/2010	31	PA-1		12,295	25	0.65	\$0.00	\$0.00	\$0.13615	\$1,673.9
03/12/2010	30	PA-1		11,113	33	0.47	\$0.00	\$0.00	\$0.13590	\$1,510.2
02/10/2010	29	PA-1		10,645	26	0.58	\$0.00	\$0.00	\$0.13345	\$1,420.5
01/12/2010	32	PA-1		11,809	22	0.71	\$0.00	\$0.00	\$0.13678	\$1,615.2
12/11/2009	29	PA-1		11,242	21	0.78	\$0.00	\$0.00	\$0.13745	\$1,545.2
11/12/2009	33	PA-1		13,112	21	0.79	\$0.00	\$0.00	\$0.13756	\$1,803.7
10/10/2009	30	PA-1		11,797	21	0.78	\$0.00	\$0.00	\$0.13504	\$1,593.0

This interamilysis is based on applicable Southern Catifornia Edisori (SCE) anto send is provided to illustrate potential bill impacts to help your evaluate your current rate and/or compare alternative SCE states or rate options. While this rate and/sis provides accurate rate and cations, it is based on acctain assumptions for wage and applicable rate factors. The results of this analysis are based on south lhistorical energy consumption and/or assumptions about facture energy consumption and/or assumptions. SCE can neither predict nor guarantee any actual cost savings or increases due to the changes to usage variables or applicable rate factors such as: operating bours, equipment, k Var charges, weather patterns, service voltage, film service levels, taxes, and added facilities charges. Charges to these numerous variables will affect actual costs. This rate analysis is intended to compare selected into schedules and may not include all of your rate options. Please contact SCE for more information about this analysis or your available rate options. If you have a SCE account representative, please contact your SCE account persentative for more information about this analysis or your available rate options.

Date Prepared:

Billing Summary (continued)

Data displayed in this report is current as of the date of the most recent billing period seen in the Billing Summary section below. Account activity subsequent to this date may impact the data presented in this report.

*The average cents/kWh value is determined by dividing the total bit amount by the total bit and interview in the total bit amount, and therefore the average cents/kWh, contains at charges induding, but not limited to, energy charges, demand charges, service charges, bit psymont charges, and applicable taxes.

Ro ad Date	Days	1	Tarif	kWh Usaga	Max KW	Load Factor	LPC Amount	City Tax	Cents/ kWh	Bill Amount
09/10/2009	30	PA-1		11,612	21	0.78	\$0.00	\$0.00	\$0.13610	\$1,580.40
08/11/2009	29	PA-1		9,904	21	0.68	\$0.00	\$0.00	\$0.13696	\$1,356.42
07/13/2009	32	PA-1		14,451	22	0.86	\$0.00	\$0.00	\$0.13694	\$1,978.97
Total	1,827			690,523		- 38.00	\$0.00	\$0.00	- 18 14 1	\$97,450.60
Average	30.45		100 gr	11,509	27	0.63		\$0.00	\$0.14113	\$1,624.18

This into analysis is based on applicable Southern California Edison (SCE) intest and is provided to illustrate potential bill impacts to help you evaluate your current rate and/or compare alternative SCE intestor nate options. While this rate analysis provides accurate rate and/or compare alternative SCE intestor nate options. While this rate analysis provides accurate rate calculations, it is based on certain assumptions for usage and applicable rate factors. The results of this analysis are based on actual historical energy consumption and/or assumptions about future energy consumption patterns and amounts. SCE can neither predict nor gurantee any actual cets savings or increases due to the changes to usage variables or applicable are factors such as: operating hours, equipment, kVar charges, weather patterns, service voltage, finn service levels, taxes, and added facilities charges. Charges to these numerous variables will affect actual cets. This rate analysis is intended to compare solected rate schedules and may not include all of your rate options. Please context SCE for more information about this analysis or your available rate options. If you have a SCE account representative, please context your SCE account representative for more information about this analysis or your available rate options.

Date Prepared:

Account Profile Information

Name / Address Information		Customer / Account Information	
Customer Name:	R M C PACIFIC MATERIALS INC	Customer Number:	0-912-9797
Guslomer Address:	6601 KOLL CENTER PKWY	Customer Account Number:	24-862-4884
	PLEASANTON, CA 94566	Service Account Number:	022-4659-04
	FLEASANTON, CA 94586	Installed Service Number:	0015-382-22
Service Account Name:	R M C PACIFIC MATERIALS INC	Site Number:	00013-39-22
Service Account Address:	22948 PLANT	Premise ID:	3176058
		L. R. Number;	0
	LEMNCOVE, CA 93244	Old CIS Number:	58-51-878-5995-07

Service Account Properties

Account Status: ACTIVE Annual kWh Usage: 113,775 Direct Access: Annual Max kW: NO 33 Facility SIC: Annual Max kVa: 1442 21 Meter Number; 256000054197 Annual Max KVar 0 Motor Phase: 3 Power Factor. 100.0 Service Voltaga: Annual Billed Total: 480 \$15,932.72 * Average Cents/kWh: \$0.14004

Annual Summary

Billing Summary

Data displayed in this report is current as of the date of the most recent billing poriodiscen in the Billing Summary section below. Account activity subsequent to this date may impact the date presented in this report.

* The average cents/kWh value is determined by dividing the total bill amount by the total bill amount; and therefore the average cents/kWh, centains all charges including, but not limited to, energy charges, demand charges, service charges, late psyment charges, and applicable taxes.

Read Date	Days	Tarif	kWh Usage	Max KW	Lood Factor	LPC Amount	City Tex	Cents / KWh	Bill Amount
07/13/2009	32	PA-1	14,451	25	0.74	\$0.00	\$0.00	\$0.13694	\$1,978.97
06/11/2009	30	PA-1	12,292	33	0.53	\$0.00	\$0.00	\$0.13922	\$1,711.27
05/12/2009	29	PA-1	9,578	26	0.53	\$0.00	\$0.00	\$0.13859	\$1,327.41
04/13/2009	32	PA-1	8,665	22	0.52	\$0.00	\$0.00	\$0.13550	\$1,174.08
03/12/2009	30	PA-1	6,829	21	0.46	\$0.00	\$0.00	\$0.14046	\$959.17
02/10/2009	29	PA-1	7,076	21	0.49	\$0.00	\$0.00	\$0.14171	\$1,002.72
01/12/2009	32	PA-1	9,077	21	0.57	\$0.00	\$0.00	\$0.14060	\$1,276.21
12/11/2008	31	PA-1	9,884	21	0.64	\$0.00	\$0.00	\$0.14002	\$1,384.00
11/10/2008	33	PA-1	10,819	21	0.66	\$0.00	\$0.00	\$0.14126	\$1,528.28
10/08/2008	29	PA-1	8,283	22	0.55	\$0.00	\$0.00	\$0.14234	\$1,179.01
09/09/2008	32	PA-1	9,060	27	0.44	\$0.00	\$0.00	\$0.14289	\$1,294.57
08/08/2008	29	PA-1	7,761	27	0.41	\$0.00	\$0.00	\$0.14393	\$1,117.03
07/10/2008	30	PA-1	7,640	22	0.49	\$0.00	\$0.00	\$0.14413	\$1,101.13
06/10/2008	32	PA-1	10,065	34	0.38	\$0.00	\$0.00	\$0.14200	\$1,429.21
05/09/2008	29	PA-1	9,271	34	0.39	\$0.00	\$0.00	\$0.14209	\$1,317.29
04/10/2008	30	PA-1	5,964	22	0.38	\$0.00	\$0.00	\$0.14237	\$849.10
03/11/2008	32	PA-1	5,601	22	0.34	\$0.00	\$0.00	\$0.14226	\$796.79
02/08/2008	29	PA-1	5,101	22	0.34	\$0.00	\$0.00	\$0.14281	\$728.48

This rate analysis is based on applicable Southern Catifornia Edison (SCE) rates and is provided to illustrate potential bill impacts to help you evaluate over function and/or compare alternative SCE rates or rate options. While this rate analysis provides a counter rate and/sis provides accurate rate calculations, it is based on certain assumptions for usage and applicable rate factors. The results of this analysis are based on neural historical energy consumption and/or assumptions about future energy consumption and/or assumptions for usage and applicable rate factors. The results of this analysis are based on neural historical energy consumption and/or assumptions about future energy consumptions and uncurks. SCE can neither predet nor guarantee and easies average or increases due to the changes to usage variables or applicable rate factors such as opplicable rate factors such as eavier voltage, firm service levels, taxes, and added facilities changes. Changes to these numerous variables will affect actual costs. This rate analysis is intended to compare selected into sender may not include all of your mite options. If you have a SCE account representative, please contact your SCE account representative for more information about this analysis or your available rate options. If you have a SCE account representative grades accurate your SCE account representative for more information about this analysis or your available rate options.

Date Prepared:

(Most recent 12 Months)

Billing Summary (continued)

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Data displayed in this report is current as of the data of the most recent biling period seen in the Biling Summary section below. Account activity subsequent to this date may impact the data presented in this report.

*The average cents/MVh value is determined by dividing the lots! bill amount by the total quantity of kWh usage. The total bill amount, and therefore the average cents/KWh, contains all charges including, but not limited to, energy charges, demand charges, service charges, late payment charges, and applicable taxes.

Ro ad Dale	Days	Та	kWh df Usaga	Mex. KW	Load Factor	LPC Amount	City Tax	Certs / XWh	Bill Am cunt
01/10/2008	30	PA-1	5,712	21	0.37	\$0.00	\$0.00	\$0.14315	\$817.6
12/11/2007	33	PA-1	8,734	23	0.48	\$0.00	\$0.00	\$0.14131	\$1,234.1
11/08/2007	30	PA-1	10,801	26	0.59	\$0.00	\$0.00	\$0.14017	\$1,513.9
10/09/2007	32	PA-1	8,940	23	0.50	\$0.00	\$0.00	\$0.14168	\$1,266.63
09/07/2007	29	PA-1	8,197	23	0.52	\$0.00	\$0.00	\$0.14230	\$1,166.4
08/09/2007	30	PA-1	10,171	35	0.41	\$0.00	\$0.00	\$0.14104	\$1,434.4
07/10/2007	29	PA-1	8,655	34	0.36	\$0.00	\$0.00	\$0.14156	\$1,225.2
06/11/2007	32	PA-1	11,331	35	0.43	\$0.00	\$0.00	\$0.14106	\$1,598.3
05/10/2007	30	PA-1	6,340	21	0.42	\$0.00	\$0.00	\$0.14413	\$913.7
04/10/2007	29	PA-1	4,638	21	0.31	\$0.00	\$0.00	\$0.14683	\$680.9
03/12/2007	32	PA-1	5,459	21	0.34	\$0.00	\$0.00	\$0.14639	\$799.1
02/08/2007	29	PA-1	5,260	21	0.36	\$0.00	\$0.00	\$0.15416	\$810.8
01/10/2007	30	PA-1	5,849	21	0.39	\$0.00	\$0.00	\$0.15604	\$912.6
12/11/2006	32	PA-1	7,240	21	0.45	\$0.00	\$0.00	\$0.15538	\$1,124.9
1/09/2006	29	PA-1	6,800	21	0.47	\$0.00	\$0.00	\$0.15588	\$1,060.0
0/11/2006	30	PA-1	9,011	34	0.37	\$0.00	\$0.00	\$0.15514	\$1,397.9
9/11/2006	32	PA-1	8,070	35	0.30	\$0.00	\$0.00	\$0.15598	\$1,258.7
08/10/2006	29	PA-1	9,995	35	0.41	\$0.00	\$0.00	\$0.15490	\$1,548.2
7/12/2006	30	PA-1	7,922	33	0.33	\$0.00	\$0.00	\$0.15550	\$1,231.8
6/12/2006	32	PA-1	9,301	34	0.36	\$0.00	\$0.00	\$0.15488	\$1,440.5
)5/11/2006	30	PA-1	4,876	21	0.33	\$0.00	\$0.00	\$0.15785	\$769.6
04/11/2006	28	PA-1	5,050	20	0.37	\$0.00	\$0.00	\$0.15634	\$789.5
3/14/2006	32	PA-1	5,046	21	0.31	\$0.00	\$0.00	\$0.15655	\$789.9
2/10/2006	29	PA-1	4,123	21	0.28	\$0.00	\$0.00	\$0.14006	\$577.4
01/12/2006	30	PA-1	3,626	24	0.21	\$0.00	\$0.00	\$0.13109	\$475.3
2/13/2005	33	PA-1	0	11	0.00	\$0.00	\$0.00	\$0.00000	\$38.9
1/10/2005	30	PA-1	1,200	12	0.14	\$0.00	\$0.00	\$0.14944	\$179.3
0/11/2005	32	PA-1	1,817	12	0.20	\$0.00	\$0.00	\$0.13851	\$251.6
9/09/2005	30	PA-1	2,528	19	0.19	\$0.00	\$0.00	\$0.13267	\$335.4
8/10/2005	29	PA-1	5,948	19	0.46	\$0.00	\$0.00	\$0.12395	\$737.2
7/12/2005	33	PA-1	2,488	8	0.40	\$0.00	\$0.00	\$0.13228	\$329.1
6/09/2005	29	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.00000	\$38.9
5/11/2005	29	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.00000	\$39.5
4/12/2005	32	PA-1	24	12	0.00	\$0.00	\$0.00	\$2.11625	\$50.7
3/11/2005	30	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.00000	\$48.3
2/09/2005	28	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.0000	\$48.3
1/12/2005	33	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.00000	\$48.3
2/10/2004	31	PA-1	0	12	0.00	\$0.00	\$0.00	\$0.00000	\$48.3
1/09/2004	33	PA-1	1,132	12	0.12	\$0.00	\$0.00	\$0.14312	\$162.0

This rate analysis is based on applicable Southern California Edison (SCE) rates and is provided to illustrate potential bill impacts to help you evaluate your cutern rate and/or compare alternative SCE rates or rate options. While this rate analysis provides accurate rate cal culations, it is based on certain assumptions for usage and applicable rate factors. The results of this analysis are based on actual historical energy consumption rate options about factor energy consumption patterns and amounts. SCE can neither predet nor guarantee any achal cost savings or increases due to the changes to usage variables or applicable rate factors such as construction about factor energy consumption patterns, service voltage, fam service levels, rates, and added facilities changes to these numerous variables will affect actual costs. This rate analysis is intended to compare elected rate solvabules and may not include all of your rate options. Please contact SCE for more information about this analysis or your available rate options. If you have a SCE account representative, please contact your SCE account representative for more information about this analysis or your available rate options.

Billing Summary (continued)

Data displayed in this report is current as of the data of the most recent billing period seen in the Billing Summary section below. Account activity subsequent to this date may impact the data presented in this report.

* The average centr/KV/h value is determined by dividing thetotal bill amount by the lotal quartity of kWh usage. The total bill amount, and therebre the average cents/KWh, contains at charges including, but not limited to, energy charges, demand charges, service charges, isle payment charges, and applicable taxes.

Read Date	Days	Tarif	KMh Usaga	Max kW	Load Factor	LPC Amount	City Tax	Cents/ KWh	Bill Am cunt
10/07/2004	29	PA-1	2,543	12	0.32	\$0.00	\$0.00	\$0.11823	\$300.66
09/08/2004	29	PA-1	3,237	12	0.39	\$0.00	\$0.00	\$0.11407	\$369.24
08/10/2004	29	PA-1	4,156	12	0.50	\$0.00	\$0.00	\$0.11291	\$469.24
Total	1,827		363,637			\$0.00	\$0.00		\$52,489.11
Avorage	30.45	—	6,061	22	0.35		\$0.00	\$0.14434	\$874.82

This rate analysis is based on applicable Southern California Edison (SCE) mites and is provided to illustrate potential bill impacts to help you evaluate your current rate and/or compare alternative SCE rates or rate options. While this rate analysis provides accurate rate calculations, il is based on certain assumptions for usage and applicable rate factors. The results of this analysis are based on actual historical energy consumption and/or assumptions about future energy consumption patterns and annuants. SCE can neither predict nor guarantee any actual cert savings or increases due to the changes to usage variables or explicable mate factors such as: operating hours, equipment, k Var charges, weather patterns, service voltage, finn service levels, taxes, and added facilities charges. Changes to these numerous variables will affect actual casts. This rate analysis is intended to compare elected and exclude all of your rate options. Please central SCE for more information about this analysis or your available rate options. If you have a SCE account representative, please center your SCE account representative for more information about this malysis or your available rate options.

Date Prepared:

Account Profile Information

ame / Address Information		Customer / Account Information	
Cuslomer Name:	R M C PACIFIC MATERIALS INC	Customer Number:	0-912-9797
Customer Address:	6601 KOLL CENTER PKWY	Customer Account Number:	24-862-4884
		Service Account Number:	022-4659-04
	PLEASANTON, CA 94566	Installed Service Number:	0015-382-22
Service Account Name:	R M C PACIFIC MATERIALS INC	Site Number:	00013-39-22
Service Account Address:	000 (0 PL ANT	Premiae ID:	3176058
del live Account Activate.	22948 PLANT	L. R. Number:	0
	LEMNCOVE, CA 93244	Old CIS Number:	58-51-878-5995-07

Service Account Properties

Annual Summary

(Most recent 12 Months)

Account Status:	ACTIVE	Annual kWh Uange:	24,217
Direct Access:	NO	Annual Max KW:	12
Facility SIC:	1442	Annual Max KVa:	21
Meter Number;	256000054197	Annual Max KVer:	0
Molor Phase:	3	Power Factor:	100.0
Service Voltage:	480	Annual Billed Total:	\$2,950.47
		* Average Centa/kWh:	\$0.12183

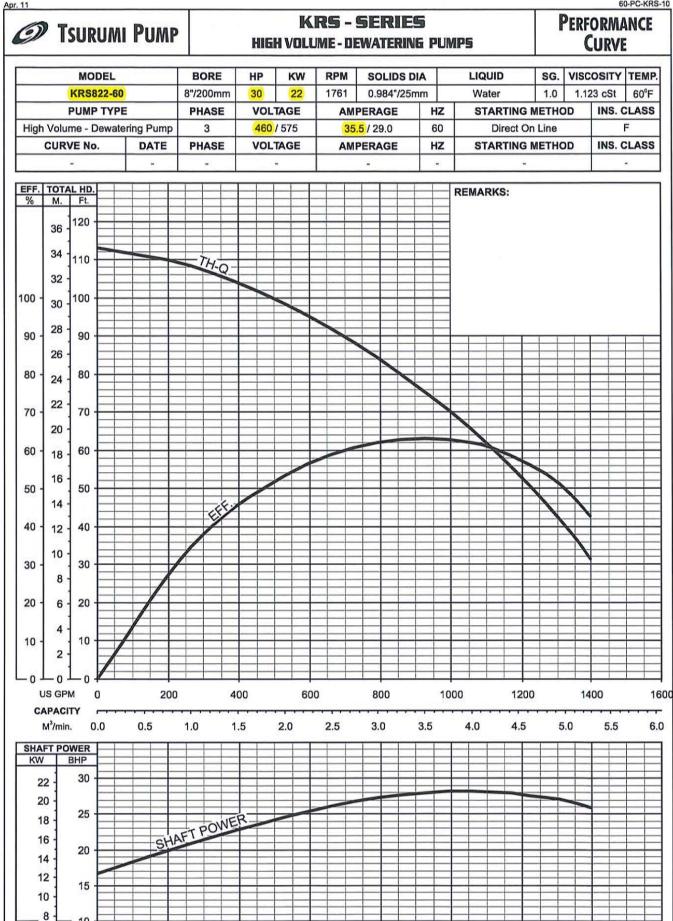
Billing Summary

Data displayed in this report is current as of the date of the most recent billing period scen in the BillingSummary section below. Account activity subsequent to this cate may impact the data presented in this report.

* The average cents/AWh value is determined by dividing the total bill amount by the total polarity of kWh usage. The total bill amount, and therefore the average cents/AWh, contains all charges including, but not limited to, energy charges, demand charges, service charges, late payment charges, and applicable taxes.

Read Date	Days		Tarif	kWh Usage	Max KW	L cod Fector	LPC Amount	City Tax	Cents / kWh	Bill Amount
08/10/2004	29	PA-1		4,156	12	0.51	\$0.00	\$0.00	\$0.11291	\$469.24
07/12/2004	32	PA-1		3,792	12	0.42	\$0.00	\$0.00	\$0.11387	\$431.81
06/10/2004	30	PA-1		2,136	12	0.26	\$0.00	\$0.00	\$0.12113	\$258.73
05/11/2004	29	PA-1		6,474	12	0.79	\$0.00	\$0.00	\$0.10954	\$709.17
04/12/2004	31	PA-1		96	12	0.01	\$0.00	\$0.00	\$0.46458	\$44.60
03/12/2004	31	PA-1		0	12	0.00	\$0.00	\$0.00	\$0.00000	\$38.15
02/10/2004	29	PA-1		0	12	0.00	\$0.00	\$0.00	\$0.00000	\$38.15
01/12/2004	33	PA-1		0	12	0.00	\$0.00	\$0.00	\$0.00000	\$38.15
12/10/2003	33	PA-1		0	12	0.00	\$0.00	\$0.00	\$0.00000	\$38.15
11/07/2003	29	PA-1		1,488		0.00	\$0.00	\$0.00	\$0.13235	\$196.93
10/09/2003	30	PA-1		2,545		0.00	\$0.00	\$0.00	\$0.10924	\$278.01
09/09/2003	32	PA-1		3,530		0.00	\$0.00	\$0.00	\$0.11597	\$409.38
08/08/2003	32	PA-1		5,699		0.00	\$0.00	\$0.00	\$0.12740	\$726.05
Total	400			29,916			\$0.00	\$0.00		\$3,676.52
Average	30.77			2,301		0.15		\$0.00	\$0.12289	\$282.81

This rate analysis is based on applicable Southern California Edison (SCE) takes and is provided to illustrate potential bill impacts to help you evaluate your current rate and/or compare alternative SCE rates or rate options. While this rate analysis provides accurate rate calculations, it is based on certain assumptions for usage and applicable rate factors. The results of this analysis are based on actual historical energy consumption and/or assumptions about future energy consumption proteins mad immunts. SCE can neither protect nor guarantee any actual cost savings or increases due to the changes to usage variables or applicable rate factors such as opplicable rate factors, and added facilities charges, weather palterns, service voltage, firm service levels, taxes, and added facilities charges to these numerous variables will affect actual costs. This rate analysis is intended to compare ætected rate schedules and may not include all of your rate options. Please contact SCE for more information about this analysis or your available rate options. If you have a SCE account representative, please contact your SCE account representative for more information about this analysis or your available rate options.



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60-PC-KRS-10

Attachment 4

Hydrology:

- 46. Prior to commencement of mining, the applicant shall prepare and implement the June, 2002 Groundwater Monitoring Plan adopted for this project. The purpose of the monitoring plan shall be to assess the effectiveness of the V-ditch design in maintaining groundwater levels in wells along the east and southeast boundary of the site and in monitoring the quality of water supplying recharging the local aquifer. All groundwater monitoring and reporting shall be done in accordance with the approved plan. Any property owner with a water well (or water wells) located within a ½ mile radius of the project boundaries may participate in the groundwater monitoring program. The project applicant shall notify all owners with wells within ½ mile of the property boundaries of the opportunity to participate in the groundwater monitoring program. Participation in the program requires that the wells be accessible and in a condition which allows them to be tested on a regular basis.
- 47. The groundwater monitoring plan shall continue to be implemented after reclamation. However, after three (3) years the applicant may request the RMA to discontinue the groundwater monitoring plan. The monitoring plan may be discontinued if the RMA determines there are no outstanding complaints with valid documentation still to be resolved and that monitoring is no longer needed to meet the objectives of the monitoring plan.
- 48. In addition to the Annual Groundwater Monitoring Report required by the Groundwater Monitoring Plan, the applicant shall make available to the RMA on a monthly basis, data concerning (1) the locations and amounts of mine dewatering, (2) the locations and amounts of water delivered to the recharge trench, and (3) the locations and amounts of dewatering delivered elsewhere. This data shall be tabulated and provided in a form acceptable to the RMA.
- 49. The project shall not affect the water level, yield, or quality of any well*, both during the mining operations and subsequently as a reclaimed site. Upon receipt of a written complaint from any owner of a pre-existing well which details an alleged impact to the well's water level, yield, or water quality, the RMA shall request a report from a licensed hydrogeologist explaining the problem. If a significant problem can be professionally demonstrated by a licensed hydrogeologist to be caused by mining activities, then immediate action must be taken to correct the condition, which may include (but is not limited to) modifying the recharge ditches to provide more recharge capacity, reducing the amount of pit dewatering, or if necessary, ceasing mining operations. (* As used herein, an impact to a well shall not be deemed to have occurred if the well water level, well yield, and quality are within ranges of existing conditions specified in the EIR).

- 50. Prior to commencing mining the applicant shall, at his own expense, retain a qualified soil scientist to prepare a detailed map of the boundaries of the Tujunga sand, Exeter Ioam, and San Joaquin Ioam soils along the entire east boundary of the surface mining site. All mining activities shall be set back a minimum distance of 100 feet from the mapped boundary of the westerly extent of the Exeter Ioam and San Joaquin Ioam soils, or a distance of 70 feet from the edge of the Foothill Ditch, whichever is greater. The site plan map for the mining project shall be adjusted to show the set backs and submitted to the RMA for approval prior to commencement of mining. A copy of the soils map prepared by the soil scientist shall also be provided to the RMA for review. The set back boundary shall be staked for easy field identification using metal poles driven into the ground and painted red or white. Poles shall be placed at distances of 100 to 200 feet apart, or as necessary to clearly identify the location of the set back boundary.
- MM 4.4-4 51. The applicant shall enhance bank vegetation with tree and shrub planting on the land separating the Kaweah River and the active mining site. Planting shall be done in accordance with the site Landscaping Plan approved by the Tulare County RMA.
- MM 4.4-5 52. The operator shall construct a north-south trending berm across the eastern third of the reclamation lake in accordance with Figure 3-10 of the project EIR using overburden. Construction of the berm shall be in accordance with plans and specifications prepared by a registered civil engineer and approved by the RMA. Construction of the berm shall also be supervised in the field by a registered civil engineer to ensure compliance with approved plans and specifications. The structural integrity of the berm shall be maintained by the applicant until such time as reclamation of the site is certified complete by the RMA. The berm shall be maintained at all times to conform with original plans and specifications as approved by the RMA. The RMA may inspect the berm at any time, and require repairs and/or improvements as necessary to ensure its maintenance in accordance with the original plans and specifications. In addition, a recharge trench will be constructed along the southeast corner of the project area. Through a series of weirs, water will flow from the east lake to the west lake to maintain current groundwater elevations along the properties to the northeast of the project area.
 - 53. The applicant shall contact the State of California Division of Safety of Dams prior to constructing the north-south trending berm separating the reclamation lakes to determine if construction of the berm requires Division approval. The applicant shall be required to provide any maps, drawings, schematics, or specifications the Division deems necessary in making it's determination.

- 54. Upon completion of reclamation, the property owner (or future property owner should the site be sold or otherwise transferred) shall be responsible for maintaining the condition of the berm separating the reclamation lakes and weirs providing water flow from the east lake to the west lake in accordance with Condition No. 52 above.
- 55. The proposed "V" ditch along the east side of the project site shall contain a sufficient amount of water in order to establish a groundwater mound (groundwater barrier) to maintain water levels in neighboring wells. The trench shall be constructed to a depth sufficient to intersect the layer (substrata) of cobbles, or comparable pervious material, that occurs locally beneath the site (a depth of approximately 6 to 8 feet). The sides and bottom of the "V" ditch shall be designed and maintained to maximize the amount infiltration necessary in establishing the groundwater mound. Water produced from dewatering the mine site shall not be pumped directly into the "V" ditch, but shall initially be pumped into a holding basin(s) to allow fines in the water to settle out and flocculation and precipitation of dissolved iron minerals to occur.

Utilities:

- MM 4.9-1(b) 56. The applicant shall provide replacement rights to Southern California Edison (SCE) for any access roads which may need to be relocated due to mining, at no cost to SCE.
- MM 4.9-1(a) 57. Construction of the utility access road crossing shall be adequately sloped to ensure access to SCE vehicles and equipment onto tower access roads. Any earth disturbed within the right of way and/or backfill shall be compacted to a minimum of 90% relative compaction. Road conditions shall not be allowed to deteriorate so as to prevent access to SCE vehicles.
- MM 4.9-1(c) 58. The applicant shall install commercial-type driveways, 16-feet wide, with curb depressions capable of supporting 40 tons on a three axle vehicle when and where access points dictate.
- MM 4.9-1(d) 59. The mine operator shall establish and observe a fifty (50) foot setback around existing SCE utility towers, with an additional 50-foot setback added northwesterly of the towers to provide SCE adequate access for reconstruction of the towers, if necessary. Setbacks shall be staked and marked for easy identification by onsite personnel and SCE employees.

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Attachment 5

From: Pete Locastro <pete.locastro@cemex.com> To: akopania@sbcglobal.net Cc: Gordon K Brown <gordonk.brown@cemex.com> Sent: Tuesday, August 5, 2014 1:48 PM Subject: Fw: Lemon cove Tsurumi 30hp pump data

Gentleman,

Below is an e-mail from Mike Branco owner of American Industrial Pump and Equipment. This is the vendor who sized the electrical pump for the Stillwell pit dewatering. He has attached a spec sheet and e-mail stating the KW used and GPM.

I have updated the excel sheet to match his numbers. The flood of water occurred during January 2011. You can see from the electrical usage that the use increased. Also, if you look at the Dellevalle monitoring report for that time they noted that water was formed in the pasture of the wells and that a flood had occurred and caused damage. Noted on the excel sheet are the dates and amounts we pumped into the north pond.

Peter LoCastro Rockfield 4401 Plant Manager - Northern California Aggregate - United States of America Office : +559(822)2090 Fax: +559(822)2092 Mobile: +559(287)7912 Address: 113475 N. Friant Rd. Friant Ca, 93626 e-Mail: pete.locastro@cemex.com www.cemexusa.com

Please consider the environment before printing this email.

----- Forwarded by Pete Locastro/US/Cernex on 08/05/2014 01:10 PM -----

From: Mike Branco <mbranco@aiequip.com> To: Pete Locastro/US/Cemex@CEMEX Date: 08/05/2014 12:51 PM Subject: Fwd: Lemoncove Tsurumi 30hp pump data

Sent at 8:46 this AM

Sent from my iPhone

Begin forwarded message:

From: Michael Branco <<u>mbranco@aiequip.com</u>> Date: August 5, 2014 at 8:46:19 AM PDT To: "<u>pete.locastro@cemex.com</u>"<<u>pete.locastro@cemex.com</u>> Subject: Lemoncove Tsurumi 30hp pump data Reply-To: Michael Branco <<u>mbranco@aiequip.com</u>>

Pete,

Please find the information specific to the Tsurumi 30hp pump performance. This unit was selected to provide 1000 gpm flow rate and operated with a 460 volt 30hp (22kW) motor.

Please call if I may be of further assistance.

Regards,

Mike Branco American Industrial Equipment 925 454-3450 phone 925 454-3454 fax Attachment 6

Excerpt of DellaValle Groundwater Level Data Report for July 2007 through May 2009

1-May	14.51	16.05	NR	10.05	7.29	18.70	NR	16.40	14.10	
1-Apr	21.97	16.05	6.55	5.79	7.16	18.67	NR	16.50	13.90	
1-Mar	14.65	15.88	6.42	6.92	7.84	19.50	NR	16.66	10.88	0
1-Feb	14.55	15.67	5.63	6.55	7.40	18.79	NR	18.22	13.28	
1-Jan	15.75	36.91	6.23	6.42	7.07	18.32	NR	12.65	13.15	
1-Dec	14.61	16.00	5.90	6.19	6.64	17.80	74.33	16.14	13.38	
1-Nov	15.37	15.72	5.86	5.90	5.20	17.42	74.71	20.40	13.12	
1-Oct	14.81	15.27	6.11	6.38	5.96	17.41	75.02	17.30	14.32	
1-Sep	14.83	15.05	9.09	8.13	6.10	17.64	86.15	16.34	13.55	
1-Aug	14.29	14.78	5.10	7.00	7.39	17.72	75.68	15.87	14.25	
1-Jul	11.94	14.44	5.20	6.11	7.13	17.56	75.44	15.60	13.79	
1-Jun	13.00	14.02	5.25	5.14	6.90	17.60	82.13	15.33	17.22	
1-May	14.97	14.71	5.21	5.26	6.58	17.72	84.03	14.98	NR	
1-Apr	15.00	13.55	5.18	8.92	6.60	18.20	74.43	15.22	12.46	
1-Mar	21.10	13.52	5.17	5.96	7.56	18.37	75.40	14.80	14.88	
1-Feb	14.34	13.38	4.87	6.80	60.7	18.05	75.33	14.82	11.74	
1-Jan	13.72	5.06	15.05	5.87	7.11	17.92	73.30	14.81	12.09	
1-Dec	14.00	4.82	14.68	5.80	6.95	17.63	80.96	14.75	11.20	
1-Nov	14.00	4.62	15.18	5.93	6.80	17.70	72.64	14.50	NR	
1-Oct	13.78	6.05	14.70	5.85	6.90	17.59	78.21	15.00	12.60	
1-Sep	13.57	5.10	20.45	5.87	6.94	17.72	79.75	16.66	19.50	
1-Aug	11.84	10.74	20.25	5.60	6.69	17.70	72.62	15.46	12.90	
1-Jul	12.06	5.22	21.40	6.60	9.80	17.71	73.91	15.31	13.28	
Well Identification	Wolford	Weller	Stilwell	Morton	Cairnes	Aksarban	Serrins	Mills	Hammond	

Well Identification	1-Jul	1-Aug	1-Sep	1-Oct	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	1-101	1-Aug	1-Sep	1-Oct	1-Nov	1-Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May
MW 1	7.11	6.97	6.88		6.48	6.63	6.75	6.34	6.94	7.12	7.24	7.10	7.43	8.00	7.94	8.13	7.85	6.92	8.07	8.00	8.25	8.38	8.00
MW 2	9.06	9.86	9.84		9.33	9.51	9.43	9.46	10.40	9.91	9.98	9.75	10.13	10.63	11.10	10.78	10.40	10.44	10.73	10.91	11.10	10.61	10.65
MW3	3.44	3.86	3.90	6.87	3.65	3.79	4.20	4.50	5.00	3.69	3.71	3.75	3.90	4.22	4.43	3.66	3.32	3.36	3.95	4.12	4.60	3.33	3.85
MW 4	5.71	6.74	6.61	6.76	6.65	6.79	7.08	7.11	7.82	5.97	6.01	6.60	6.79	7.16	5.05	6.72	6.38	6.42	6.80	7.00	7.76	6.51	6.45

NR - Not Read

Well Identification																					
Wolford							<u>. ה</u>	Being irrigated													
														Watch for	for		Measured Twice - Pump			-	
Weller				_							+	+	+	dogs.			nuning				
Stillwell	Well was				_						-	_		Gate locked.						V	Mean Dogs
Morton																					
Caimes																					
Aksarhan						/															
Serrins				\vdash					25	Well was running							No key	No key	No key	No key	No key
Mills				_	_	_					_									1	
Hammond				No one was home.	e .			-	<u>5 C</u>	Locked		_									
Monitoring well #1						No water No water h in the in the ii ditch ditch o	r No water in the ditch		0.2	Ditch 1/2 running full full	ch ning Ditch runni	Ditch Ditch Di Ditch running ru running full full ful	ch Ditch ming runnir full	Ditch Ditch running full full	Ditch running full	ditch runnin 3/4 No water full in ditch		No water No water Ditch full Ditch full of in ditch of water water	No water D	Ditch full C of water v	Ditch full of water
Monitorina well #2	Ditch was 3/4 Full	Ditch Di running run full.	Ditch Dit running runr full. fu	Ditch running full.				2 2	Ditch running full												
Monitoring well #3													-								T

Monitoring well #4

Attachment 7

HYDROGEOLOGIC DATA EVALUATION REPORT STILLWELL PASTURE LEMONCOVE, CALIFORNIA

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Prepared for: RMC Pacific Materials, Inc. 6601 Koll Center Parkway, Suite 300 P.O. Box 5252 Pleasanton, CA 94566

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PROFESSIONAL CERTIFICATION

This report has been prepared by and under the direct supervision of a California Registered Geologist and Certified Hydrogeologist.

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1.0 INTRODUCTION

This Hydrogeologic Data Evaluation Report has been prepared at the request of RMC Pacific Materials, Inc. to analyze a proposed gravel mining operation at the Stillwell Pasture near Lemoncove, California. A description of the proposed project is provided in the Draft Environmental Impact Report (DEIR), prepared by Resource Design Technology, Inc. Hydrogeologic data collection activities have been conducted at the site by Sierra-Pacific Group (2000). The basic data and descriptions of geologic conditions in Sierra-Pacific Group (2000) are considered valid and are incorporated into this report. This report, however, supercedes and replaces interpretations regarding aquifer parameters, groundwater flow, and water balances presented in Sierra-Pacific Group (2000). Other data sources are listed in the references cited at the end of this report.

The Stillwell Pasture is located within the Sierra Nevada foothills, where the metamorphic and granitic rocks of the Sierra Nevada mountains transition with the alluvium and sediments of the San Joaquin Valley. The regional and local geology has been described by Sierra-Pacific Group (2000). According to Sierra-Pacific Group (2000, Plate 2), a brown poorly-graded sand is present to approximately eight feet to 10 feet below ground surface. Below the shallow sand is a sequence of gray to yellowish-brown sand, gravel, and cobbles, referred to as conglomerate. The conglomerate averages approximately 20 feet thick. Beneath the conglomerate, a basal white, poorly-graded sand is present beneath most of the project area. The base of the sand varies from approximately 30 feet to 40 feet below ground surface. Granitic and metamorphic bedrock is present beneath the conglomerate. Based on driller's logs from the area, the upper 25 feet to 30 feet of the bedrock appears to be unfractured, or the fractures have been cemented or filled with finegrained material from the overlying sediments. Figure 3-9 of the DEIR is a generalized cross section that depicts the subsurface geology beneath the Stillwell Pasture.

Groundwater within the sediments and alluvium is consistently present at a depth of three feet to six feet below ground surface. Within the bedrock, groundwater is typically not encountered until depths of 50 feet to 70 feet below ground surface or greater.

The proposed project consists of the excavation of a series of four gravel pits within the shallow sand and conglomerate described above. The four gravel pits will encompass 89 acres of the 137-acre project area within the Stillwell pasture. Two of the pits will be located along the eastern side of the site and two will be located along the western side. During the excavation of each individual gravel pit, dewatering will occur within that pit. After mining has been completed in a specific pit, the pit will be allowed to fill with water. After all four pits have been mined out, the material between the individual pits will be removed without dewatering. Additional information about the project is provided in the DEIR.

The purpose of this report is to provide a hydrogeologic evaluation of four specific technical

issues related to the proposed project. These issues are:

- X Estimation of aquifer parameters based on aquifer pumping tests conducted at the project site;
- X Calculation of a water balance for the proposed project site to compare current, active-project, and post-project conditions;
- X Conduct a hydrogeologic assessment of the potential impacts of the proposed project on water flows within the adjacent Kaweah River; and
- X Conduct a hydrogeologic assessment of the potential impacts of the proposed project on nearby shallow private wells.

Each of these issues are addressed in the following sections. For additional information on the proposed project, please refer to the DEIR.

2.0 AQUIFER PARAMETERS

Several aquifer pumping tests have been conducted at the Stillwell pasture, as described by Sierra-Pacific (2000). The evaluation of many of the issues related to mining of the Stillwell property, such as the water balance and impacts on nearby wells, are dependent upon the aquifer parameters estimated from the aquifer pumping tests conducted at the site. Therefore, identification of the aquifer parameters is an important quantitative step in assessing the impacts of the proposed project.

For this review, two of the aquifer tests conducted at the site have been evaluated in detail. One of these tests is the first 72-hour aquifer test conducted using well E-1 as the pumping well. The other test is the 13.25-hour aquifer test conducted using well E-3 as the pumping well. These tests are referred to as the E-1 test and the E-3 test, respectively. The E-1 test was conducted at 14 gallons per minute (gpm) and the E-3 test was conducted at 50 gpm. The E-3 test ended prematurely due to excessive sanding of the well during the aquifer test. Please see Sierra-Pacific (2000) for a discussion of the details of these aquifer tests and maps showing the well locations.

The data were interpreted using the AQTESOLV software package. AQTESOLV is a widely used package for the interpretation of aquier-test data. Attachment A includes the curve-matching plots and interpretation of the data from the first 72-hour aquifer test conducted in well E-1. The estimated aquifer parameters are summarized in Table 1. The estimated transmissivity values vary by a factor of almost 60% between the highest and lowest values, pointing out the significance of the heterogeneity and anisotropy of the aquifer. The average transmissivity for all observation points is approximately 21,000 feet squared per day (ft²/day), or 155,000 gallons per day per foot (gpd/ft).

Attachment B includes the curve-matching plots and interpretation of the data from the

13.25 hour aquifer test conducted in well E-3 (referred to as the 'Schmidt Well' in some previous reports). The estimated aquifer parameters are summarized in Table 1. For the three observation points E-1, T-3, and T-4, the estimated transmissivity varies by only about 20%. The small degree of apparent heterogeneity is likely due to the observation wells being closer to the pumping well, as compared to the E-1 aquifer test. For the pumping well, E-3, the transmissivity is a factor of 10 less than the estimates from the other three observation points. As shown on the AQTESOLV plot for well E-3 in Attachment B, the drawdown data are very irregular and difficult to interpret. This is likely due to the large amount of sand produced during the aquifer test. The data from well E-3 are not considered representative of aquifer conditions and are not included in the evaluation of aquifer parameters.

As shown in Table 1, the average transmissivity value from the E-3 aquifer test is about 2,275 ft²/day, or 17,000 gpd/ft, based on the data from wells E-1, T-3, and T-4. This value is approximately 10 times less than the values obtained from the E-1 aquifer test.

An analytical calculation can be used to assess the performance of the E-1 and E-3 pumping wells, and determine which test provides the most representative aquifer parameters. The analytical calculation was conducted using the Theis equation for drawdown in an aquifer (Veissman, et al., 1977). The calculation can be used to estimate the "expected" drawdown from pumping at the pumping well during the aquifer pumping test.

For the E-1 test, the analytical calculation predicts a total drawdown of 0.2 ft (about 2.5 inches) at the pumping well at a pumping rate of 14 gpm. The actual drawdown observed at E-1 was in excess of 24 ft. The appreciable difference between the predicted and actual drawdown indicates that the pumping well is relatively inefficient. The inefficiency may be due to well-screen and gravel-pack materials that are too small for the aquifer, damage to the aquifer caused during drilling (e.g. clay smearing on the surface of the borehole), or both. Note that the DinefficiencyD applies only to conditions within the well itself, not in the surrounding aquifer. Thus, although the drawdown within the well is 24 ft when pumping at 14 gpm, the drawdown within the aquifer immediately adjacent to the borehole will still be only 0.2 ft.

For the E-3 test, the analytical calculation predicts a total drawdown of 4.8 ft for the pumping well after pumping at 50 gpm for a period of 12 hours. The actual drawdown observed at well E-3 after 12 hours of pumping was 6.9 ft. The difference between the predicted and actual drawdown demonstrates that well E-3 is much more efficient than well E-1.

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In summary, well E-3 is a more efficient pumping well than E-1, as demonstrated by the higher pumping rate and lower drawdown. Given the very small drawdowns in the aquifer during the 14-gpm E-1 aquifer pumping test, it is likely that the well was not pumped at a

rate sufficient to adequately stress the aquifer. Based on the interpretation of the aquifer test data and the analytical calculation described above, the transmissivity of the aquifer is in the range of 2,275 ft^2 /day, or 17,000 gpd/ft.

3.0 WATER BALANCE

A water balance has been prepared to evaluate the potential impacts of the project on groundwater supplies and groundwater discharge to the Kaweah River. In general, a water balance considers all of the water inputs to an area and all of the water outputs to an area. For this project, the water inputs include groundwater flow within the alluvium that enters the upgradient (eastern) edge of the Stillwell pasture (referred to as "groundwater inflow"), rainfall, and irrigation water applied to the pasture. Water outputs include surface runoff, evapotranspiration of applied irrigation water from the pasture, evaporation from surface-water bodies, and groundwater discharge to the Kaweah River at the downgradient (western) edge of the project site. A conceptual representation of the inputs and outputs of the water balance is shown on Figure 2.

For the project site, a water balance has been conducted for pre-project, or current, conditions (Figure 2A), for an active-project scenario, and for post-project conditions (Figure 2B). The active-project scenario used in the water balance calculations represents the time at which Phases II and III have been completed, as described in the EIR, but before Phases IV and V begin. Comparison of the pre-project, active-project, and post-project water balances provides a means to compare the potential impacts of the project on groundwater supplies and groundwater discharge to the Kaweah River.

As discussed further below, the potential impacts on discharge to the Kaweah River extend beyond the project boundaries since the 137-acre Stillwell pasture is irrigated with water from ponds located north of the project site. Thus, a separate comparative water-balance has also been conducted for the northern ponds (Figure 2C).

Each of the individual water inputs and outputs are discussed below, prior to conducting the comparative water balance for the northern ponds and the pre-project, active-project, and post-project water balances for the project site.

The accuracy of the values in the water balance varies by source. The values used shown in Table 2 are listed at a level of accuracy consistent with that used by the reporting source. For example, the Department of Water Resources (DWR), U.S. Geological Survey (USGS), or the Corps of Engineers report rainfall numbers to the hundredth of an inch and pan evaporation to the tenth of an inch. Thus, input parameters such as rainfall and pan evaporation reported as 1.18 ft/yr and 6.88 ft/yr, respectively, are used with the appropriate number of significant figures. The overall water-balance calculations, however, do not have the same degree of accuracy due to the general nature of the area calculations or estimates of groundwater inflow from the east. Thus, rainfall and evaporation-related

calculations are rounded to the nearest acre-foot and groundwater and irrigation-related calculations are rounded to the nearest 10 acre-feet. This presentation is consistent with the appropriate level of accuracy of the input and output terms while still allowing the calculations to take into account minor water-balance terms, such as runoff.

3.1 Water Inputs

The water inputs include groundwater inflow from upgradient of the site, rainfall, and applied irrigation water.

Groundwater Inflow

The groundwater inflow entering the project site can be defined by Darcy's Law (Viessman et al., 1977):

Q = TiL,

where Q is the total groundwater inflow entering the upgradient project boundary, T is the transmissivity of the shallow alluvial aquifer material, *i* is the hydraulic gradient, or slope, of the groundwater surface, and L is the length of the upgradient side of the project. As discussed above, the transmissivity of the shallow alluvial aquifer is approximately 2,275 feet squared per day (ft²/d). The hydraulic gradient is reported to be 0.003 ft/ft to 0.004 ft/ft by Sierra-Pacific. For the water balance calculations, an average value of 0.0035 ft/ft is used. The length of the upgradient project boundary is approximately 4,000 ft. As shown on Table 2, these values indicate that approximately 270 acre-feet of groundwater water per year (AF/yr) flows under the upgradient project boundary.

Rainfall

The average rainfall for the Lemoncove area is reported to be 14.16 inches per year, or 1.18 ft/yr. For the 137-acre project site, the total rainfall is 162 AF/yr, as shown on Table 2.

Irrigation

Currently, an average of 142 inches per year, or 11.83 ft/yr, of irrigation water is applied to the 137-acre project site. This is equivalent to 1,620 AF/yr of applied irrigation water.

For the active-project scenario, it is assumed that 100 acres of the site exists as irrigated pasture and that mining has occurred on 37 acres. Application of 11.83 ft/yr of irrigation water to the 100-acre pasture area is equivalent to 1,180 AF/yr, as shown in Table 2.

After the project is completed, the 137-acre site will consist of an 89-acre lake and up to 48 acres of irrigated pasture. Application of 11.83 ft/yr of irrigation water to the 48-acre post-

project pasture area is equivalent to 570 AF/yr. It is worth noting that the actual postproject irrigated pasture area may be less than 48 acres. Thus, the total post-project irrigation water input may be less than 570 AF/yr. As discussed below, however, the actual acreage does not affect the overall water balance since any changes in the amount of applied irrigation water input are directly offset by a reduction in the irrigation pumping output from the northern ponds.

3.2 Water Outputs

The water outputs include surface runoff, evapotranspiration (ET) of applied irrigation water from the pasture, evaporation from surface-water bodies, and groundwater discharge to the Kaweah River at the downgradient (western) edge of the project site.

Surface Runoff

The surface runoff output acts to reduce the amount of rainfall that actually enters the subsurface at the site. The more runoff that occurs, the less significant the rainfall is as an input. Currently, the surface of the Stillwell pasture slopes toward the Kaweah River at the rate of approximately 10 ft per 2,400 ft, or 0.4%, which is relatively flat.

Runoff can be estimated by applying a runoff factor to the rainfall amount. The Stillwell pasture site consists of grasslands with sandy soil. According to Viessman et al. (1977), the runoff factor for grasses on sandy soil, with a slope of less than 2% is 0.05 to 0.10. To be conservative, a value of 0.10 is used in this water balance. Thus, the runoff from the existing pasture is 16 AF/yr (0.10 times the rainfall input of 162 AF/yr for the entire 137-acre project area).

During the active project, runoff from half of the 137-acre site (68.5 acres) will occur as it does under current conditions because mining will not have begun on that part of the site. For the Phase II and Phase III areas of the site, 37 acres will be reclaimed as a lake and 31.5 acres will remain as pasture. There will be no runoff from the 37-acre lake. Runoff from the northern and eastern parts of the 31.5-acre pasture area will be toward the lake and will not act as a water output from the site. In addition, approximately one half of the area between the lake and the Kaweah River will drain to the lake. Thus, a maximum of about five acres will potentially drain from the site and act as a runoff output. The total runoff output under the active-project scenario will, thus, be nine AF/yr (0.10 times {68.5+5 acres} times 1.18 ft/yr of rainfall), as shown in Table 2.

Under post-project conditions, 89 acres of the site will be a lake, from which there will be no runoff. Of the remaining 48 acres, an appreciable fraction will drain toward the lake and will not act as a water output from the site. Specifically, areas to the east, north, and south will drain to the lake. In addition, approximately one half of the area between the lake and the Kaweah River will drain to the lake. Thus, a maximum of about six acres will potentially drain from the site and act as a runoff output. The total runoff output under post-project conditions will, thus, be one AF/yr (0.10 times six acres times 1.18 ft/yr of rainfall).

Evapotranspiration (ET)

ET represents the amount of applied irrigation water and rainfall that is lost to both surface evaporation and transpiration from plant surfaces. The ET is estimated based on a factor that is applied to the rate of pan evaporation for the area. Based on information presented by Sierra Pacific (2000) and the California Department of Water Resources (1975, 1986, and 1993), the pan factor for irrigated pasture is 0.77. The pan evaporation rate for the area has been addressed by Barnes (1997), based on U.S. Army Corps of Engineers data from Terminus Dam. The average pan evaporation rate over the 25-year period from 1962 to 1987 is 82.56 inches per year, or 6.88 ft/yr.

ET can be determined by direct measurement and by applying a factor to the pan evaporation rate. The DWR refers to this factor as the ET/Ep ratio, or the ratio of crop ET to the pan evaporation rate. The DWR has compiled a substantial amount of data regarding crop ET and the ET/Ep ratio in Bulletin No. 113-3. This information is summarized on the attached Table C-1 as it pertains to this project. Column A of Table C-1 shows the average pan evaporation rate for irrigated pasture areas of the San Joaquin Valley, as reported by the DWR and discussed above.

Column B of Table C-1 shows the actual *measured* irrigated pasture ET within the San Joaquin Valley. Column C is the ET/Ep ratio calculated by dividing Column B by Column A. The ET/Ep ratio based on actual measured ET averages 0.81 for both the growing season and the entire year.

<u>The DWR also provides recommended ET/Ep ratios in Table 5 of DWR Bulletin No. 113-3.</u> <u>The recommended monthly ET/Ep ratios for irrigated pasture in the San Joaquin Valley</u> <u>are shown in Column D of Table C-1. Based on the DWR recommended values, the</u> <u>average annual ET/Ep ratio is 0.77.</u>

Column E of Table C-1 shows the DWR's estimated growing-season ET for irrigated pasture in the San Joaquin Valley. The total growing season ET is 44.2 inches, while the growing season pan evaporation is 57.2 inches. Thus, the growing season ET/Ep ratio for irrigated pasture in the San Joaquin Valley is 0.77, the same as the DWR recommended annual ET/Ep ratio, discussed in the above paragraph.

The measured pasture ET, DWR-recommended ET/Ep ratios, and DWR-estimated growing season ET all consistently result in ET values that are within the range of 0.77 to 0.81 times the pan evaporation rate. It should be noted that these ET/Ep ratios apply specifically to irrigated pasture land within the San Joaquin Valley. The DWR data indicate that there are many common crops raised within the San Joaquin Valley for which the

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ET/Ep ratio is less than lake evaporation (e.g. melons, tomatoes, grapes, and tree crops such as nuts and citrus). For irrigated pasture, however, the data consistently indicate ET rates in the range of 0.77 to 0.81.

As discussed below, the pan evaporation rate at Terminus Dam is much higher than the pan evaporation rate measured by DWR at irrigated pastures where ET was also measured. Therefore, it is not appropriate to use the direct ET measurements made by the DWR in agricultural areas for evaluation of the Stillwell property. The appropriate reference values for evaluation of ET at the Stillwell property are the ET/Ep ratios developed by DWR. As discussed above, the annual ET/Ep ratios vary from 0.77 to 0.81. However, to present the most conservative (i.e. environmentally protective) assessment of ET from the Stillwell pasture, the MINIMUM annual ET/Ep ratio provided by the DWR for irrigated pasture, 0.77, was used in the DEIR.

For the existing 137-acre pasture, the ET is 726 AF/yr (0.77 times 6.88 ft/yr times 137 acres).

For the 100 acres of the project site that will not be a lake under the active-project scenario, the ET will be 520 AF/yr (0.77 times 6.88 ft/yr times 100 acres).

For the 48 acres of the project site that will not be a lake under post-project conditions, the ET will be 254 AF/yr (0.77 times 6.88 ft/yr times 48 acres).

Evaporation from Surface-Water Bodies

Under current conditions, there are no open surface-water bodies on the 137-acre project site. Thus, there is currently no evaporation from surface-water bodies on the site.

Under the active-project scenario, a 37-acre lake will be present on the site. Lake evaporation is estimated by applying a factor to the pan evaporation rate for the area. As discussed above, the pan evaporation rate is 6.88 ft/yr. The lake factor can be estimated from two different sources. According to the National Oceanic and Atmospheric Administration (NOAA, 1982), the evaporation rate from a shallow lake is approximately 70% of the pan evaporation rate. Thus, the lake evaporation pan factor, according to NOAA, is 0.70. Data from the U.S. Army Corps of Engineers for Terminus Dam, however, suggests that the pan factor in the Lemoncove area may be as high as 0.78 (Barnes, 1997). References in the scientific literature suggest that lower pan factor values, such as 0.78, are more applicable to large lakes, whereas higher pan factor values, such as 0.78, are more applicable to small lakes and ponds.

Due to the uncertainty in the local pan factor for lake evaporation, the water balance is conducted using both factors. Using the NOAA factor, the lake evaporation output in the water balance is 178 AF/yr (0.70 times 6.88 ft/yr times 37 acres of lake surface) for the

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active-project scenario, as shown in Table 2. Using the Army Corps of Engineers (ACE) factor, the lake evaporation output in the water balance is 199 AF/yr (0.78 times 6.88 ft/yr times 37 acres of lake surface). The difference between the lake evaporation outputs based on the NOAA and ACE pan factors is approximately 21 AF/yr.

Under post-project conditions, an 89-acre lake will be present on the site. Lake evaporation is estimated by applying a factor to the pan evaporation rate for the area. As discussed above, the pan evaporation rate is 6.88 ft/yr. As discussed above, due to the uncertainty in the local pan factor for lake evaporation, the water balance is conducted using both the NOAA and ACE factors. Using the NOAA factor, the lake evaporation output in the water balance is 429 AF/yr (0.70 times 6.88 ft/yr times 89 acres of lake surface). Using the Army Corps of Engineers (ACE) factor, the lake evaporation output in the water balance is 478 AF/yr (0.78 times 6.88 ft/yr times 82 acres of lake surface). The difference between the lake evaporation outputs based on the NOAA and ACE pan factors is approximately 49 AF/yr.

Groundwater Discharge to the Kaweah River

1-

The groundwater discharge output term in the water balance is the term that defines the potential impact of the active-project scenario and post-project conditions on the available water in the Kaweah River. (Potential impacts to the Kaweah River during the proposed project are discussed in Section 4.0.) The groundwater discharge term, however, can not be estimated in the same manner as the other water balance inputs and outputs described above. To calculate the groundwater discharge, the following water-balance equation is used:

$I - O = \delta S$,

where *I* is the sum of all the input terms, O is the sum of all the output terms, and δS is the change in water storage at the project site (Viessman et al., 1977). A change in water storage at the site, from one year to the next, would be evidenced by appreciable changes in the groundwater surface elevation, the hydraulic gradient, or the water surface elevation within the 89-acre lake in the post-project scenario. Based on data collected at the site (Sierra-Pacific, 2000), the proximity of the groundwater table to the ground surface, and the presence near the site of various surface-water features with controlled flows (e.g. irrigation canals and the Kaweah River), the amount of water in storage at the site is not expected to change from year to year under normal meteorological conditions. Thus, the water-balance equation becomes:

I = O,

where the sum of all the water inputs is equal to the sum of all of the water outputs.

For current conditions, the water balance includes each of the following parameters:

$$GF + R + Ir = Ro + ET + D$$
,

where GF is the groundwater inflow, R is the rainfall, Ir is the applied irrigation water, Ro is the runoff, ET is the evapotranspiration, and D is the discharge to the Kaweah River.

For active-project and post-project conditions, the water balance includes the following parameters:

$$GF + R + Ir = Ro + ET + LE + D.$$

where GF is the groundwater inflow, R is the rainfall, Ir is the applied irrigation water, Ro is the runoff, ET is the evapotranspiration, LE is the lake evaporation, and D is the discharge to the Kaweah River.

As discussed above, all of the terms in the water balance equations are quantified except for the discharge to the Kaweah River (D). Thus, to identify D, each equation can be rewritten as:

$$D = (GF + R + Ir) - (Ro + ET)$$

for current conditions, and as:

$$D = (GF + R + Ir) - (Ro + ET + LE)$$

for active-project and post-project conditions.

For the proposed project, however, evaluation of the potential impact to the Kaweah River is not limited to the project site. Since the 137-acre Stillwell pasture is irrigated with water from the 50-acre northern ponds, the total impact on the Kaweah River must also include an evaluation of the water balance for the northern ponds. This evaluation is presented below.

3.3 Northern Ponds

The irrigation water within the northern ponds is primarily riparian water from the Foothill Ditch. The Foothill Ditch diversion within the Kaweah River is located just upstream from the area of the northern ponds. According to the property owner, if riparian water is not provided to the northern ponds, the ponds would become dewatered very rapidly. In addition, the owner reports that once the ponds are dewatered, it would take a very long time to recharge the ponds with groundwater inflow from the upgradient direction and lateral inflow from the Kaweah River through the geologic material present between the river and the ponds. Thus, the primary source of water within the northern ponds is

riparian water that is diverted from the Kaweah River.

A conceptual representation of the inputs and outputs of the water balance for the northern ponds is shown on Figure 2C. The water inputs include groundwater inflow into the ponds from upgradient, rainfall onto the surface of the ponds, and <u>riparian waterpossible inflow</u> from the Kaweah River. The water outputs include irrigation pumping, evaporation, and discharge to the Kaweah River. The purpose of evaluating the water balance for the northern ponds is to compare the amount of water available to the Kaweah River under current conditions versus post-project conditions.

On an annual basis, the amount of water in storage in the ponds does not change. Thus, the water-balance equation for the northern ponds is:

$$GF + R + IF = LE + Ir + D$$
,

where GF is the groundwater inflow, R is the rainfall, IF is the <u>riparian water diversion and</u> potential <u>subsurface</u> inflow from the Kaweah River, LE is the lake evaporation, Ir is the irrigation water pumped from the ponds and applied to the project site, and D is the <u>potential subsurface</u> discharge to the Kaweah River.

The net flow to the Kaweah River (KR) from the northern ponds can also be defined as:

KR = D - IF.

Thus, the water-balance equation can be rewritten as:

$$GF + R = LE + Ir + KR.$$

For current, active-project, and post-project conditions, groundwater inflow (GF), rainfall (R), and lake evaporation (LE) remain the same. Thus, if the subscript 'c' is used for current conditions and the subscript "p" is used for post-project conditions, the water-balance comparison can be simplified to:

 $Ir_{c} + KR_{c} = Ir_{p} + Kr_{p}$, or $Ir_{c} - Ir_{p} = Kr_{p} - Kr_{c}$.

The last equation states that the decrease in irrigation pumping from the northern ponds from current to post-project conditions is exactly the same as the increase in the net flow to the Kaweah River <u>due to reduced diversions of riparian water</u> under post-project conditions as compared to current conditions. The same relationship also applies to the active-project scenario.

Groundwater inflow into the northern ponds from the east is calculated in the same manner as for the 137-acre project site, as described in Section 3.1. For the northern ponds, however, the length of the upgradient boundary is 750 feet, as opposed to 4,000 feet for the 137-acre project site.

According to information provided by the property owner and Sierra-Pacific (2000), approximately 142 inches per year, or 11.83 ft/yr, of irrigation water is applied to the Stillwell pasture. For the current 137-acre pasture area, the irrigation pumping is 1,621 AF/yr. For the active-project scenario, where 100 acres are irrigated, the irrigation pumping will be 1,183 AF/yr, as shown in Table 2. Under post-project conditions, where a maximum of 48 acres will be irrigated, the irrigation pumping will be no more than 568 AF/yr. Therefore, the net increase in flow to the Kaweah River is 438 AF/yr under the active-project scenario as compared to current conditions and 1,053 AF/yr under post-project conditions as compared to current conditions. To complete the water balance for the project site, this discharge term must be added to the discharge term to the Kaweah River for the active-project and post-project water balances.

3.4 Water Balance

As described above, the water balance for the 137-acre project site can be used to define the discharge to the Kaweah River (D). As defined above, the discharge to the river is:

$$D = (GF + R + Ir) - (Ro + ET)$$

for current conditions, and:

$$D = (GF + R + Ir) - (Ro + ET + LE)$$

for the active-project scenario and post-project conditions.

Table 2 shows the values for each parameter in the equations. For current conditions, the total discharge to the Kaweah River is 1,310 AF/yr for the 137-acre project site. As discussed above, two active-project and post-project scenarios are evaluated due to uncertainties in the lake evaporation factor. For the active-project scenario on the 137-acre project site, the discharge to the river is 895 AF/yr using the NOAA lake evaporation factor and 874 AF/yr using the ACE lake evaporation factor. For post-project conditions on the 137-acre project site, the discharge to the Kaweah River is 318 AF/yr using the NOAA lake evaporation factor and 269 AF/yr using the ACE lake evaporation factor.

The total discharge to the Kaweah River for the active-project scenario and post-project conditions also includes the net increase from the northern ponds due to reduced irrigation pumping. Thus, the total discharge to the Kaweah River under the active-project scenario ranges from 1,312 AF/yr to 1,333 AF/yr, depending on the lake evaporation factor.

Comparing the current and active-project discharge amounts, the active project will result in a net increase of two AF/yr to 23 AF/yr in the amount of water discharged to the Kaweah River, as shown on the last page of Table 2. For post-project conditions, the total discharge to the Kaweah River ranges from 1,322 AF/yr to 1,371 AF/yr, depending on the lake evaporation factor. Comparing the current and post-project discharge amounts, the proposed project will result in a net increase of 12 AF/yr to 61 AF/yr in the amount of water discharged to the Kaweah River, as shown on the last page of Table 2.

4.0 IMPACTS ON FLOWS WITHIN THE KAWEAH RIVER

The Kaweah River is located approximately 400 feet northwestern of the proposed project. The land between the proposed project and the river is currently open pasture and is anticipated to remain the same after the project is completed. Over a one-year period from March 1999 to March 2000, the water level in the Kaweah River varied by only four feet (Sierra-Pacific, 2000, Table 4), as measured at the Highway 216 bridge. The water level in the river ranged from approximately 464 to 468 feet above mean sea level (ft amsl).

At the northern edge of the Stillwell pasture, the groundwater table, water level within the northern ponds, and the water level in the river (when flowing) are all approximately 483 ft amsl, as reflected in the water-level measurements from well MW-1 (Sierra-Pacific, 2000, Table 4). This elevation is about four feet below the native ground surface elevation.

Within the Stillwell pasture and the proposed project area, the groundwater table is approximately three to six feet below ground surface. The groundwater surface elevation ranges from approximately 479 to over 485 ft amsl beneath the pasture. The groundwater surface elevation beneath the pasture in the project area is about 15 feet higher than the water level in the Kaweah River at the Highway 216 bridge, as illustrated on Figure 3. Figure 3 is based on data measured by Sierra-Pacific (2000, Table 4) between March 1999 and March 2000. The water-level data are consistent with the water-balance calculations that indicate a large amount of discharge from the Stillwell pasture to the Kaweah River under current conditions.

During the proposed gravel-mining operations, excavation is not expected to extend deeper than 35 feet below ground surface, on average. Since the water table is about five feet below ground surface, the total drawdown in the water table from dewatering will be about 30 feet within the four individual gravel pits. The base of each pit will be about 15 feet below the water level in the river (see Figure 4). Dewatering will occur in only one of the four pits at any one time.

The aquifer parameters and analytical calculations described in Section 2.0 can be used to evaluate the estimated drawdown from dewatering in the area between a dewatered pit and the river. The data and calculations indicate that at a distance of 200 feet from the pit (i.e. half-way between one of the western pits and the river), the total drawdown will be

approximately 12 feet. Thus, the groundwater table will be higher than the water level in the river, preventing the flow of water from the river to a dewatered pit during the mining operations, as illustrated on Figure 4.

The water pumped from the dewatered pit may be pumped to several different locations. While mining is occurring along the east side of the project site, some of the water will be pumped to a trench along the eastern boundary of the pasture to maintain the water level in nearby shallow private wells (see Section 5.0). This use is expected to require only a fraction of the total amount of water pumped for dewatering. The water not pumped to the trench is expected to be pumped into the northern ponds or the lakes formed by the previous project phases. During gravel mining, there will be a net increase of water in the river, due to a reduction in the amount of irrigation water pumped from the northern ponds, as discussed for the active-project scenario in Section 3.0.

As discussed in Section 3.0, under post-project conditions, there will be a significant reduction in the amount of irrigation water pumped from the northern ponds. The decrease in irrigation pumping results in a net increase in the total water flow within the Kaweah River under post-project conditions as compared to current conditions, as discussed in Section 3.4 and shown in Table 2.

As discussed above and in Section 3.4, the proposed project will not result in a decrease in water flows within the Kaweah River during or after the gravel mining operations.

5.0 POTENTIAL IMPACTS ON NEARBY SHALLOW PRIVATE WELLS

As shown by Sierra-Pacific (2000), there are at least 19 private supply wells located to the east and south of the project site. According to the information provided by Sierra-Pacific (2000, Appendix E), less than half of these wells are completed in the shallow alluvial sediments. The remaining wells are completed within the deeper bedrock aquifer. Groundwater is typically not encountered in the bedrock until depths of 60 feet below ground surface or greater are reached, while the base of the alluvium is approximately 30 feet below ground surface to 40 feet below ground surface. The water levels in the bedrock wells typically stabilize at depths much shallower than 60 feet below ground surface, indicating artesian conditions within the bedrock. The upper section of bedrock is either unfractured or the fractures are cemented or filled with fine-grained material from the overlying alluvium. This information demonstrates that the groundwater within the shallow alluvial sediments is not in hydraulic communication with the bedrock aquifer and that the proposed project should not have any measurable impact on the deeper wells.

Many of the shallow private wells are located within 200 to 400 feet of the boundary of the proposed project. During mining and dewatering of the eastern two gravel pits, it is possible that water levels within the shallow private wells could be lowered unless some type of mitigation measure is implemented. To prevent the lowering of water levels within

Page -15-

the shallow wells, a shallow trench will be installed along the eastern project boundary to a depth of six feet or deeper. Water pumped from the active pit will be piped to the shallow trench to maintain the groundwater table east of the project site.

The effectiveness of using a trench to maintain water levels in the shallow wells east of the project boundary was evaluated as part of the aquifer pumping tests conducted at the site by Sierra-Pacific (2000). After completion of the initial 72-hr test in well E-1, a second 72-hr test was conducted in well E-1. During the first E-1 test, the pumped water was piped to a location approximately 500 feet west of the pumping well. During the second E-1 test, the pumped water was piped to a shallow trench located between the pumping well, E-1, and monitoring point T-6. The data from the first and second E-1 tests are shown on Figure 5. Monitoring point T-6 are located approximately 150 feet northeast of E-1. The trench and monitoring point T-6 are located approximately 75 feet and 150 feet southwest of E-1, respectively. During the first test, measurable drawdown was observed at both T-3 and T-6 from the pumping at E-1. During the second test, drawdown was not observed at T-6 due to the recharge occurring at the trench, as shown on Figure 5.

Based on the data shown on Figure 5, use of the shallow trench will prevent a drop in water levels within the private wells that might otherwise be caused during the gravel mining operations. For the Stillwell project, a recharge trench was selected as the appropriate method to maintain water levels at the upgradient neighboring properties. The water pumped to the recharge trench will maintain the water-level elevation and, thus, the hydraulic gradient at the neighboring properties. Therefore, the water available to the neighboring wells will remain the same and will come from groundwater flow entering the neighboring properties from upgradient, which is the same source of water currently entering these wells. The water pumped to the recharge trench from the quarry will not flow upgradient to the neighboring wells, it will flow back into the quarry.

For other proposed mining projects in the area, cut-off walls have been proposed to reduce infiltration into the mine pit. Use of cut-off walls is not considered appropriate for the Stillwell site for several reasons. First, the proposed Stillwell quarry is substantially shallower than the other proposed projects where cut-off walls have been proposed. Second, use of a cut-off wall on the upgradient side of the Stillwell quarry would cause groundwater levels to rise under the neighboring properties. Since the water table is only a few feet from the ground surface, this rise in the water table could potentially cause flooding of the neighboring properties. Third, only a limited amount of water is expected to enter the quarry from upgradient, as discussed above. In addition, use of a cut-off wall to prevent inflow from the Kaweah River during dewatering is unnecessary, as discussed above in Section 3.3. Specifically, when the Northern Ponds are pumped for irrigation, little or no water percolates into the ponds from the river.

After the gravel mining is completed, the resulting lake will be allowed to fill. Once the lake level reaches an equilibrium with the natural groundwater level, the trench is not needed to

maintain the water level at the upgradient shallow wells. Thus, there is no anticipated impact to the priate wells under post-project conditions and the trench will only need to be used while gravel mining operations are occurring. Groundwater elevations at the northeast, upgradient side of the proposed quarry are approximately 484 feet above mean sea level (ft amsl). Groundwater elevations at the southwest, downgradient side of the proposed quarry are approximately seven feet of difference in the groundwater elevation across the proposed project area.

Once the project is completed, the water surface in the lake will stabilize at an elevation that is at an equilibrium between the rate of groundwater inflow from upgradient and the rate of groundwater outflow downgradient. This will result in the upgradient edge of the lake being at an elevation below the adjacent groundwater table, and the downgradient edge of the lake being at an elevation slightly above the previous groundwater table. The downgradient edge of the lake, however, can not rise significantly because the hydraulic gradient in the aquifer would then increase, resulting in an increased rate of groundwater outflow. However, since the lake elevation will not affect the rate of groundwater inflow will not increase. Thus, the lake will reach an equilibrium point at an elevation that maintains the rate of groundwater outflow at about the rate of pre-project groundwater movement. This rate occurs when the lake elevation is at about the same elevation as the current groundwater elevation at the downgradient edge of the project area.

To reduce the overall drop in water surface elevation across the lake, a north-south trending berm will be placed across the eastern third of the lake, as shown on Figure C-1. The east part of the lake will then have a surface elevation of approximately 483.5 ft amsl. The west lake will then have a surface elevation of between 477 ft amsl and 480 ft amsl, which is approximately the same as the current groundwater elevation. In addition, a recharge trench will be constructed along the southeast corner of the project area. Through a series of weirs, water will flow from the east lake to the west lake and maintain the current groundwater elevations along the properties to the southeast of the project area.

The berm will also have the added benefit of reducing wind fetch and wave erosion in the lakes.

To verify the effectiveness of the trench and subsequent lake in maintaining groundwater elevations upgradient of the project site, a groundwater monitoring program will be conducted. It is anticipated that this program would include measurement of water levels in the existing on-site wells and either in several of the off-site private wells or in two to three additional piezometers to be installed on the Stillwell property specifically for this purpose. Water levels would be measured at least quarterly.

Elevated levels of nitrate and iron have also been detected in some of the wells at the site.

Elevated levels of nitrate have been detected in wells MW-2, MW-3, and T-3 (Sierra-Pacific, 2000, Table 7). The nitrate concentrations, however, do not exceed regulatory standards. The highest nitrate concentrations have been detected in MW-2. MW-2 is located east of the project site, downgradient of a cluster of residences. MW-2 also contains noticeably elevated levels of sulfate and chloride as compared to other wells at the project site. The nitrate, sulfate, and chloride are most likely present due to the use of septic systems in the area and/or the application of agricultural fertilizers.

Elevated levels of <u>ferrous</u> iron have been detected in wells MW-1, MW-2, MW-3, and T-3 (Sierra-Pacific, 2000, Table 8). The highest concentrations occur in MW-1 and T-3. MW-1 is located adjacent to the Kaweah River and northern ponds. T-3 is located in the south-central part of the Stillwell pasture.

Pumping of water from the mining pit into a trench along the upgradient side of the project will not reduce water quality at the neighboring properties for two reasons. First, as discussed above, most of the water pumped into the trench will flow back into the quarry pit. Second, the water pumped from the quarry to the trench will be representative of the water quality from the upgradient neighboring properties. Pumping the water to the trench, in fact, is likely to remove much of the ferrous iron, resulting in an improvement in water quality.

It is uncertain whether the water pumped from the active pit during mining operations and piped to the trench will contain elevated levels of nitrate, iron, or other constituents. To address this issue, the pumped water should be monitored for iron, nitrate, and other constituents when mining begins. The monitoring will be conducted to verify that constituent concentrations in the water pumped to the trench are within ambient levels identified at the time the trench is excavated. If the water pumped from the currently-active pit contains elevated constituent levels (i.e. concentrations higher than those at the upgradient properties), then water from an alternate source will be pumped to the trench. Alternate sources include the 50-acre northern ponds and previous gravel pits within the project site.

If an acceptable alternate source can not be identified, another possible option is to pump the water from the dewatered gravel pit through a small aeration pond prior to discharge to the trench. The aeration of the water should cause the iron to precipitate from the pumped groundwater and improve the water quality. If needed, the aeration pond could be located in the 300-foot diameter area that will not be mined around the high-tension powerline tower within the project area.

6.0 SUMMARY AND CONCLUSIONS

This Hydrogeologic Data Evaluation Report has been prepared to analyze a proposed gravel mining operation at the Stillwell Pasture near Lemoncove, California. The purpose

- of this report is to provide a hydrogeologic evaluation of four specific technical issues related to the proposed project. These issues are:
 - X Estimation of aquifer parameters based on aquifer pumping tests conducted at the project site;
 - Calculation of a water balance for the proposed project site to compare current, active-project, and post-project conditions;
 - X Conduct a hydrogeologic assessment of the potential impacts of the proposed project on water flows within the adjacent Kaweah River; and
 - X Conduct a hydrogeologic assessment of the potential impacts of the proposed project on nearby shallow private wells.

The findings of this evaluation for each of the four issues is summarized below. Aquifer Parameters

Aquifer pumping tests have been conducted using two different pumping wells at the project site. These wells are designated as well E-1 and E-3. Well E-3 has also been referred to as the 'Schmidt Well' in other reports.

The data from a 72-hour pumping test in well E-1 indicates that the average transmissivity of the shallow aquifer at the site is approximately 21,000 ft²/day, or 155,000 gpd/ft. The data from the pumping test in well E-3 indicates that the average transmissivity is about 2,275 ft²/day, or 17,000 gpd/ft. An analytical simulation of the E-1 and E-3 aquifer test results indicates that well E-3 is much more efficient than well E-1. Thus, the results of the E-3 aquifer pumping test are considered most representative of actual aquifer conditions at the project site. Based on the interpretation of the aquifer test data and the analytical simulation, the transmissivity of the aquifer is in the range of 2,275 ft²/day, or 17,000 gpd/ft.

Water Balance

The water balance was conducted to evaluate the potential impacts of the project on groundwater supplies and groundwater discharge to the Kaweah River. For this project, the water inputs include groundwater inflow within the alluvium that enters the upgradient (eastern) edge of the Stillwell pasture, rainfall, and irrigation water applied to the pasture. Water outputs include surface runoff, evapotranspiration of applied irrigation water from the pasture, evaporation from surface-water bodies, and groundwater discharge to the Kaweah River at the downgradient (western) edge of the project site. A water balance has been conducted for current conditions, an active-project scenario, and post-project conditions.

There are two valid pan factors for lake evaporation that can be used for this project. One was developed by NOAA and the other was developed by the ACE. Due to the uncertainty in the local pan factor for lake evaporation, the water balance is conducted using both

factors.

For the proposed project, evaluation of the potential impact to the Kaweah River is not limited to the project site. Since the 137-acre Stillwell pasture is irrigated with water from the 50-acre northern ponds, the total impact on the Kaweah River must also include an evaluation of the water balance for the northern ponds. The water balance for the northern ponds varies for each scenario based on the amount of irrigation water pumped to irrigate the available pasture land within the 137-acre project site.

For current conditions, the total discharge to the Kaweah River is 1,310 AF/yr for the 137acre project site. As discussed above, two active-project and post-project scenarios are evaluated due to uncertainties in the lake evaporation factor. For the active-project scenario on the 137-acre project site, the discharge to the river is 895 AF/yr using the NOAA lake evaporation factor and 874 AF/yr using the ACE lake evaporation factor. For post-project conditions on the 137-acre project site, the discharge to the Kaweah River is 318 AF/yr using the NOAA lake evaporation factor and 269 AF/yr using the ACE lake evaporation factor.

The total discharge to the Kaweah River for the active-project scenario and post-project conditions, however, must also include the net increase from the northern ponds due to reduced <u>use of riparian water from the river for</u> irrigation pumping. Thus, the total discharge to the Kaweah River under the active-project scenario ranges from 1,312 AF/yr to 1,333 AF/yr, depending on the lake evaporation factor. Comparing the current and active-project discharge amounts, the active project will result in a net increase of two AF/yr to 23 AF/yr in the amount of water discharged to the Kaweah River. For post-project conditions, the total discharge to the Kaweah River conditions, the total discharge to the Kaweah River ranges from 1,322 AF/yr to 1,371 AF/yr, depending on the lake evaporation factor. Comparing the current and post-project discharge amounts, the proposed project will result in a net increase of 12 AF/yr to 61 AF/yr in the amount of water discharged to the Kaweah River.

Potential Impacts on Flows Within the Kaweah River

The groundwater surface elevation beneath the pasture in the project area is about 15 feet higher than the water level in the Kaweah River at the Highway 216 bridge. This 15-foot difference in water levels between the pasture and the river are consistent with the water-balance calculations that indicate a large amount of discharge from the Stillwell pasture to the Kaweah River under current conditions.

Active mining will not occur closer than 400 feet from the Kaweah River. Groundwater data from the site and calculations based on the aquifer parameters discussed above, indicate that the water level under the pasture, between the river and the active pit, will remain higher than the water level in the river during mining. Thus, water will not flow from the river to the dewatered pit during mining.

Based on the water balance calculations, the active-project scenario and post-project conditions will result in a net increase of flow within the Kaweah River. Therefore, the proposed project will have a positive impact on flows within the Kaweah River.

Potential Impacts on Nearby Shallow Private Wells

The primary potential impact on nearby shallow private wells is the possible reduction in the groundwater table during dewatering of an adjacent active pit. To mitigate this potential impact, a shallow trench will be installed between the active pit and the private wells. Water pumped to this trench will maintain the groundwater table in the area of the private wells, as demonstrated by the results of an aquifer pumping test.

The presence of iron, nitrate, and other constituents in groundwater at the site is from upgradient off-site sources such as domestic septic systems and agriculture. To prevent any change in water quality in the nearby wells, the pumped water will be monitored to verify that it is within the ambient conditions present at the time the trench was excavated. If necessary, water from an alternate source will be pumped to the trench or the water will be aerated prior to pumping to trench to maintain ambient conditions.

The use of the trench on the eastern property boundary and, if necessary, an alternate water source or aeration pond, will prevent any reduction of water quantity or quality available to the users of the shallow wells during active gravel mining. It is recommended that a groundwater monitoring program be implemented to verify that water levels are maintained by the trench and that water quality is not adversely affected.

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Table 1 Stillwell Pasture Aquifer Test Results RMC Pacific Materials

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EMKO Environmental, Inc.

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TABLE 2

Page 1 of 3

TABLE 2 Water Balance Calculations Stillwell Pasture

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50-ACRE NORTHERN PONDS	
Current Conditions Current Conditions OUTPUTS NPUTS Depth (ft/vr) Factor Area (ac) Total (AF/vr) Rainfall 1.18 1 50 59.0 Roundwater Flow 1.18 1 50 50.0 Groundwater Flow 1.18 1 109.0 Total Inputs 109.0 109.0 109.0 Discharge to River = Total Inputs - Total Outputs = 109.0 - 1861.5 = -1752.5 AF/yr Total Outputs	Depth (ft/vr) Factor Area (ac) Total (AF/vr) ng 11.83 1 137 1620.7 DA) 6.88 0.7 50 240.8 ver 10 be calculated 1861.5 plus Discharge to River
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Water Balance Calculations	Stillwell Pasture
	Water Balance Calculations

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TOTAL PROJECT IMPACTS	CT IMPACTS		3
Active Project Defined as 137-	acre Active Project Discharge minus 137-acr	Active Project Defined as 137-acre Active Project Discharge minus 137-acre Current Discharge plus 50-acre Net Increase in Discharge:	
NOAA: ACE:	894.9 - 1307.3 + 437.7= 874.6 - 1307.3 + 437.7=	25.3 AFlyr 4.9 AFlyr	
Post-Project Defined as 137-	acre Post-Project Discharge minus 137-acre	Post-Project Defined as 137-acre Post-Project Discharge minus 137-acre Current Discharge plus 50-acre Net Increase in Discharge:	
NOAA:	312.8 - 1307.3 + 1052.9 =	58.3 AFlyr	
ACE:	263.8 - 1307.3 + 1052.9 =	9.3 AFlyr	

Column	A	B	C	D	E
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	Evaporation (2)	Pasture	to Pan Evap	Pasture ET to Pan	Estimated
		ET (3)	3-04-00-00-0		Growing
					Season
Month	(inches)	(inches)	Ratio (4)	Evap Ratio (5)	ET (inches)
					(6)
January	1.3	<u>0.7</u>	0.54	<u>0.71</u>	
February	2.3	<u>1.8</u>	0.78	<u>0.74</u>	
March	4.2	3.7	<u>0.88</u>	<u>0.76</u>	3.2
April	5.9	4.6	0.78	<u>0.77</u>	4.5
May	8.3	6.7	<u>0.81</u>	<u>0.78</u>	<u>6.5</u>
June	9.6	7.2	0.75	<u>0.78</u>	7.5
July	10.0	8.0	<u>0.80</u>	<u>0.78</u>	<u>7.8</u>
August	8.5	7.3	0.86	<u>0.78</u>	<u>6.6</u>
September	6.3	5.3	0.84	<u>0.77</u>	4.8
October	4.4	3.6	0.82	0.75	<u>3.3</u>
November	2.1	1.7	0.81	0.73	
December	1.0	0.9	0.90	0.70	
Growing	57.2	46.4	0.81		44.2
Season (1)	2.1.12				
Annual	63.9	51.5	0.81	0.77	

TABLE C-1 Comparison of Pan Evaporation and Evapotranspiration (ET) Data

NOTES:

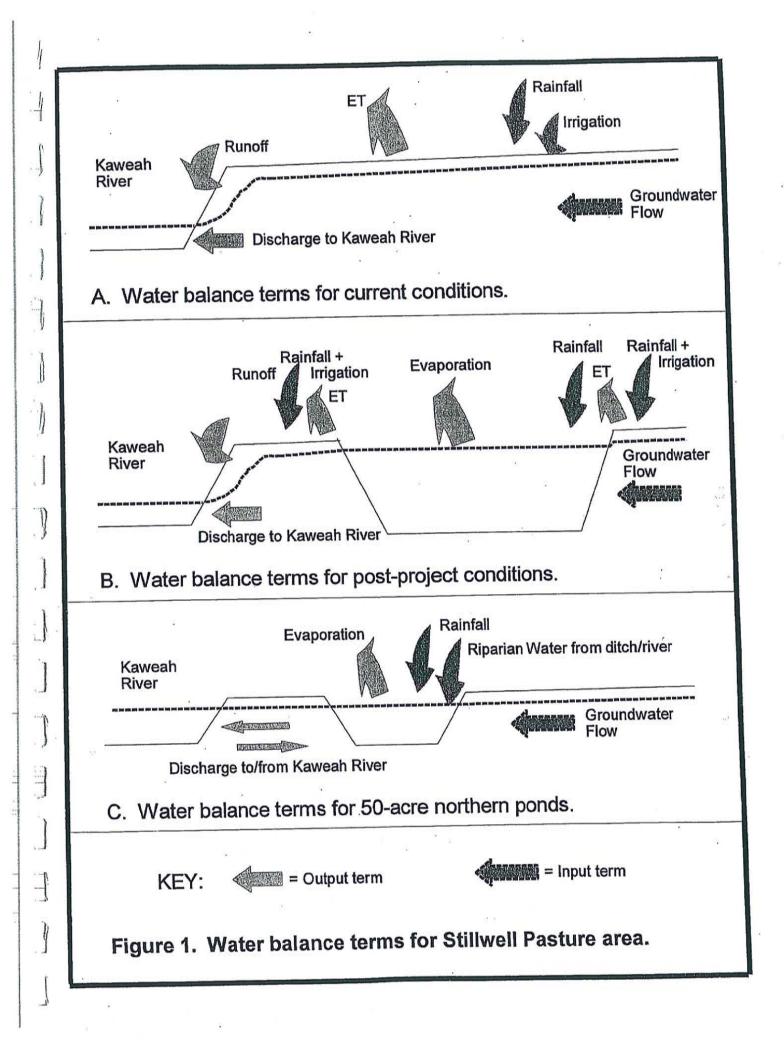
(1) March through October

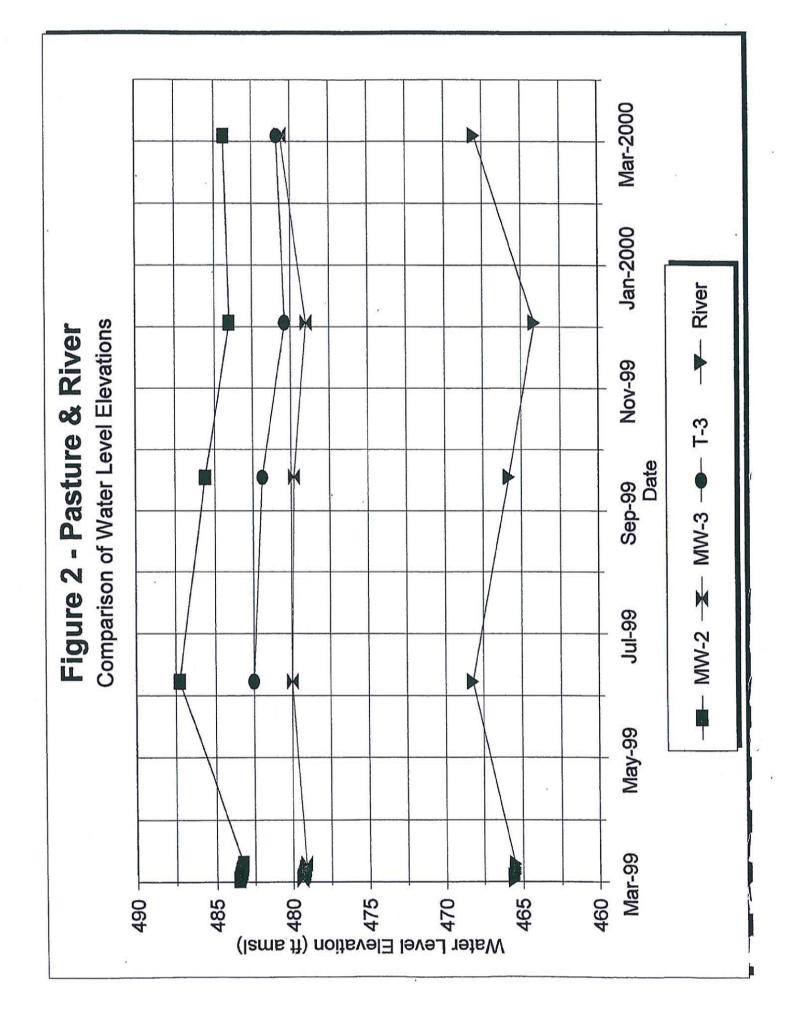
(2) For the San Joaquin Valley, from Table 1 of DWR Bulletin No. 113-3

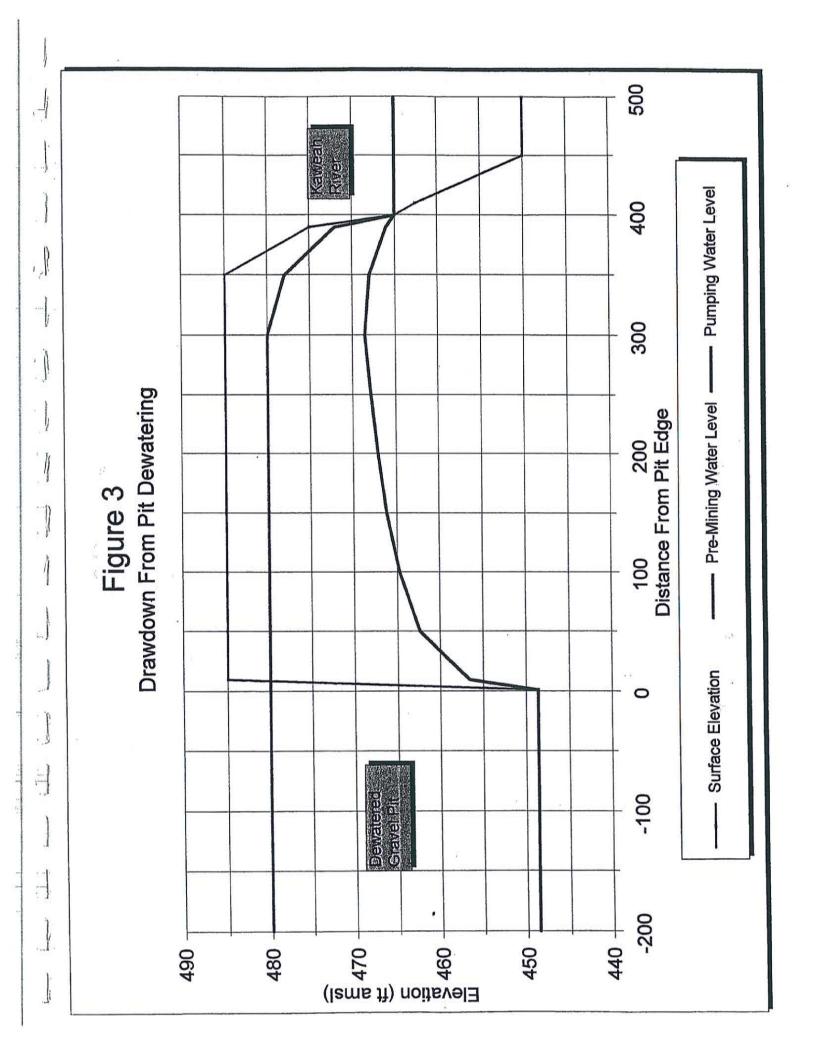
(3) Average measured at Arvin in the San Joaquin Valley, from Table 4 of DWR Bulletin No. 113-3

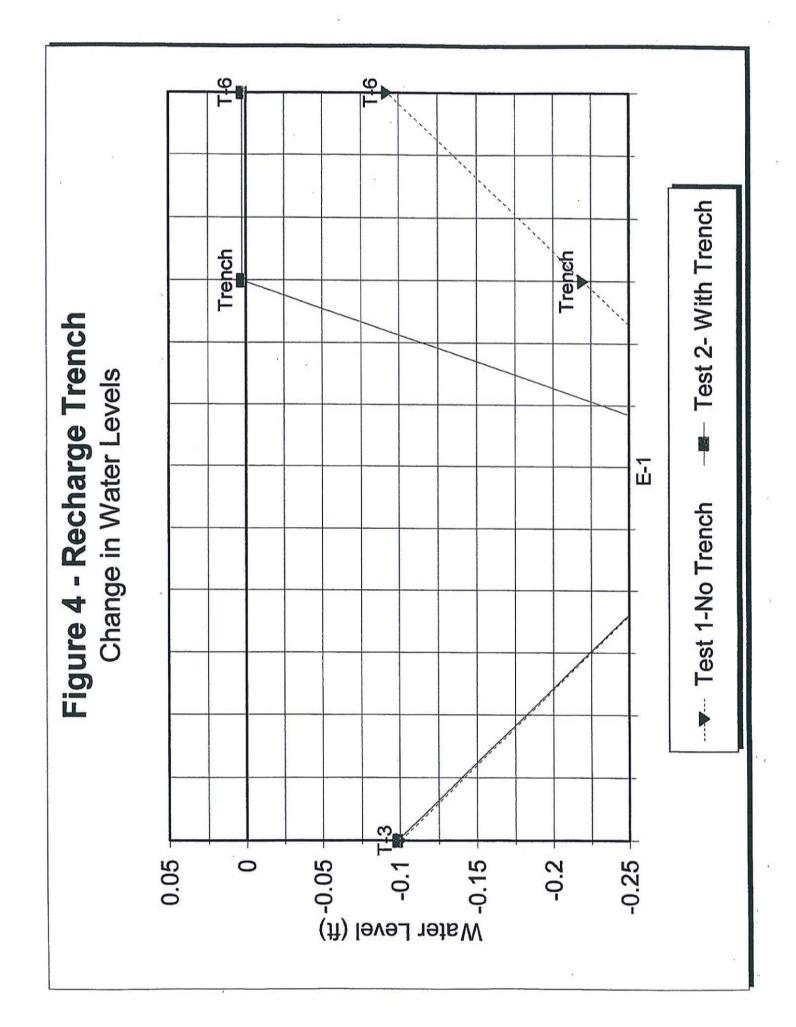
(4) Calculated from Columns A and B

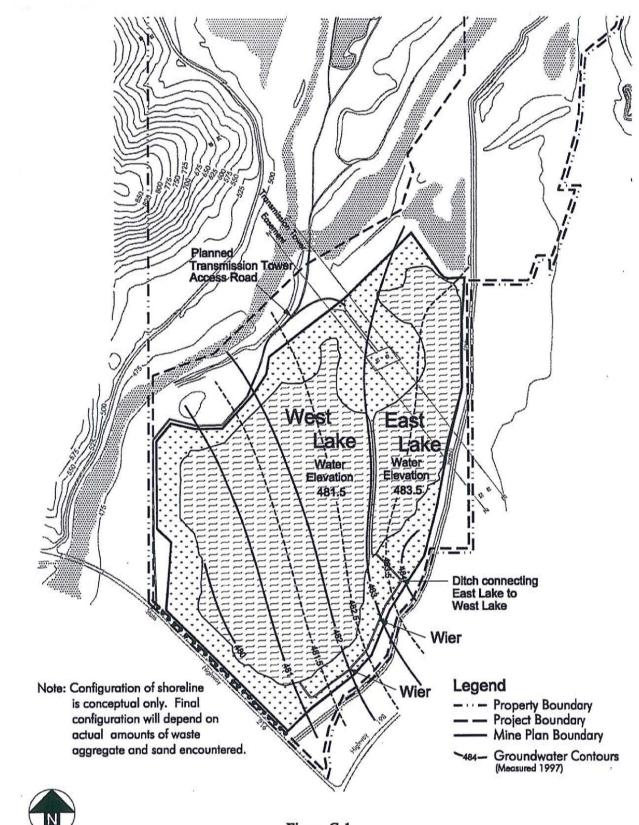
(5) For irrigated pasture, from Table 5 of DWR Bulletin No. 113-3 (6) For irrigated pasture, from Table 24 of DWR Bulletin No. 113-3











Scale: 1" = 750' Contour Interval = 25 Feet

750'

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Figure C-1 Reclamation Plan with Contours Stillwell Project Tulare County, California

ATTACHMENT A

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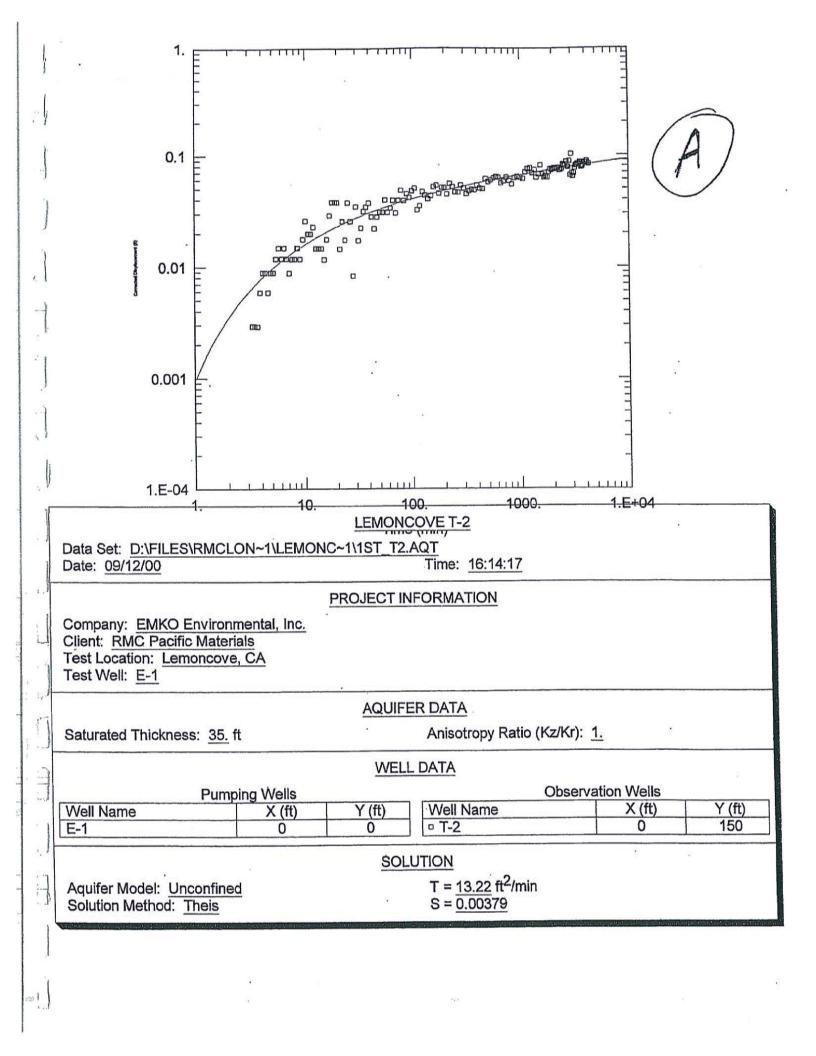
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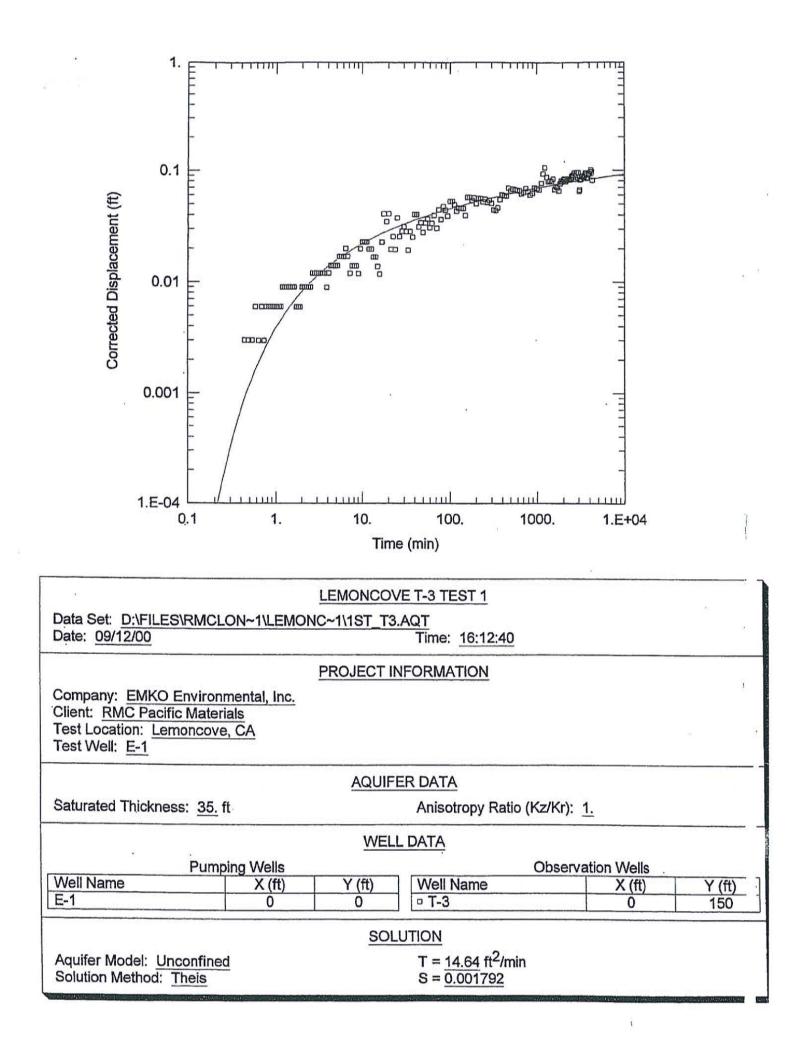
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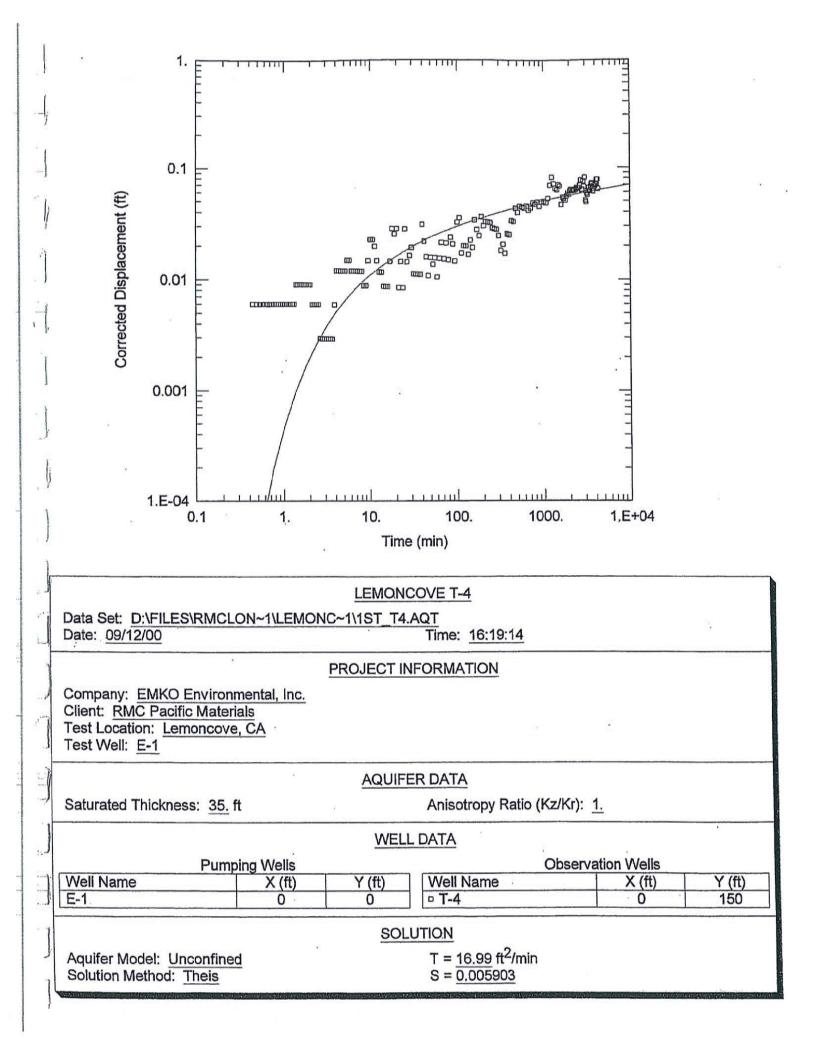
1-1

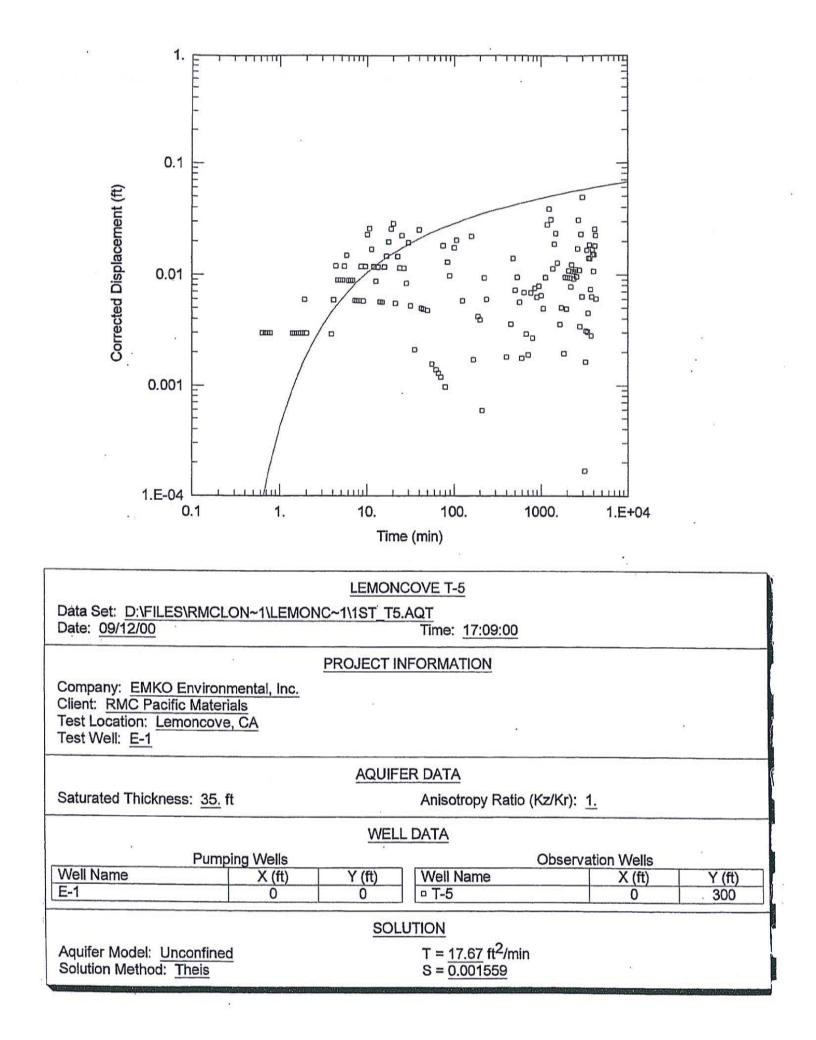
1

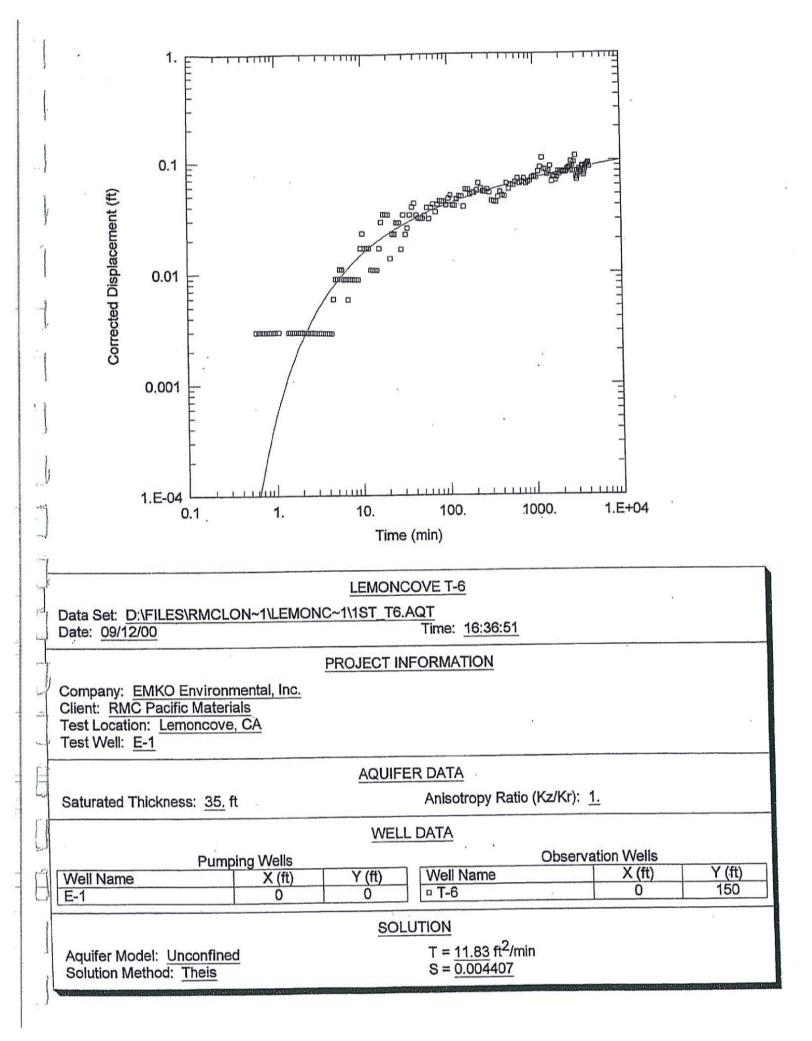
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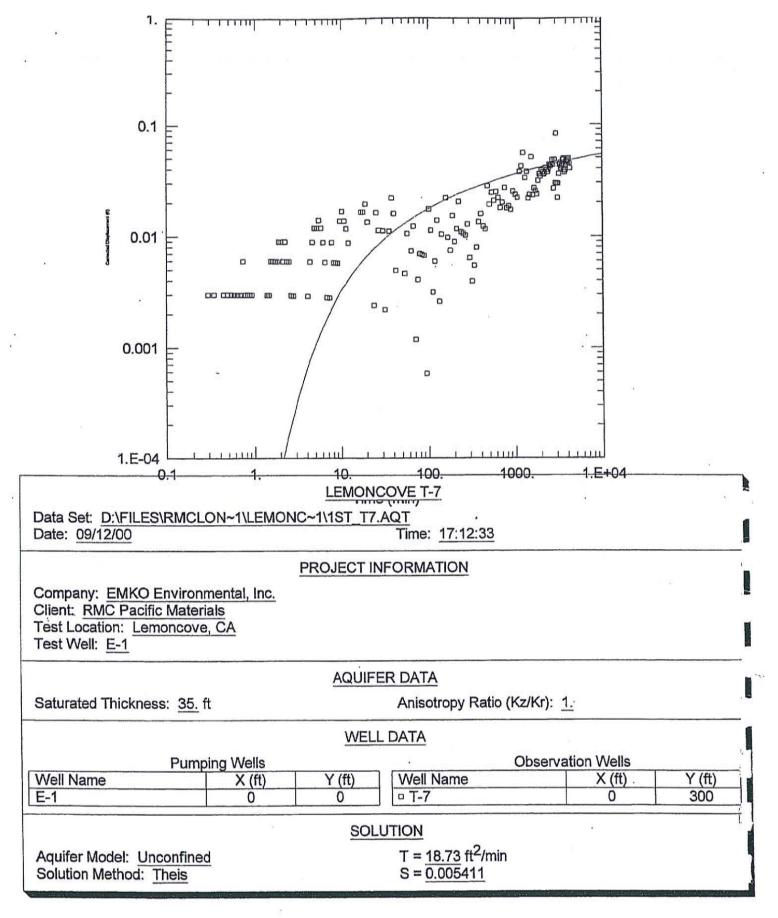


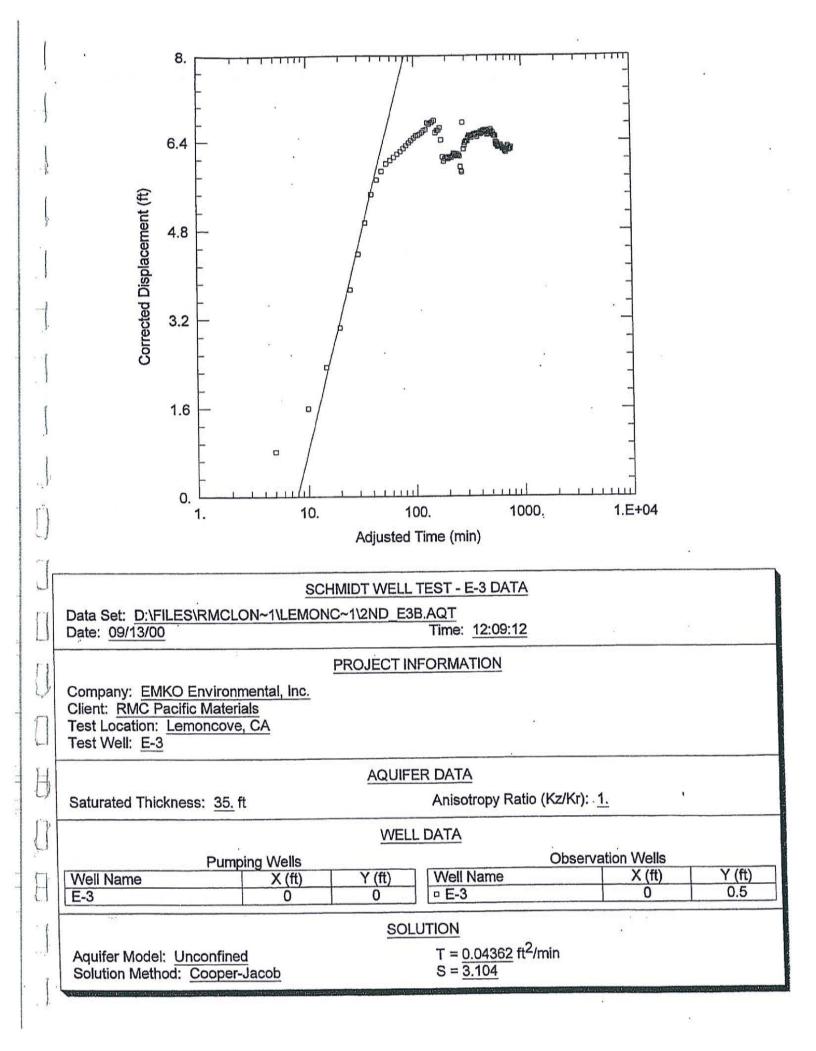


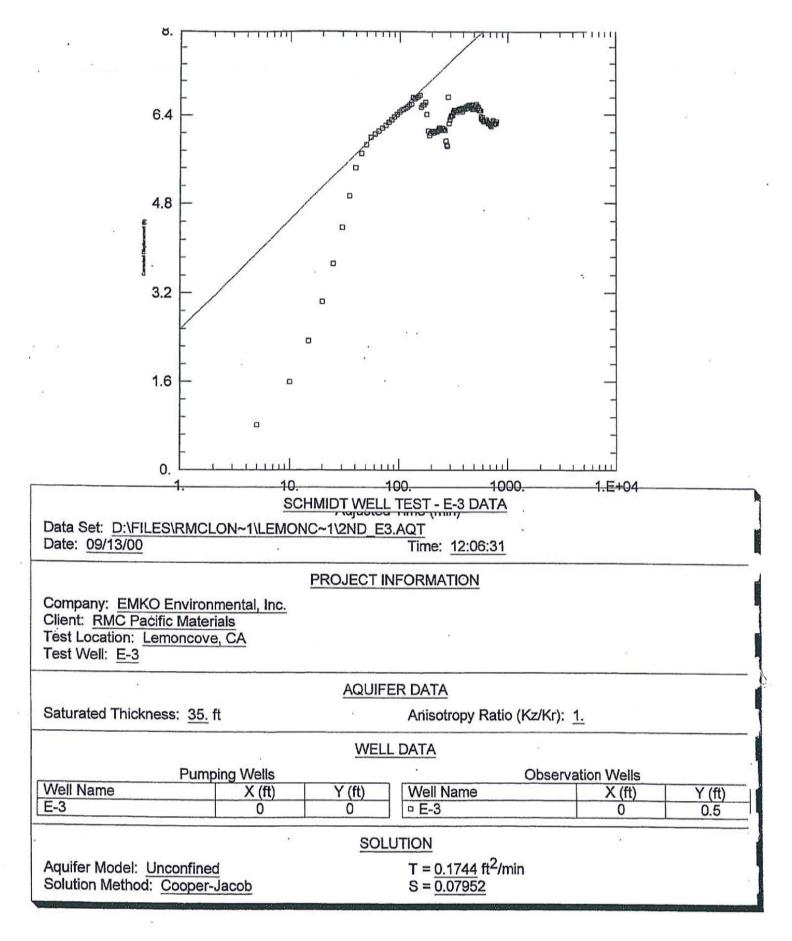


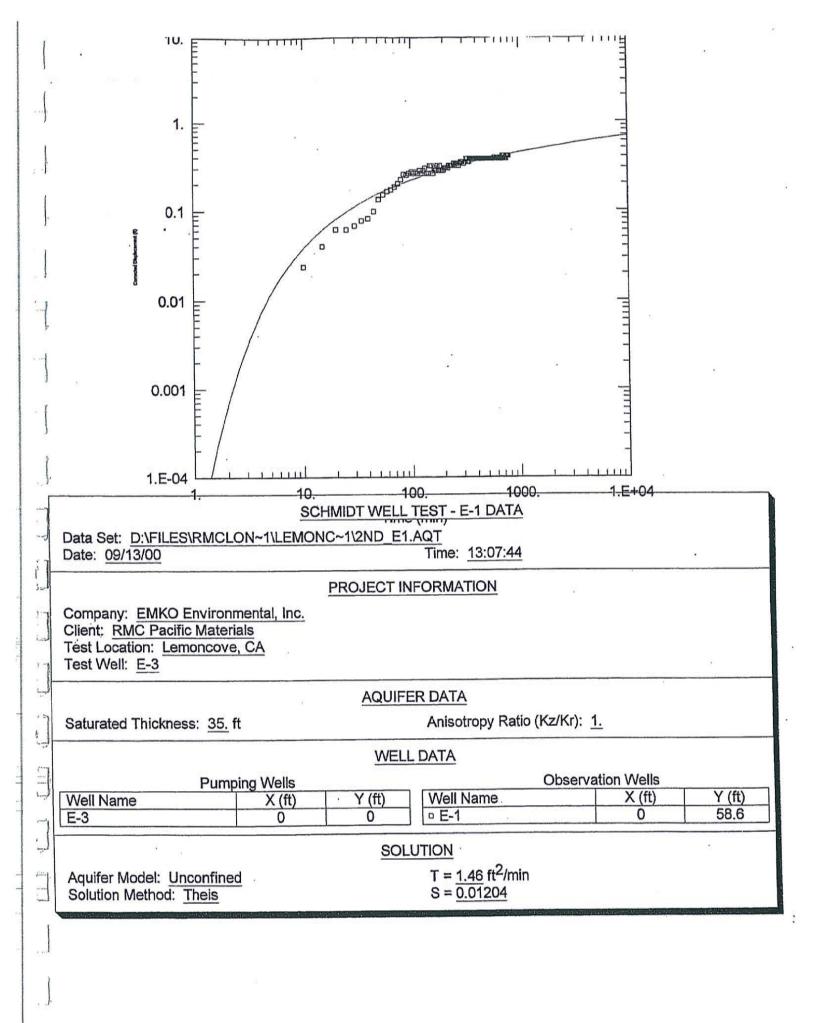


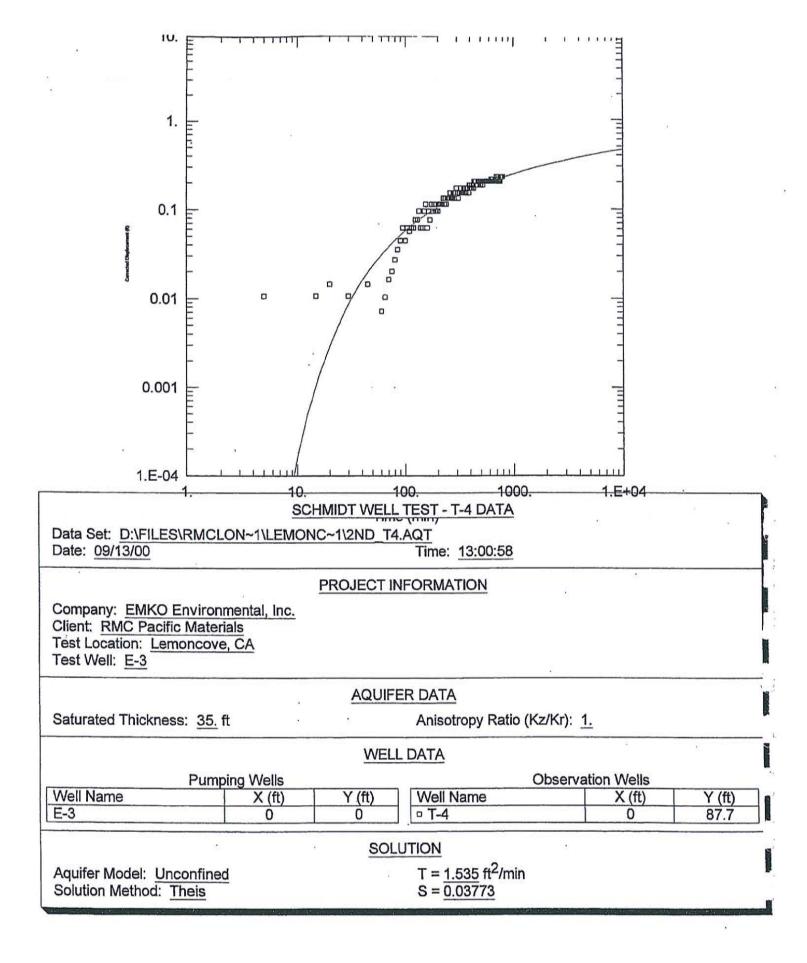


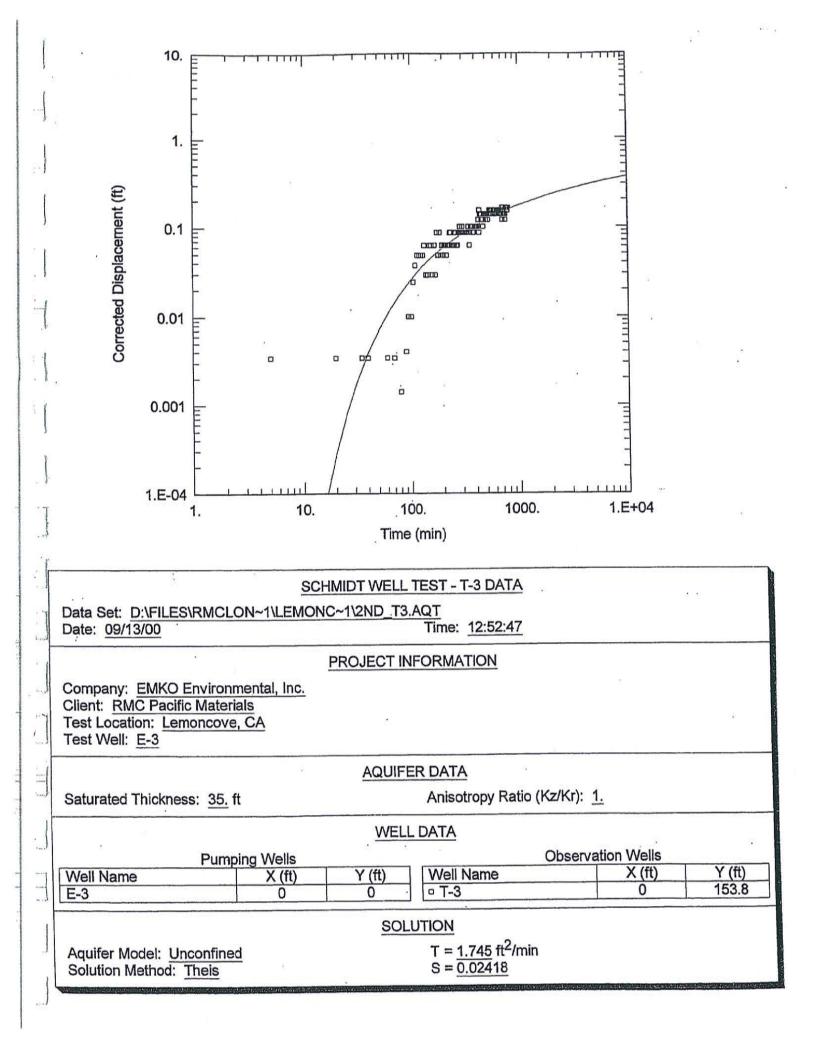












Part 2: August 25, 2014 Addendum to Peer Review Memorandum from Tully & Young to Tulare County RMA, and attachments



MEMORANDUM

То:	Mike Spata, Associate Director Tulare County Resource Management Agency
From:	Greg Young, P.E.
Date:	August 25, 2014
Subject:	Addendum to August 25, 2013 Peer Review of Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry

The purpose of this memorandum is to recognize the receipt of additional materials submitted by CEMEX to the County on Friday August 22, 2014 and Monday August 25, 2014.

Background

Tully & Young, Inc. has evaluated the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014 ("Report"), and provided a peer review memorandum to Tulare County ("County") during the week of August 18, 2014 documenting the findings and conclusions ("Peer Review Memo"). Upon review and acceptance by the County, the Peer Review Memo has been finalized as of today, August 25, 2014.

Recent Information from CEMEX

On Friday afternoon, August 22, 2014, additional materials were sent to the County by EMKO, including a memorandum with the subject Groundwater Elevation Data, Hydrographs, and contour Maps, CEMEX Stillwell Mine, and the associated elevation data accompanied by six groundwater contour maps (see **Attachment A**).

On Monday morning, August 25, 2014, EMKO also sent "a memorandum discussing the water quality data from the CEMEX Stillwell mine, a summary of the procedures used to purge and sample the wells, and photographs of each well head." This data is included in Attachment B.

As this information has been submitted following completion of the Peer Review Memo, this recent information will need to be assessed separately. A more complete review will be undertaken and provided separately to the County. Any refinements to the Peer Review Memo as a result of this review will be identified.

Preliminary Observations of Recent Information

As noted above, a thorough review of the recently provided information will be undertaken. However, a very cursory read of the water contour memorandum and review of the associated figures was undertaken late on Friday August 22, 2014. Based on that cursory review, a few preliminary observations are offered.

- The August 22 memorandum regarding groundwater contours states: "Thus, there does not appear to be any correlation between discharge rates to the recharge trench, groundwater elevations, and groundwater flow directions." (See Attachment A). This appears to contradict the original hydrogeologic analysis completed to support the 2002 EIR upon which the permit condition dictating the "V" ditch was derived as part of the quarry approval. As stated in the Hydrologic Data Evaluation Report, June 10, 2002 (included as Attachment 7 to the Peer Review Memo, referred to here as "2002 Report"), "Based on the data shown in Figure 5, use of the shallow trench will prevent a drop in water levels within the private wells that might otherwise be caused during the gravel mining operations." (2002 Report, p. 15). This statement and related analysis and conclusions of the 2002 report seem to indicate that there is a correlation that was demonstrable at the time.
- 2. There does not appear to be an assessment as to whether groundwater conditions underlying the subject properties were exacerbated by the lack of water in the "V" ditch since September 2013. The recent information simply states that water levels were low in March of 2012 when water was purported to be discharged to the "V" ditch, and in March of 2014, when no water was being discharged.
- 3. The memorandum regarding groundwater contours and water levels does not make an effort to provide further directed substantiation to the analysis and conclusions reached in the *Hydrogeologic Evaluation of Current Groundwater Conditions at the CEMEX Stillwell Quarry*, prepared by EMKO dated February 26, 2014. Rather it simply makes a conclusion that there are no correlations based on six individual groundwater contour maps.

In conclusion, as indicated above, Tully & Young will provide further analysis of the data recently submitted by CEMEX.

Attachment A

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)939-0133 akopania@sbcglobal.net

MEMORANDUM

August 22, 2014

To: Michael Spata, Tulare County RMA Greg Young, Tully and Young

Cc: Aaron Bock, Tulare County RMA Charles Przybylski, Tulare County RMA Gordon Brown, CEMEX Ronald Wilson, CEMEX Pete LoCastro, CEMEX Pat Mitchell, Mitchell Chadwick

From: Andy Kopania

Subject: Groundwater Elevation Data, Hydrographs, and Contour Maps CEMEX Stillwell Mine

This memorandum provides a discussion of the groundwater elevation data, hydrographs, and contour maps from the CEMEX Stillwell Mine. Transmitted with this memorandum are an Excel Spreadsheet entitled "Stillwell Water Level Data" and six PDF files containing groundwater contour maps. The "Stillwell Water Level Data" file contains the following information:

- Table 1 Available water level data from the wells that are monitored, including depth to water (DTW), surveyed top-of-casing elevation, and groundwater surface elevation (GWSE). For dates and wells where no information is reported, measurements were not made, typically due to lack of access to a specific well location.
- Table 2 A summary of the dates for which groundwater contour maps were prepared, including conditions that were occurring at the mine and recharge trench, recent groundwater elevation trends, and the amount of water that was pumped to the recharge trench the previous month (see footnote 1, below).
- A hydrograph showing the GWSE for all wells monitored.
- A hydrograph showing the GWSE for the CEMEX and private wells along the recharge trench.
- A hydrograph showing the GWSE for the wells that are peripheral to the mine and recharge trench area.

{00014963;1 }

 Four hydrographs that compare the GWSE in each of the CEMEX monitoring wells with the nearest private well.

Groundwater contour maps were prepared for six dates, as shown in Table 2, which is also presented below.

TABLE 2 Groundwater Contour Map Dates and Site Conditions								
Date	Groundwater Level and Trend	Dewatering Condition	Dewatering Rate (prior month, MM Gal.)					
7/18/06	Near highest levels recorded, stable trend	Active dewatering and discharge to trench	15.73					
3/1/08	Near highest levels recorded, stable trend	Active dewatering and discharge to trench	8.63					
5/1/11	At highest levels recorded, stable trend	Active dewatering and discharge to trench	12.15					
4/1/12	Near lowest levels recorded, declining trend	Active dewatering and discharge to trench	21.39					
1/1/13	Near highest levels recorded, increasing trend	Active dewatering and discharge to trench	37.75					
4/1/14	At lowest levels recorded, declining trend	No dewatering or discharge to trench	0.00					

The dates for the contour maps were selected to provide a representation of conditions during different mining, climatic, and recharge conditions. Specific dates were chosen to minimize outlier data (e.g. that may be a result of recent pumping of a private well) and to be representative of the overall data trend for the time period shown. The attached Figures 1 through 6 present the contour maps.

Data from for the wells that are peripheral to the mine and recharge trench area are not

{00014963;1 }

included in the groundwater contours. Based on their location, field observations, and aerial photographs (see base map for Figures 1-6), the Weller, Serrins, and Aksarban wells are completed within bedrock and are, thus, not representative of conditions in the shallow alluvial material at and adjacent to the Stillwell property. The Wolford well is located west of the Kaweah River.

The Hammond well is located south of the Stillwell property in an area of alluvium between two large bedrock hills. The water level in the Hammond well is consistently higher than the CEMEX monitoring wells and adjacent neighbors' wells, typically by at least 20 feet. It is uncertain if there is a groundwater divide, shallow bedrock barrier, or other hydrogeologic feature between the Hammond well and the Stillwell property. The data indicate that there is not a direct relationship between groundwater levels at the Hammond well and at the Stillwell property.

The groundwater contour maps (attached Figures 1-6) demonstrate that the groundwater gradient is oriented from the northeast toward the southwest. This gradient direction is consistent with previous interpretations of recharge occurring primarily due to runoff from the bedrock hills to the east and northeast and leakage from the saddle dam to the northeast when water levels in Lake Kaweah are high enough to saturate that area of the lake bed.

At certain times, the gradient is oriented toward the west in part of the area monitored. This is especially true when water levels are very low, such as in April 2012 (Figure 4) and April 2014 (Figure 6). In March 2012¹, the rate of water discharge to the recharge trench was very high (see Table 2 and additional documentation provided with my August 12, 2014 memorandum), and had been occurring at a high rate for at least the prior nine months. In March 2014, however, and the prior six months, there had been no discharge to the recharge trench. Thus, there does not appear to be any correlation between discharge rates to the recharge trench, groundwater elevations, and groundwater flow directions.

¹ Most water level measurements have been collected on the first of the month (e.g. April 1, 2012). Therefore, it is appropriate to consider the water volumes from the prior month (e.g. March 2012) when comparing discharge to the recharge trench with the groundwater contours. {00014963;1 }

					Tat Groundwater	ale 1 Elevation Data						
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3/1/11 15 12 401.88 4/1/11 14 87 462 13 8/1/11 12 72 404.28 404.28	0.57 517.33	4 14 480.18 4 24 480.06 3 72 480.58	4 75 483 75 4 42 484 08	6.18 487.62 5.43 468.37 6.6 487.20	14 14 491 66 15 56 490 24 16 97 488 63 13 21 492 59	_	3 78 492 32 9 27 486 83 14 22 481 88 13 56 482 54	8 24 507 96 9 42 506 78	47 480.30 6.16 479.04 5.85 479.05 5.85 479.35 5.72 479.46 6.47 479.46 6.47 479.46 6.47 479.73 8.08 477.12 0.87 475.33 6.56 478.64 8.89 476.31	0 97 470 93 6 32 481 58 7 59 482 31 6 39 481 51	3 34 466 36 324 486 46	0 84 483 16 7 47 485 53 6 16 486 81 5 65 487 35
0/1/11 12.28 464.72 7/1/11 12.64 464.36 0/1/11 22.32 454.68 9/1/11 22.53 454.47	1 32 516 52 1 79 516 11 2 02 515 68 3 12 514 78	3 12 481 18 4 47 479 83 4 02 480 28 5 12 479 18	4.75 463.75 5.74 482.76 5.04 483.46	6 07 467 73	16.27 489.53 11.07 494.73		15.51 480.59	10.00 506.11	6 47 478 73 8 06 477 12	9.12 480.78	4 71 484.99	8 91 484 09 5 04 487 90
9/1/11 22.53 454.47 10/1/11 14.73 462.27 11/1/11 15.56 461.42	3.72 514.16	4 92 479 38	7 02 481 48 4 26 464 24 4 95 463 55	11 04 482 78 6 82 486 98 6 47 487 33	17 02 488 78 16.5 469 30 17.52 468 28	_	22 03 474 07 14 51 481 59 14 44 481 66	11.07 505.13 11.05 505.15	9 87 475 33 6 56 478 64 8 69 476 31	9 21 460 69 9 09 460 81 0 01 479 89	3.01 400.09	3 09 489 91 6 43 486 57 5 68 487 37
10/1/11 14 73 462 27 11/1/11 15 58 401 42 12/1/11 15 58 401 42 12/1/12 15 3 461 70 1/1/12 15 87 401 13	4 08 513 82 4 10 513 80 4 35 513 55	3 83 460 47 6 21 478.09	6 03 482 47 12 68 475 62	6 47 487 33 8 01 485 79 13 31 480 49	16.05 469.75		14.44 481.66 15 481.10 16.96 479.14	10 9 505 30 11 34 504 86	4 2 481.00 8 1 477.10	2.11 477.79	3.9 485.80	6.8 486.20 15.1 477.90
2/1/12 16 21 460 79 3/1/12 16 63 460 37 4/1/12 14 93 462 07	3.56 514.32 4.76 513.12 4.35 513.55	7 96 476 34 7 67 476 63 6 01 476 29	11.56 476.04 11.15 477.35 12.02 476.48 14.89 473.61	6.66 450.94	17.65 467.95 17.97 467.63 17.91 467.69		18 41 477 89 17 98 478 14 18 47 477 63 19 51 476 59	13 51 502 69 11 46 504 74 11 27 504 93	6 94 470 20 1 9 46 475 74 1 10 19 475 01	3 21 476 69 3 51 476 39 14 6 475 30	13 18 476 52 13 93 475 77 14 55 475 15	16 43 476 57 16 91 476 09 17 33 475 67
8/1/12 20.67 456.13 8/1/12 14.61 462.39 7/1/12 21.25 455.75	4 31 513 59 22 33 495 57 517 90	6 01 476 29 8 01 476 29 8 62 475 68 8 94 475 38 9 19 475 11	12 08 476 42	3.82 489.98 9.75 484.05 9.51 484.29	14.74 491.06 17.65 468.14 17.5 468.30	_	19.51 476.59 19.34 476.76	10 54 505 66 12 77 503 43 16 51 499 69		_		
8/1/12 21 21 455 79 8/1/12 21 21 455 79	7.42 510.48 8.2 509.70 8.82 509.08 8.91 506.99	8 72 475 58 9.0 475 30 6.5 475 80 8 11 476 19	10 52 477 98 8 0 480 50 7 71 460 76 7 21 461 29	8.86 464.92 8.3 485.50	17.57 468.23		19.53 476.57	13.4 502.80	10 53 474 67 10 5 474 70	2 12 477 78	535 48435 4.1 48560 432 48538	8.6 484 40 8.2 484 80 7.52 485 48
10/1/12 16 21 460.79 11/1/12 16 1 460.90 12/1/12 14 76 462 22		6 1 476 19 6 1 476 20	721 46129 72 46130	7.49 486.31 6.8 487.00 6.6 467.20	17 28 408 52 17 2 468 60 17 2 468 60			16 23 499 97 11 71 504 49 11 75 504 45	10.05 475.15	2 41 477 49 2 25 477 65 12 2 477 70	3.61 485.69 3.65 466.05	6 91 486 D9 6 6 486 40
1/1/13 15.7 461.30 2/1/13 15.5 461.50	9.01 508.89 13.6 504.30	6 1 476 20 7 81 476 49 7 3 477 00 6 01 476 29	7 2 481 30 4 96 483 54 5 8 462 70 7 76 480 74	6 21 487 59 6 3 487 50 6 91 488 69	17.21 468.59 17.3 468.50 17.58 468.22		17 2 478 90 17 2 478 90 17 01 479 09 17 01 479 09	11 64 504 56 14 3 501 90 11 67 504 53	9.62 475.68 9.2 476.00	11.1 478.80 11.0 478.90 1.93 477.97	2 91 486 79 3 2 486 50 3 32 486 35	0.15 460.85 0.2 466.60 0.35 466.65
4/1/13 17.91 459.09	9.6 508.30 517.90	10 1 474 20 A 11 476 19	8.01 460.49	6.82 488.98	17.55 468.25		15.5 477.60	13 75 502 45 12 51 503 69	11 21 473.99 6.31 478.69	13 9 476 00 2 66 477 24	5 01 484 69 9 41 480 29	8.5 464.50 7.01 485.99
	11.9 500.00	13 21 471.09 15 4 466.90 12 91 471.39	8 8 479.70 8 4 460.10 9 1 479.40	7.7 4//6.10 8.5 4//5.30 7.2 4//66.60	17.9 487.90 12.5 493.30 15.61 490.19		194 476 70 194 476 70 1371 482 39	14.6 501.60	12.4 472.80	4 01 475 89 14 5 475 40 13 4 470 50	6.71 482.99 7.1 482.60 489.70	9 11 463 89 7 9 465 10
9/1/13 21.9 455.10 10/1/13 16.01 460.99	11.9 506.00	12 91 471 39 11 2 473 10 17 5 466 80 13 4 470 90	8 4 460.10 9 1 479.40 12 5 476.00 14 7 473.60	10.0 463.60 15.6 478.00 15.7 478.10	17.5 466.50		24.2 460.00	13.8 502.40	12.8 472.40 12.01 473.19	13 4 476 50 15 0 474 90 15 3 474 60	11 4 478 30 15 6 474 10	14.2 478.60 18.4 474.60
1/1/14 16 24 460.70 2/1/14 16 53 460.47	12.8 505.10 16.23 501.67 13.27 504.63	11.17 473.13	12.0 475.60 14.43 474.07 14.92 473.58	15.21 478.59 15.45 478.35	18.47 487.53		18 9 477 20 21 44 474 66 22 01 474 09	15.5 500.70 13.79 502.41	14.7 470.50	16.0 473.90	15.8 473.90	16.3 476.70
3/1/14 16 35 460 65	13 11 504 79 14.51 503 39	11.61 472.49 12.98 471.32 12.5 471.60	1535 473.15 1643 472.07	15.65 478.15	19 11 466 69 19 09 466 71 19 5 466 30	_	20 2 400 90 18.9 477 20 21.44 474 66 22.01 474 09 22.24 473 86 24.11 471 99 23.1 473 80 22.35 473 8	13 43 502 77 14 48 501 74	13 73 471.47 14 65 470.55 14 38 470.55	7.74 472 18 8.91 470 99 8.45 471 45	17 41 472 29 17 73 471 97 17 75 471 95	19.52 473.48 20.25 472.75 19.87 473.13 19.51 473.5
5/1/14 16 78 460 22 6/1/14 16 54 460 5	13.6 504.30 13.95 504.0	11.21 473.1	15.40 473.1	15.85 477.95 15.31 478.5	18.72 467.1		2235 4738		14 38 470 82	9.11 470 1	17.56 472.1	19.51 473.5

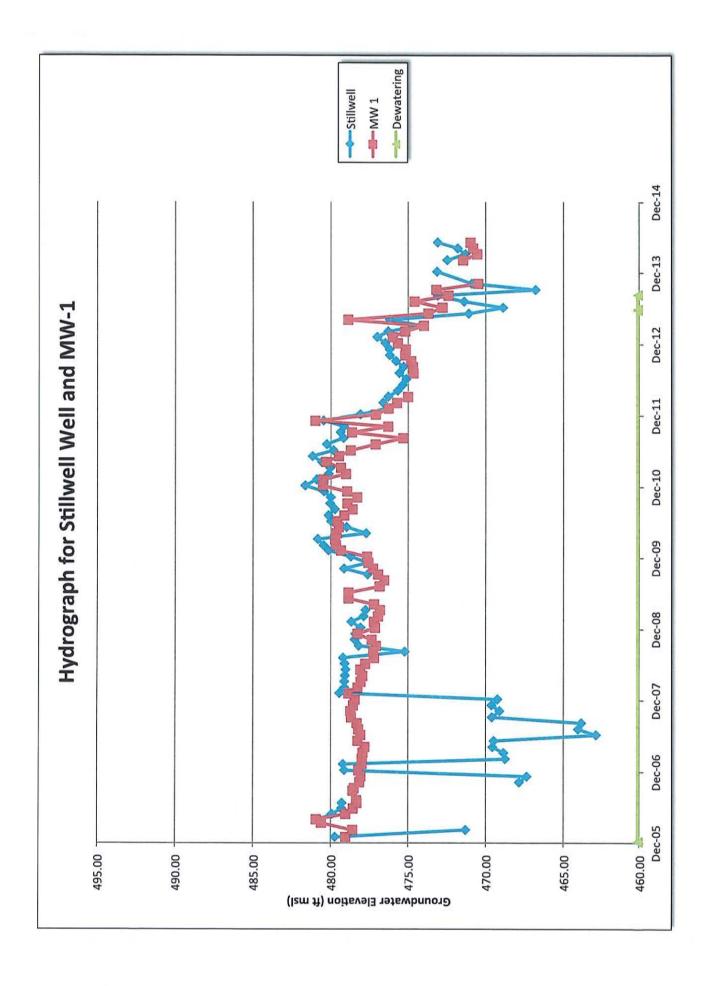
GSE = Ground surface elevation DTW = Depth to Water GWSE = Groundwater surface elevation ft bgs = feet below ground surface ft mai = feet above mean sea (evel

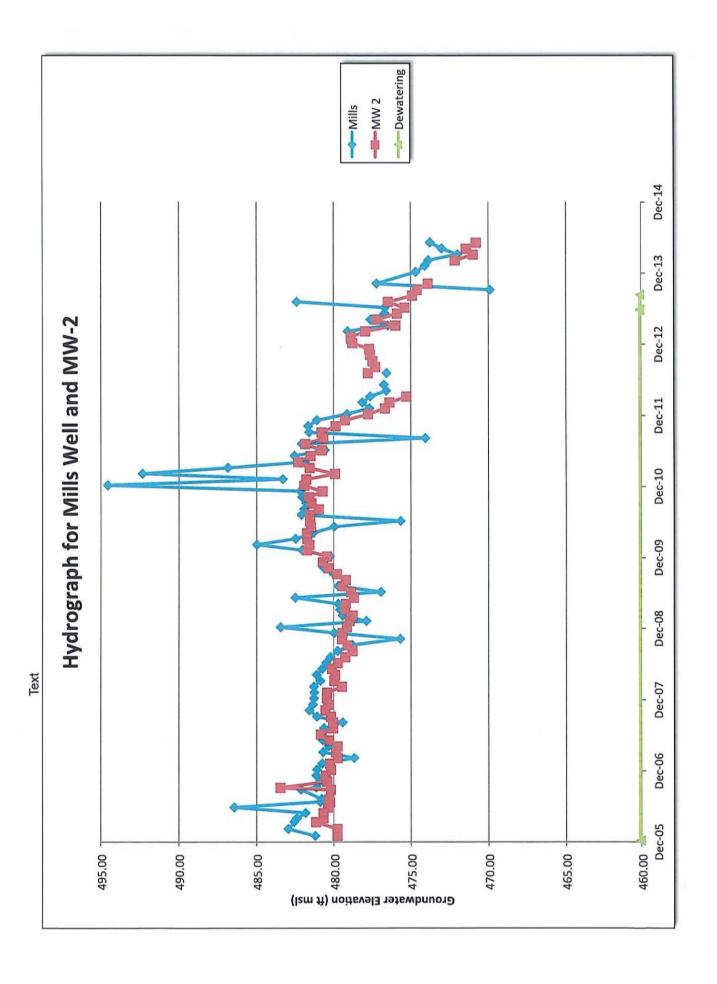
 1/1/06
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 6/15/13
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 9/4/13

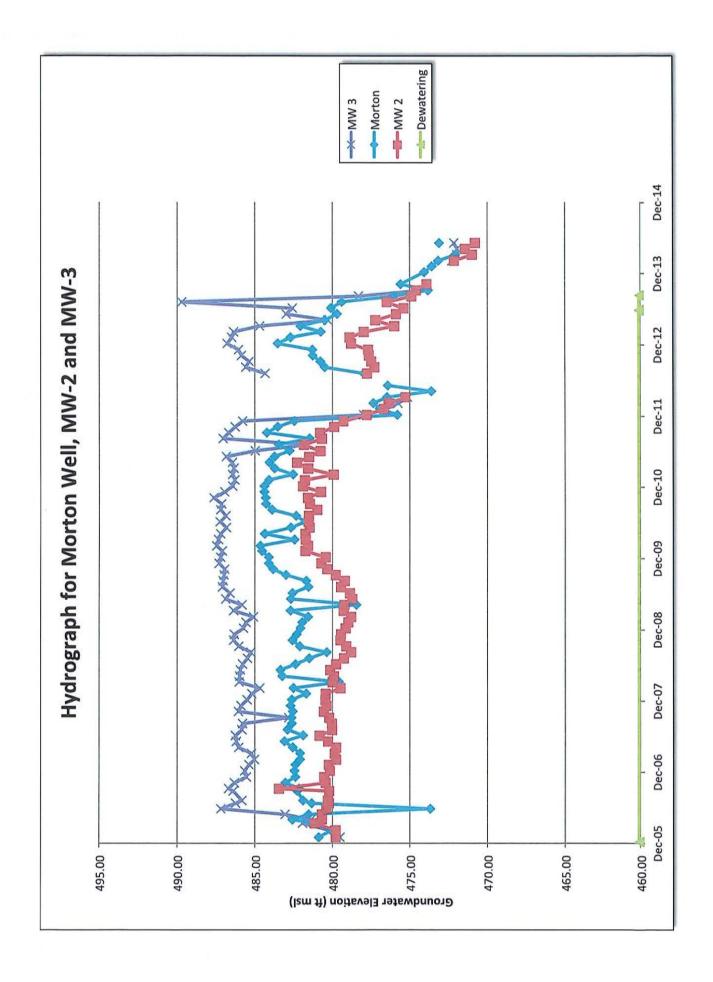
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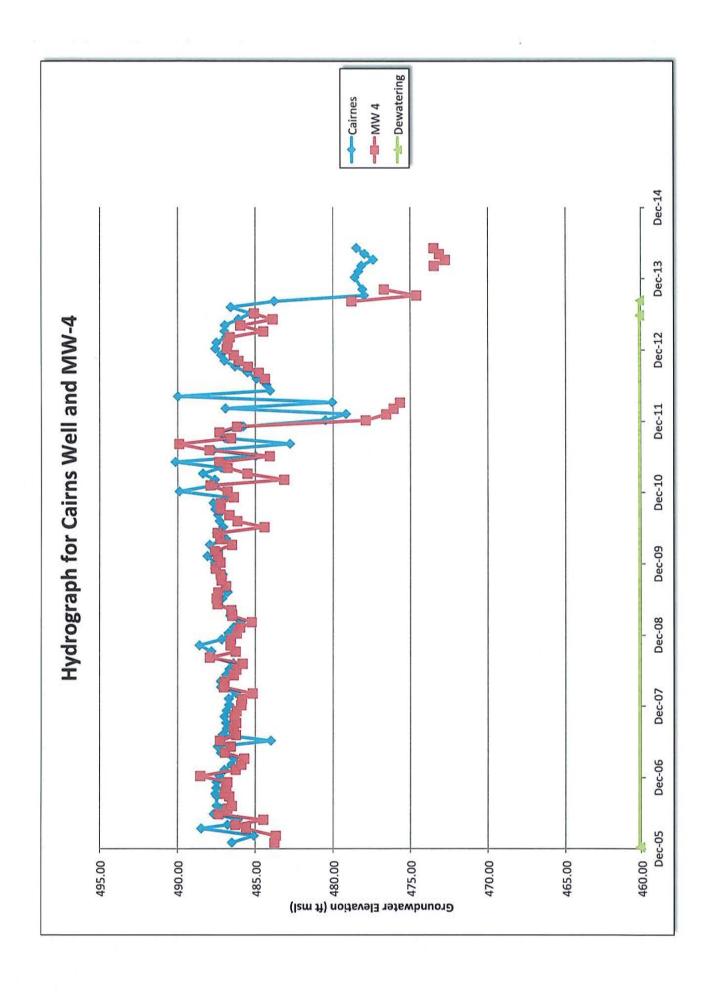
TABLE 2	
Groundwater Contour Map Dates	
and Site Conditions	

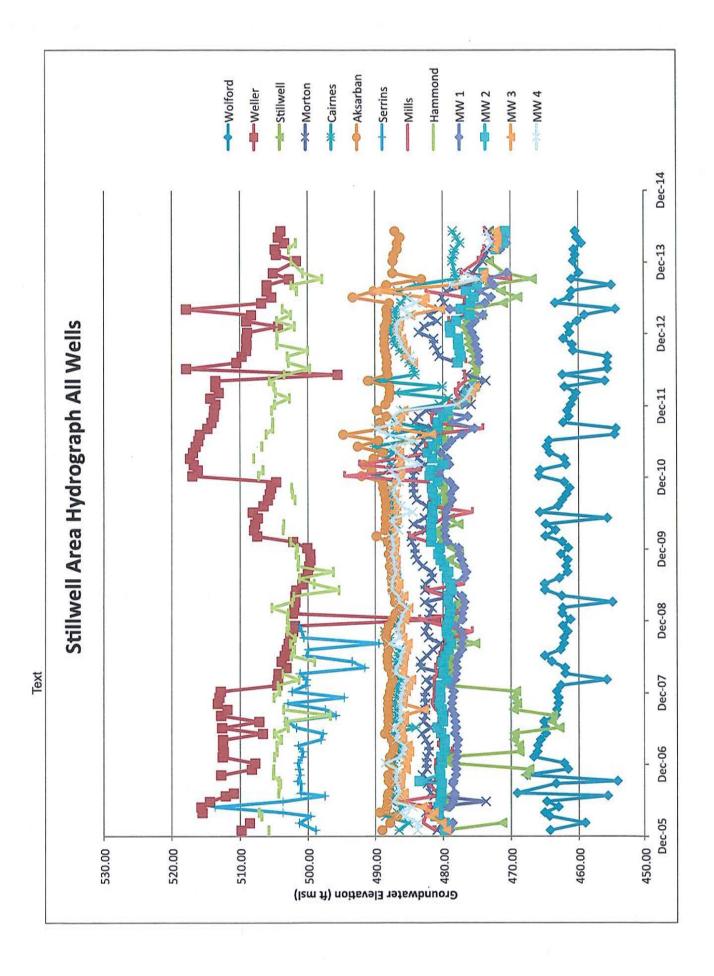
	Groundwater Co	LE 2 Intour Map Dates Conditions	
Date	Groundwater Level and Trend	Dewatering Condition	Dewatering Rate (prior month, MM Gal.)
7/18/06	Near highest levels recorded, stable trend	Active dewatering and discharge to trench	15.73
3/1/08	Near highest levels recorded, stable trend	Active dewatering and discharge to trench	8.63
5/1/11	At highest levels recorded, stable trend	Active dewatering and discharge to trench	12.15
4/1/12	Near lowest levels recorded, declining trend	Active dewatering and discharge to trench	21.39
1/1/13	Near highest levels recorded, increasing trend	Active dewatering and discharge to trench	37.75
4/1/14	At lowest levels recorded, declining trend	No dewatering or discharge to trench	0.00

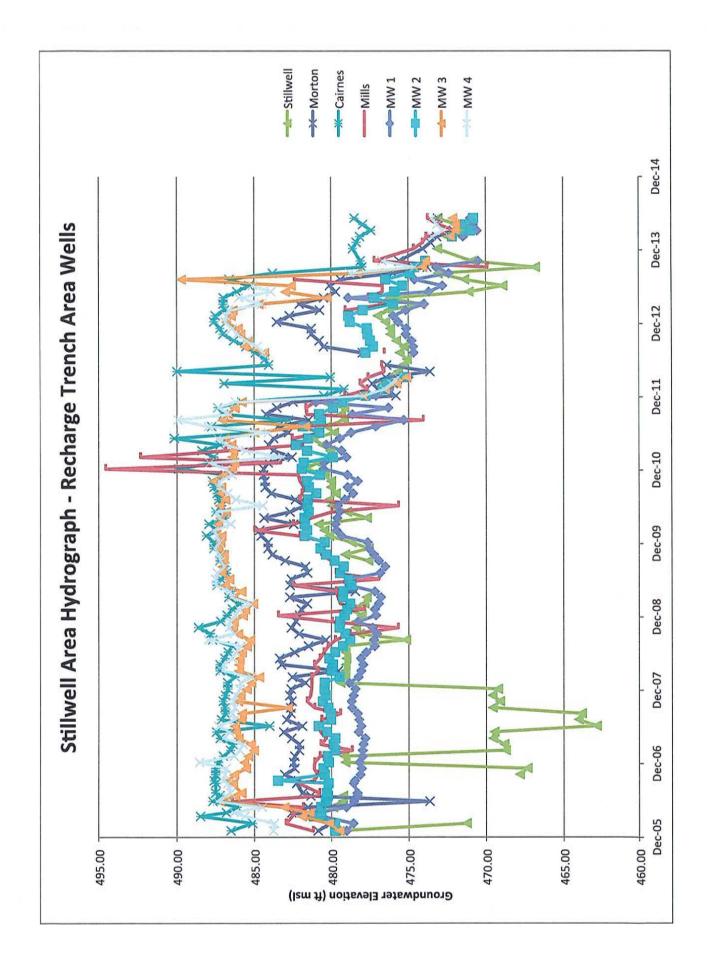


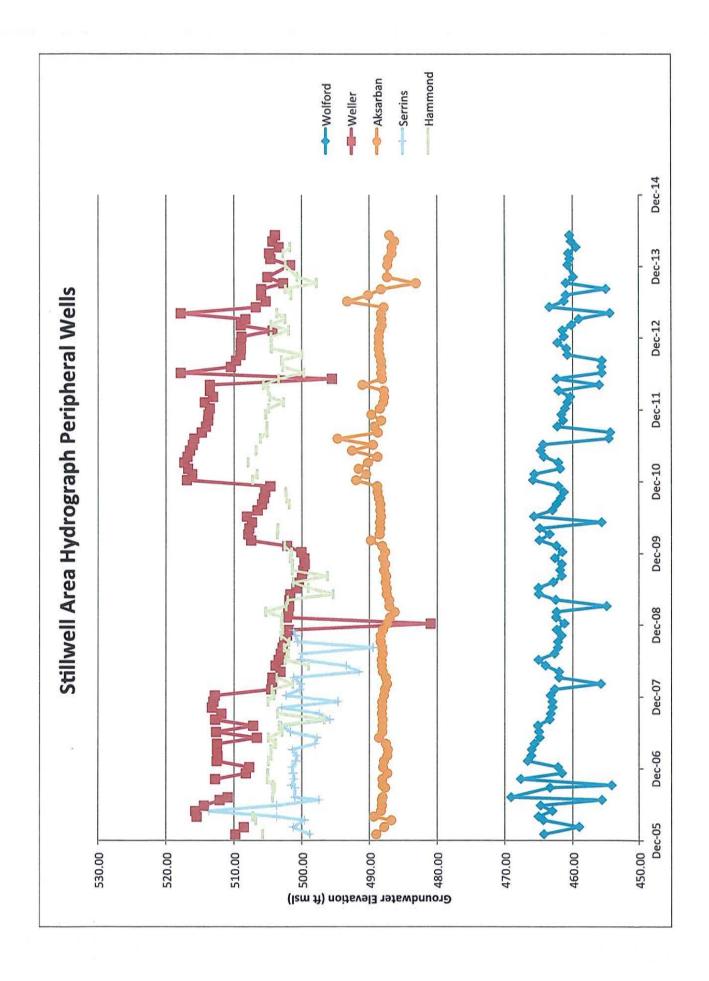


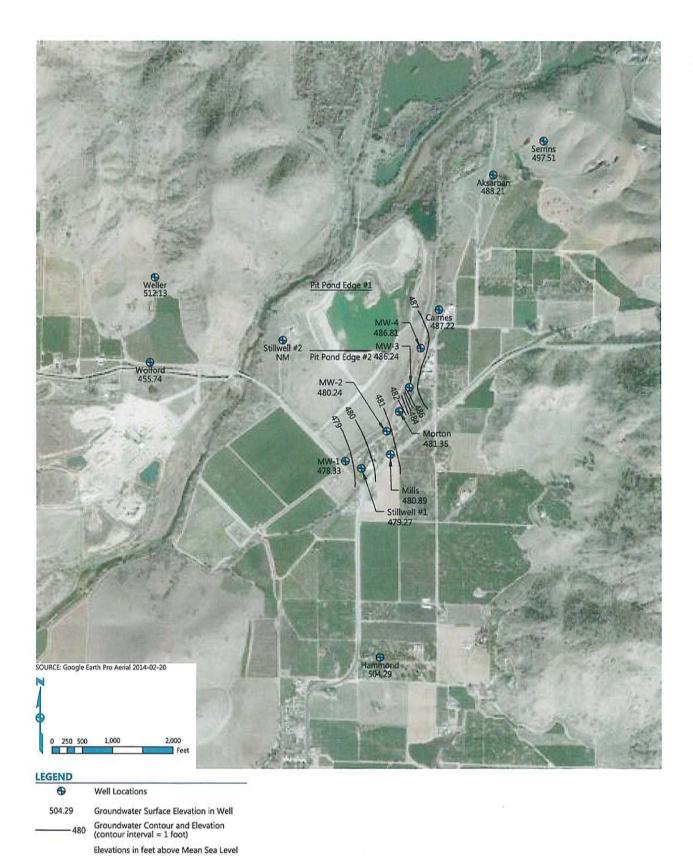




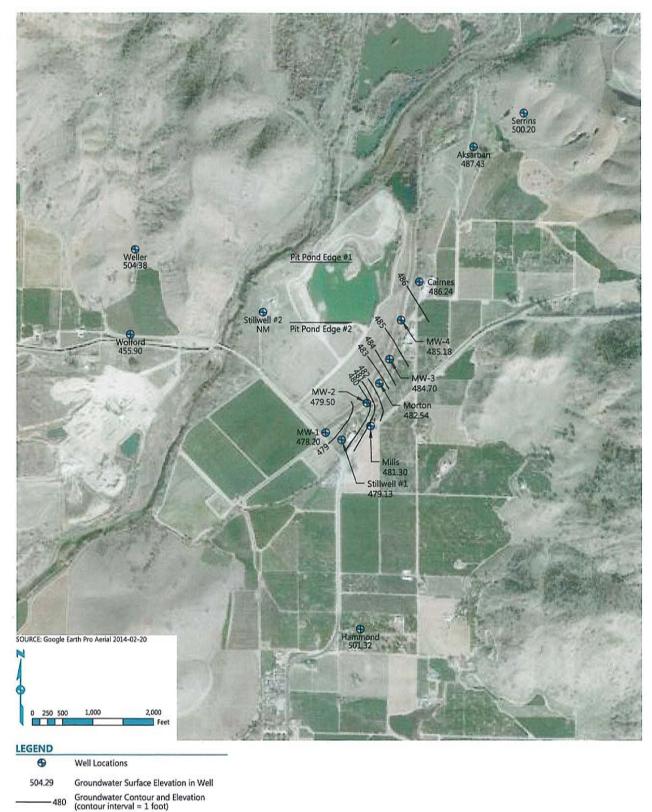




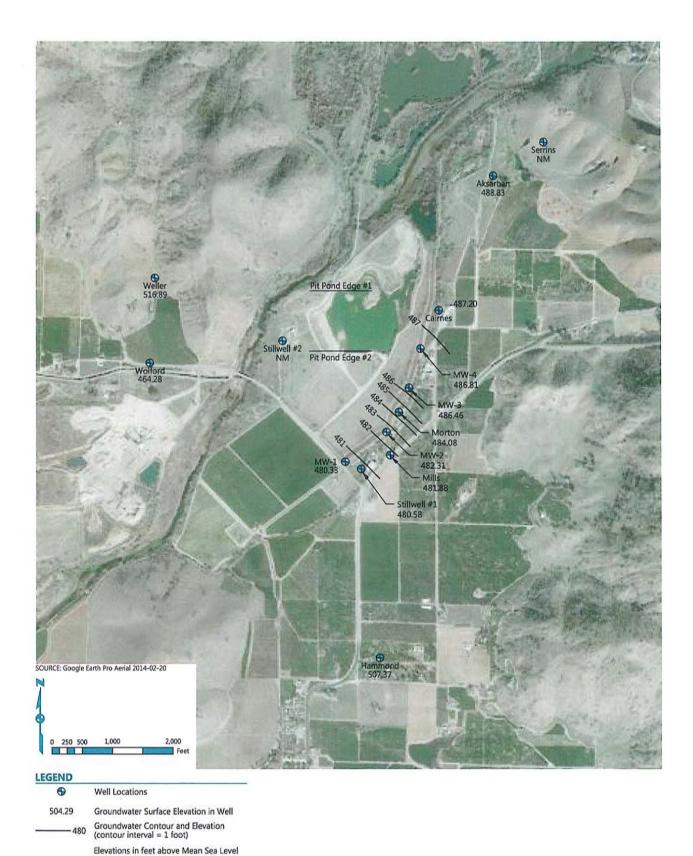


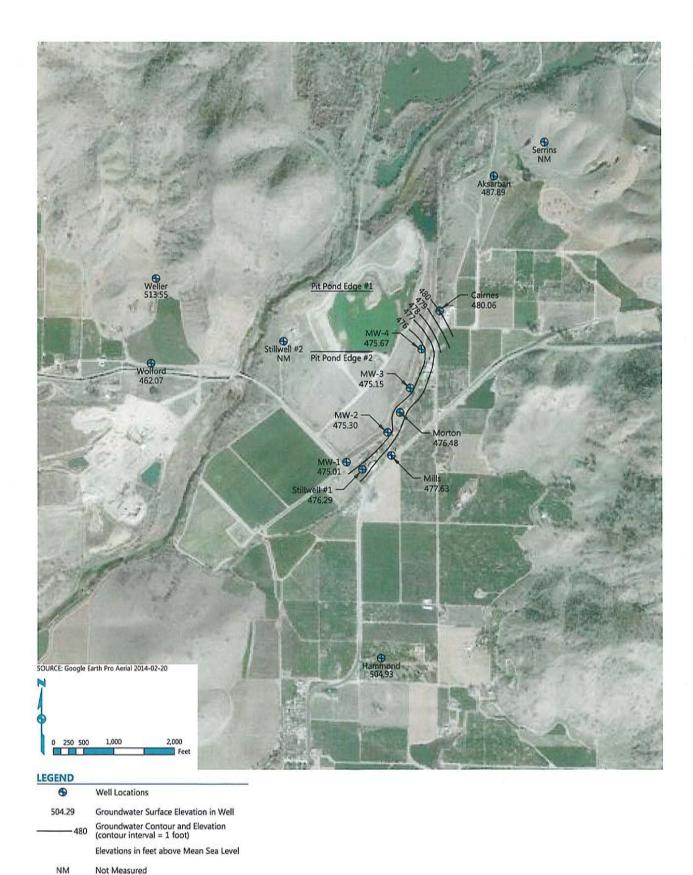


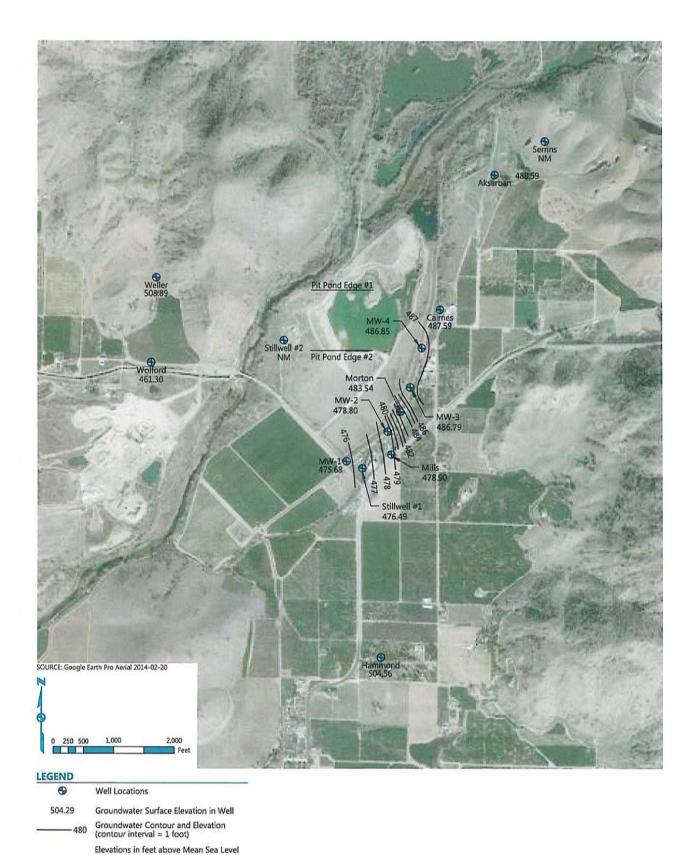
EMKO Environmental, Inc.

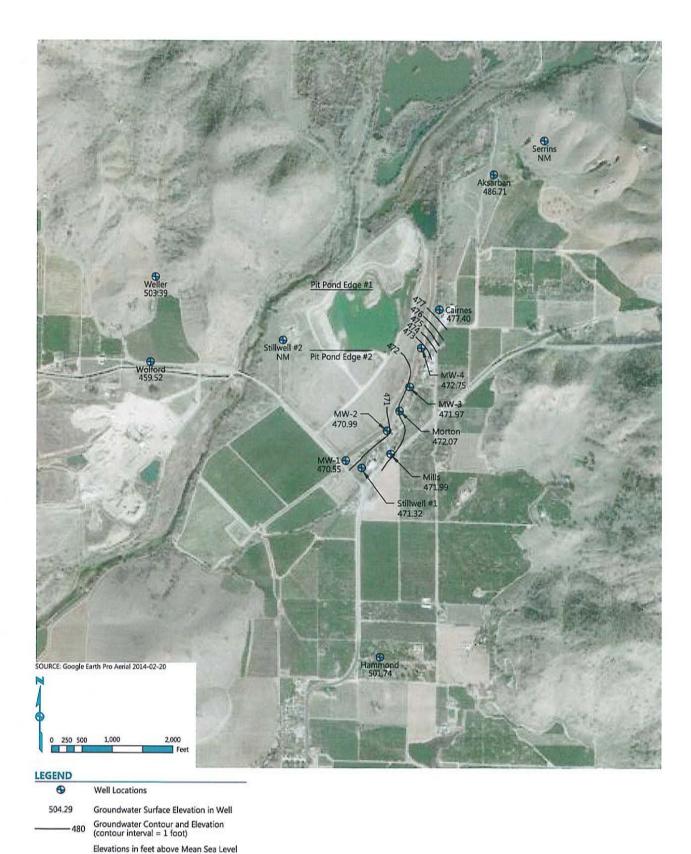


Elevations in feet above Mean Sea Level









Attachment B

EMKO Environmental, Inc.

551 Lakecrest Dr. El Dorado Hills, CA 95762-3772 (916)939-0133 akopania@sbcglobal.net

MEMORANDUM

August 25, 2014

- To: Michael Spata, Tulare County RMA Greg Young, Tully and Young
- Cc: Aaron Bock, Tulare County RMA Charles Przybylski, Tulare County RMA Gordon Brown, CEMEX Ronald Wilson, CEMEX Pete LoCastro, CEMEX Pat Mitchell, Mitchell Chadwick

From: Andy Kopania

Subject: Water Quality Data CEMEX Stillwell Mine

This memorandum provides a brief discussion of water quality data obtained as part of monitoring conducted in relation to the CEMEX Stillwell Mine. Transmitted with this memorandum are the following:

- Excel Spreadsheet entitled "Water Quality Summary with Plots"; containing Table 1 showing the available water quality data and various water-quality analysis plots.
- Word file entitled "RMC Water Sampling and Sounding Procedures", describing the methods used to obtain samples.
- PDF file entitled "Wellhead photos", showing the wellhead for each well sampled, except for Morton. The Morton well was not accessible on the date the photographs were taken due to a dog in the yard.
- Nine PDF files with titles beginning with "DELLAVALLE- -CEMEX QUARRY <DATE>", providing the field records of well purging and sampling for the monitoring wells. The indicator <DATE> represents the date of the sampling event.
- Nine PDF files with titles "CEMEX 2005" through "CEMEX 2014" presenting the laboratory analytical reports summarized in the Excel Spreadsheet file referenced in the first bullet, above.

{00014963;1 }

August 25, 2014 Page 2

Of particular concern in the results are the nitrate levels in the Cairns, Morton, and Stillwell domestic wells. The nitrate levels routinely exceed the maximum contaminant level (MCL) for drinking water of 45 milligrams per liter (mg/L).

Due to an apparent miscommunication in the field, the mine pit (referred to as the "Pump Basin" on Table 1 and the lab sheets) and v-ditch were only sampled in 2006. Nitrate was not detected in the sample from the mine pit and was present at less than one-tenth of the MCL in the v-ditch sample. Comparison of the 2006 data from the v-ditch and the three domestic wells also indicates additional water quality differences, such as much higher total dissolved solids (TDS) in the domestic wells and differences in the proportion of various anions and cations (see Table 1 and the water quality plots in the Excel spreadsheet file).

Based on the groundwater flow direction (see August 22, 2014 memorandum *Groundwater Elevation Data, Hydrographs, and Contour Maps*), the elevated nitrate and TDS in the domestic wells is most likely a result of local septic systems clustered near the domestic wells and/or the orchards upgradient to the northeast of the domestic wells. The elevated nitrate and TDS are not sourced from the mine site or the v-ditch.

It is anticipated that all wells, the mine pit, and the v-ditch trench will be sampled shortly after pumping begins early next month to dewater the mine pit to prepare for the resumption of aggregate extraction.



1910 W. McKinley, Ste 110, Fresno, CA 93728, (559) 233-6129 FAX (559) 268-8174

3. METHODS

Monitoring Well Water Quality Sampling

A qualified subcontractor will be employed to sample the groundwater monitoring wells.

Before each sampling event, measurements of static water level will be taken from the north side of the top of each casing and recorded to the nearest 0.01 foot with respect to the established casing elevation. After collecting static water level measurements, the monitoring wells will be purged of at least three well volumes and sampled. During purging, temperature, pH, and specific conductance parameters of the return water will be periodically measured until the parameters stabilize.

Water samples will be collected from each well into laboratory prepared containers, sealed with tight fitting caps, labeled, and logged into a sample chainof-custody. Samples will then be stored in a cool ice chest while awaiting delivery to Dellavalle Laboratory, Inc. Dellavalle Laboratory is a California Certified Environmental Laboratory Accreditation Program (ELAP) laboratory.

3.2 Domestic Well Water Quality Sampling

Domestic water samples will be collected from the tap hydraulically nearest each domestic well. The tap will be run for an amount of time sufficient to purge any water standing the pipes.

Water samples will be collected from each well into laboratory prepared containers, sealed with tight fitting caps, labeled, and logged into a sample chain-of-custody. Samples will then be stored in a cool ice chest while awaiting delivery to Dellavalle Laboratory, Inc. Dellavalle Laboratory is a California Certified Environmental Laboratory Accreditation Program (ELAP) laboratory.

3.3 Storage Basin Water Quality Sampling

Grab samples will be collected from four to six locations in each storage basin. The samples will be obtained from a depth of approximately one foot or greater from below the waters surface. These samples will be combined, thoroughly mixed, and the resulting sample will be placed in a laboratory



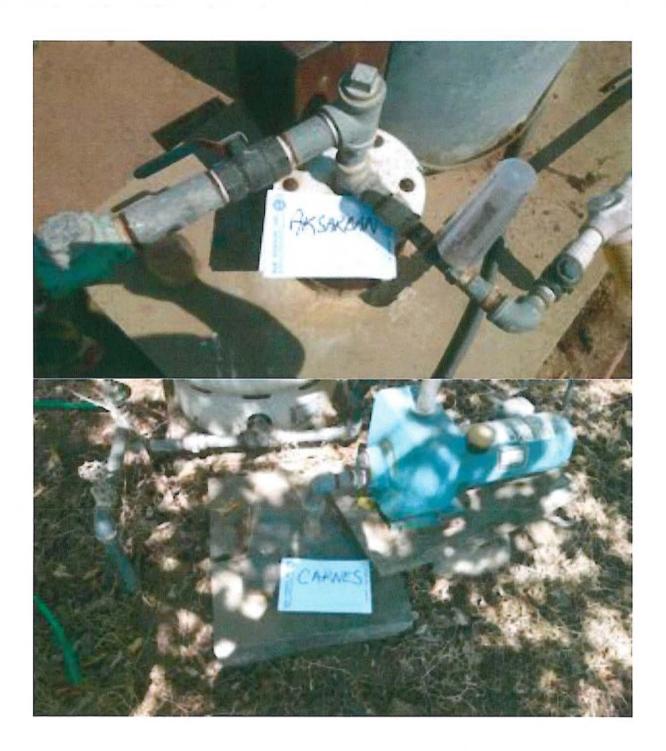
prepared container, sealed, labeled, and stored in an ice chest while awaiting delivery to Dellavalle Laboratory. Dellavalle Laboratory, Inc is a California Certified ELAP laboratory and will perform sample analyses by appropriate analytical methods.

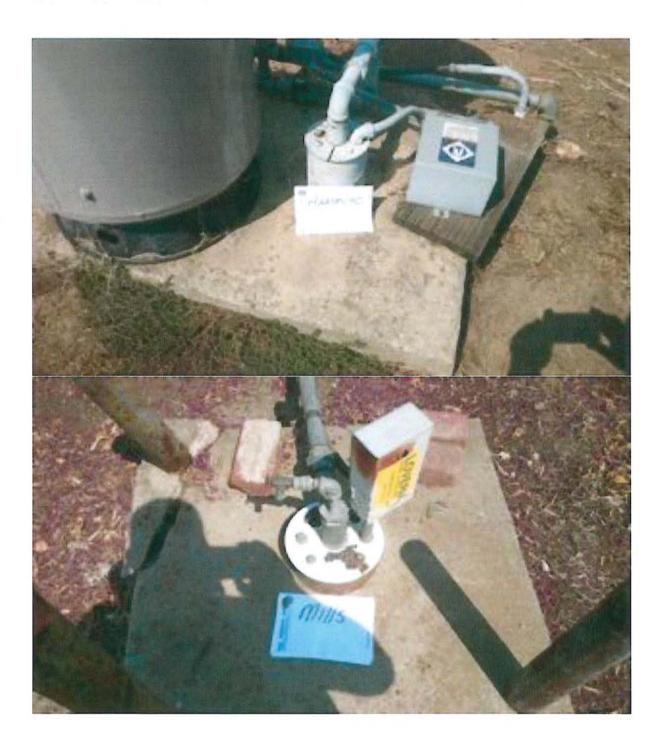
3.4 Groundwater Level Measurement

The groundwater monitoring well static water level measurements will be taken from the north side of the top of each casing and recorded to the nearest 0.01 foot with respect to the established casing elevation.

The domestic well static water level measurements will be taken from a hole at the top of each well casing, (provided that a sounding hole is present). A measurement reference point will be established and recorded for each well. Sounding equipment will be sanitized prior to being placed into the well. Water level measurements will be recorded to the nearest 0.01 foot with respect to the established reference point.



















2006 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. May 11, 2006

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



DEL-TECH geotechnical support services

MONITORING WELL FIELD LOG 2006

SAM	PLE LOCATIO	ON/MW-	1		DATE:			5/11/2006			
PROJI	ECT NAME:	(CEMEX		ANALYSIS PERFORMED: SEE CHAIN OF CUSTODY						
ADDR	ESS:	24325 I	LOMITAS DI	R.	SAMPLE	TIME:		17:00			
CITY,	STATE:	LEMO	NCOVE, CA		SAMPLE	CONTAI	NERS:	2 - LITER PLA	STICS		
	CONTACT:	GERA	LD COBURN	N I	PRESER			NEAT / HNO3			
CONS	ULTANT:				LAB. AN.	ALYSIS B	Y:	DELLAVALLE	LABS.		
			New West Commence								
	ECT MANAGER:		NYDAM		MONUM	the state of the second se		POST			
SAMP	and a model of some distance of the source o		H / DON LIC				ATERIAL :				
SIGNE			Par 2.2.			ASING DI		2" /	0.1632		
	LE MEDIA:	Contra and Contra	JNDWATER		P.I.D. RE	ADING / 0	DDOR:	N/A	NONE		
and the second	F CASING ELEV	the base of the state of the ball of the b	6.1.6	MSL	COLOR:	monvio	·	CLEAR	C 1 T		
the second s	H TO WATER:	a second and a second as a second as the	6.15	FEET	CALC. P	which is not set on the set of th	CONTRACTOR OF THE OWNER OWN	4.85	GAL.		
and the local division in the local division		(feet.100th's)	35.89	FEET		the second s	PURGED:	14.56	GAL.		
STAN	DING WATER CO	DLUMN:	29.74	FEET	DEPTH C	DF PUMP:		34	FEET		
			FIEI	D PAI	RAMETE	RS					
			DVID CDVDIC	TT	E C	THE AD	0.0.0	DISCOLVED	TUDDIDUT		
гіме	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
	CASING VOLUME	DOWN	RATE	8 8 8		120711	22 2 3	OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)		(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	7.69	420	20.4	48	0.47	45		
	4.85		"	7.11	387	18.6	55	0.40	16		
	9.71	"		7.09	380	18.5	65	0.60	10		
_	14.56			7.11	375	18.3	68	0.69	9		
							-				
PURG	E METHOD:		CENTRIFUG.	AL PUMI	Ρ.						
SAMP	LE METHOD:		CENTRIFUG.	AL PUMI	P						
	V. AFTER PURGE:					T SAMPL	E TIME:	6.68'			
WELL	INTEGRITY:		CAP & SEAL	ARE SE	CURE.						
	LOCATION:		SEE SITE MA	AP.							
REMA	RKS:										
WEAT	HER:		CLEAR / HO	r!		WIND:		NONE			
	ITY CONTROL:		and the last of th		MENT AND S	and the second se	EOUIPMENT	WAS CLEANED IN	I THE		
Quitte	irr contract.		And the second statement of the se	the second s	subdivision in a link one of the second s	the second state of some the balance of the party of the party	and the second se	NITRILE GLOVES	and the second state of th		
CONT	AINMENT:		D.O.T. 17 55		and the second se	ANY OCCUPANT AND	An of the second s				
INSTR	UMENTATION-		V 6 1 3560 EL	OWCELL	_	V S I DISSO	LVED OXYGE	NMETER			
INSTRUMENTATION: Y.S.I. 3560 FLOWCELL SOLINIST SLOPE METER							NE 580B P.I.D.				
			0.01011 1101 0100	a and streams him			The second a street				
			KECK INTERF	ACEMET	ER	TURBIDITY	METER				



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2006

SAMPLE LOCATION / MW - 2 DATE: 5/11/2006

PROJECT NAME:	CI	EMEX		ANALYSIS PERFORMED:	SEE CHAIN O	F CUSTODY		
ADDRESS:	24325 LC	MITAS E	DR.	SAMPLE TIME: 16:24				
CITY, STATE:	LEMON	COVE, C.	Α.	SAMPLE CONTAINERS: 2 - LITER PLASTICS				
SITE CONTACT:	GERALD COBURN			PRESERVATIVES:	NEAT / HNO3			
CONSULTANT:		_		LAB. ANALYSIS BY:	DELLAVALLI	ELABS.		
PROJECT MANAGER:	BEN	NYDAM	MONUMENT:	POST				
SAMPLER:	DEL-TECH	/ DON L	IGHT	WELL CASING MATERIAL	PVC :			
SIGNED:	5	an ziz	de	WELL CASING DIA. :	4" /	0.6528		
SAMPLE MEDIA:	GROUI	NDWATE	R	P.J.D. READING / ODOR:	N/A	NONE		
TOP OF CASING ELEV	ATION:		MSL	COLOR: RUST TO LIGHT BROWN				
DEPTH TO WATER: (feet.100th's)	9.21	FEET	CALC. PURGE VOL.:	25.60	GAL.		
DEPTH OF WELL: (feet.100th's)	48.42	FEET	TOTAL VOLUME PURGED:	76.79	GAL.		
STANDING WATER CO	LUMN:	39.21	FEET	DEPTH OF PUMP:	47	FEET		

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)				
	0	N/A	0.5 GPM	7.44 7.63	665	21.0 21.6	50.2 49	0.83	183				
	25.60	"	"		692			1.2	112				
	51.19	"	"	7.59	750	21.2	49	1.0	43				
	76.79	"	"	7.53	759	21.1	42	1.1	27				
and the local division of the local division of the	E METHOD:		CENTRIFUG										
SAMP	LE METHOD:		CENTRIFUGAL PUMP.										
Construction of the owner own	V. AFTER PURGE:		D. T. W. AT SAMPLE TIME: 18.90'										
	INTEGRITY:		CAP & SEAL ARE SECURE.										
	LOCATION:		SEE SITE MA										
REMA	RKS:		LOCK IS MI	SSING.	_								
WEAT	HER:	_	CLEAR / HOT	<u>[]</u>		WIND:		NONE					
QUAL	ITY CONTROL:		ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE										
			FIELD WITH .	A STEAM	ICLEANER &	ALCONOX	SOAP. NEW	NITRILE GLOVES					
CONT	AINMENT:		D.O.T. 17 55 0	GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.						
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSOLVED OXYGEN METER							
			SOLINIST SLO	PE METE	R	THERMODINE 580B P.I.D.							
			KECK INTERF.	ACE MEI	ER	TURBIDITY METER							

DELETECH

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2006

SAM	PLE LOCATIO	DN / MW -	3		DATE:			5/11/2006			
PROI	ECT NAME:	C	CEMEX		ANALYS	IS PERFO	BMED.	SEE CHAIN OF	CUSTODY		
ADDR	the second s	The second se	OMITAS DI	2.	ANALYSIS PERFORMED: SEE CHAIN OF CUSTODY SAMPLE TIME: 15:00						
	STATE:	and the second	NCOVE, CA		SAMPLE	and the second se	NERS:	2 - LITER PLA	STICS		
	CONTACT:	An and a state of a st	LD COBURN		PRESER	Particular functions and a second		NEAT / HNO3	01100		
	ULTANT:				LAB. AN	and the second se		DELLAVALLE	LABS.		
PROJ	ECT MANAGER:	and a second sec	NYDAM		MONUM	ENT:		POST			
SAMP	LER:		H / DON LIC		WELL CA	ASING M	ATERIAL :	PVC			
SIGNE	ED:		San zign	E	WELL C	ASING DI	A.:	2" /	0.1632		
SAMP	LE MEDIA:	GROU	JNDWATER		P.I.D. RE	ADING /	ODOR:	N/A	NONE		
and the state of the second second second	OF CASING ELEV	to be a set of the set		MSL	COLOR:			<u>T BROWN TO C</u>	LEAR		
DEPT	H TO WATER:	(feet.100th's)	6.63	FEET	CALC. PI	URGE VO)L.:	5.88	GAL.		
and the second se	and a second	(feet.100th's)	42.65	FEET	TOTAL V	OLUME	PURGED:	17.64	GAL.		
STAN	DING WATER CO	OLUMN:	36.02	FEET	DEPTH C	OF PUMP:		41	FEET		
			FIEI	D PAI	RAMETE	RS					
			T TEL	D I IL							
ГIME	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
	CASING VOLUME	DOWN	RATE				The second second	OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	7.45	934	22.1	49.5	0.71	48		
	5.88			7.34	906	21.5	49	0.36	36		
	11.76			7.20	899	21.2	51	0.37	26		
	17.64			7.11	894	21.0	51	0.34	20		
PURG	E METHOD:		CENTRIFUG	AL PUMI	P.						
SAMP	LE METHOD:		CENTRIFUGA	L PUM	P.						
D.T.V	V. AFTER PURGE:				D. T. W. A	T SAMPL	E TIME:	6.68'			
WELL	INTEGRITY:		CAP & SEAL	ARE SE	CURE.						
WELL	LOCATION:		SEE SITE MA	P.							
REMA	RKS:				_	_					
WEAT	HER:		CLEAR / HOT	1		WIND:		NONE			
THE OWNER WATER OF THE OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER	ITY CONTROL:		ALL PURGING	G EQUIP	MENT AND S	AMPLING	EQUIPMENT	WAS CLEANED IN	THE		
		FIELD WITH	A STEAM	ICLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.							
				EL DRUMO	R 60 GAL F	OLY DRUM.					
QUAL	AINMENT:		D.O.T. 17 55 (GAL. STE	EL DRUM OI	100 0110.1					
QUAL CONT.	AINMENT: UMENTATION:		D.O.T. 17 55 (Y.S.I. 3560 FLC				LVED OXYGE	N METER			
QUAL CONT.				WCELL	_	Y.S.I. DISSC					

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2006

SAMPLE LOCATION / MW - 4 DATE: 5/11/2006

PROJECT NAME:	CE	MEX		ANALYSIS PERFORMED:	SEE CHAIN OI	F CUSTODY			
ADDRESS:	24325 LO	MITAS E	DR.	SAMPLE TIME:	E TIME: 14:05				
CITY, STATE:				SAMPLE CONTAINERS:	AMPLE CONTAINERS: 2 - LITER PLASTICS				
SITE CONTACT:	The second se			PRESERVATIVES:	NEAT / HNO3				
CONSULTANT:				LAB. ANALYSIS BY:	DELLAVALLE	ELABS.			
PROJECT MANAGER: BEN NYDAM				MONUMENT:	FLUSH				
SAMPLER:	DEL-TECH	/ DON L	IGHT	WELL CASING MATERIAL :	PVC				
SIGNED:	8	pr - Siz	÷	WELL CASING DIA. :	4" /	0.6528			
SAMPLE MEDIA:	GROUN	DWATE	R	P.J.D. READING / ODOR:	N/A	NONE			
TOP OF CASING ELEVATI	ON:		MSL	COLOR: RUST TO CLEAR					
DEPTH TO WATER: (feet.	.100th's)	8.51	FEET	CALC. PURGE VOL .:	13.13	GAL.			
DEPTH OF WELL: (feet.	.100th's)	28.63	FEET	TOTAL VOLUME PURGED:	39.40	GAL.			
STANDING WATER COLU	MN:	20.12	FEET	DEPTH OF PUMP:	27	FEET			

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)				
	0	N/A	0.5 GPM	7.73	600 797 793	22.5 20.2	49.8 55.3	1.7	147				
	13.13	"	"	7.18				1.7	33				
	26.27	"		7.17		19.8	55.4	1.06	17				
	39.40	"	"	6.68	791	19.7	56	1.4	12				
		_											
PURG	E METHOD:		CENTRIFUGA	AL PUMI	Ρ.								
	LE METHOD:		CENTRIFUGAL PUMP.										
	V. AFTER PURGE:		D. T. W. AT SAMPLE TIME: 8.55										
	INTEGRITY:		CAP & SEAL		CURE.								
	LOCATION:		SEE SITE MA										
REMA	RKS:		LOCK IS MI	SSING !			1						
WEAT	HER:		CLEAR / HOT	71		WIND:		NONE					
QUAL	ITY CONTROL:		ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE										
			FIELD WITH .	A STEAM	ICLEANER &	ALCONOX	SOAP. NEW	NITRILE GLOVES					
CONT	AINMENT:		D.O.T. 17 55 (GAL. STE	EEL DRUM O	R 60 GAL. P	OLY DRUM.						
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSOLVED OXYGEN METER							
			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.D).					
			KECK INTERF	ACE MEI	ER	TURBIDITY METER							
				_	_								



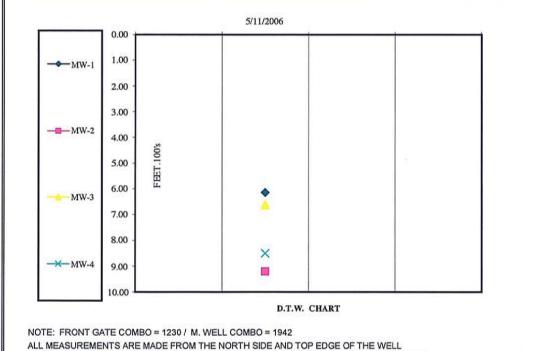
DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA. MONITORING WELL FIELD SUMMARY LOG 2006

DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR. 3	QTR.4	TOTAL
DATE		5/11/06			DEPTH
LOCATION					
MW-1		6.15			35.89'
MW-2		9.21			48.42'
MW-3		6.63			42.65'
MW-4		8.51			28.63'



CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE

CONDITION IS APPROPRIATE.



2007 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 14, 2007

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



$Del-Tech \ {\rm geotechnical \ support \ services}$

MONITORING WELL FIELD LOG 2007

SAM	PLE LOCATIO	ON / MW -	1		DATE:			6/14/2007			
and the second second second	ECT NAME:		CEMEX		ANALYS	and the second	ORMED:	SEE CHAIN OF	FCUSTODY		
ADDR			OMITAS DI		SAMPLE TIME: 14:10						
	STATE:	the second s	NCOVE, CA		SAMPLE			2 - LITER PLA	STICS		
	CONTACT:	GERA	LD COBURN	1	PRESER			NEAT / HNO3			
CONSI	ULTANT:	-			LAB. ANA	ALYSIS B	SY:	DELLAVALLE	LABS.		
DOI	OTMANAGER	DE	INVISIN/					DOOT			
PROJE SAMPI	ECT MANAGER:	the second se	NYDAM H / DON LIC	TIT	MONUM		ATERIAL :	POST PVC			
SIGNE			HIDON LIC		WELL CA		· · · · · · · · · · · · · · · · · · ·	2" /	0.1632		
the second s	LE MEDIA:		JNDWATER		P.I.D. RE.	and the second se	And the second se	 N/A	NONE		
	F CASING ELEV	the second se		MSL	COLOR:		the second s	LIGHT BROWN	and the strength of the strength of the		
	TO WATER:	The second s	7.13	FEET	CALC. PI		A TAXABLE PROPERTY OF A DESCRIPTION OF A	4.69	GAL.		
	A Second state in the second	(feet.100th's)	35.89	FEET	Contraction of the second second second	and the second se	PURGED:	14.08	GAL.		
the stand of the second second second	DING WATER CO	and the second	28.76	FEET	DEPTH C			34	FEET		
			NUN	DDAI	RAMETE	DC					
			FIEL	JD PAI	XAMETE.	ĸs					
TIME	CUMULATIVE	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT		
teater and the second	CASING VOLUME	DOWN	RATE	-				OXYGEN	COLOR		
	PER PURGE	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	N/A	0.5 GPM	8.37	386	20.5	202	4.5	206		
	4.69	"	"	7.88	292	18.0	214	4.0	123		
	9.39		н	7.69	277	17.6	201	3.7	89		
	14.08	"	"	7.45	266	16.5	178	3.3	77		
				_							
PURGI	E METHOD:		CENTRIFUG	AL PUM	5						
	LE METHOD:		CENTRIFUG								
	. AFTER PURGE:				and the second second second	T SAMPL	E TIME:	7.17'			
WELL	INTEGRITY:		CAP & SEAL	ARE SEG	CURE.						
WELL	LOCATION:		SEE SITE MA	P.							
REMA	RKS:										
WEAT	HER:		CLEAR / HOT	C1		WIND:		NONE			
	TY CONTROL:				MENT AND S		EOUIPMENT	WAS CLEANED IN	THE		
							and the second se	NITRILE GLOVES			
CONT	AINMENT:		D.O.T. 17 55	GAL. STE	EL DRUM OI	R 60 GAL. I	POLY DRUM.				
INCTR	UMENTATION:		Y.S.I. 3560 FLC	OWCELL		V C L DIESC	LVED OXYGE	NMETED			
INSIK	UMENTATION:		SOLINIST SLO			and the second of the second second by	NE 580B P.I.D.				
_			KECK INTERF			TURBIDITY					
# OF D	RUMS ON SIGH		WATER:	0		SOIL:	0				
				-		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-				

DELETECH

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2007

6/14/2007

SAMPLE LOCATION / MW - 2 DATE:

PROJECT NAME:	CI	EMEX		ANALYSIS PERFORMED:	SEE CHAIN O	F CUSTODY
ADDRESS:	24325 LC	OMITAS E	DR.	SAMPLE TIME:	13:43	
CITY, STATE:	LEMON	COVE, C.	A.	SAMPLE CONTAINERS:	2 - LITER PLA	STICS
SITE CONTACT:	GERAL	D COBUR	N	PRESERVATIVES:	NEAT / HNO3	
CONSULTANT:				LAB. ANALYSIS BY:	DELLAVALLE	ELABS.
PROJECT MANAGER:	BEN	NYDAM		MONUMENT:	POST	
SAMPLER:	DEL-TECH	I / DON LI	GHT	WELL CASING MATERIAL	: PVC	
SIGNED:	Þ	Big was	æ	WELL CASING DIA. :	4" /	0.6528
SAMPLE MEDIA:	GROUI	NDWATE	R	P.I.D. READING / ODOR:	N/A	NONE
TOP OF CASING ELEV	ATION:		MSL	COLOR:	LIGHT BROWN	1
DEPTH TO WATER: ((feet.100th's)	9.62	FEET	CALC. PURGE VOL.:	25.33	GAL.
DEPTH OF WELL:	(feet.100th's)	48.42	FEET	TOTAL VOLUME PURGED:	75.99	GAL.
STANDING WATER CO	DLUMN:	38.80	FEET	DEPTH OF PUMP:	47	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	7.64	444	20.8	50	3.7	238
	25.33	"	"	7.74	451	20.6	50	3.4	304
_	50.66			7.76	451	20.6	51	3.4	351
	75.99	0	"	7.75	450	20.5	52	3.3	226
PURG	E METHOD:		CENTRIFUG	AL PUMI	Ρ.				
SAMP	LE METHOD:		CENTRIFUG	AL PUMI	Р.				
	V. AFTER PURGE:					T SAMPLI	E TIME:	19.02'	
WELL	INTEGRITY:		CAP & SEAL	ARE SE	ECURE.				
	LOCATION:		SEE SITE MA			_			
REMA	RKS:		LOCK IS MI	SSING.					
WEAT	Contraction of the Contraction o		CLEAR / HOT			WIND:		NONE	
QUAL	ITY CONTROL:		Contraction of the second	And and a state of the second s	Contraction of the second s		and the second se	WAS CLEANED IN	and a second
								NITRILE GLOVES	
CONT	AINMENT:	_	D.O.T. 17 55	GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.		
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYG	EN METER	
			SOLINIST SLO			THERMODI	NE 580B P.I.D).	
			KECK INTERF	ACE MEI	ER	TURBIDITY	METER		



MONITORING WELL FIELD LOG 2007

6/14/2007

SAMPLE LOCATION / MW - 3 DATE:

PROJECT NAME:	CH	EMEX		ANALYSIS PERFORMED:	SEE CHAIN C	F CUSTODY
ADDRESS:	24325 LC	OMITAS I	DR.	SAMPLE TIME:	12:45	5
CITY, STATE:	LEMON	COVE, C	A.	SAMPLE CONTAINERS:	2 - LITER PL	ASTICS
SITE CONTACT:	GERAL	D COBUR	RN	PRESERVATIVES:	NEAT / HNO3	3
CONSULTANT:				LAB. ANALYSIS BY:	DELLAVALL	E LABS.
PROJECT MANAGER:	BEN	NYDAM		MONUMENT:	POST	
SAMPLER:	DEL-TECH	/ DON L	IGHT	WELL CASING MATERIAL :	PVC	
SIGNED:	þ	gen Siz	yat .	WELL CASING DIA. :	2" /	0.1632
SAMPLE MEDIA:	GROUI	NDWATE	R	P.J.D. READING / ODOR:	N/A	NONE
TOP OF CASING ELEV	ATION:		MSL	COLOR: LIGH	T BROWN TO	CLEAR
DEPTH TO WATER:	(feet.100th's)	3.41	FEET	CALC. PURGE VOL.:	6.40	GAL.
DEPTH OF WELL:	(feet.100th's)	42.65	FEET	TOTAL VOLUME PURGED:	19.21	GAL.
STANDING WATER CO	DLUMN:	39.24	FEET	DEPTH OF PUMP:	41	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	7.77	272	19.8	60	5.1	488
	6.40	"	"	7.71	222	18.1	64	5	81
	12.81		"	7.64	216	17.5	67	4.8	50
	19.21	"	"	7.56	222	17.6	69	4.7	27
PURG	E METHOD:		CENTRIFUG	AL PUMI	P.				
SAMP	LE METHOD:		CENTRIFUGA	AL PUMI	P				
D. T. V	V. AFTER PURGE:				D. T. W. A	T SAMPLE	E TIME:	3.44'	
WELL	INTEGRITY:		CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:		SEE SITE MA	Р.					
REMA	RKS:								
WEAT	HER:		CLEAR / HOT	1		WIND:	_	NONE	
QUAL	ITY CONTROL:						Contraction of the second s	WAS CLEANED IN NITRILE GLOVES	A PROPERTY AND INCOME.
CONT	AINMENT:		D.O.T. 17 55 (
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYG	EN METER	
			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.D		
			KECK INTERF.	ACE MEI	ER	TURBIDITY	METER		

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2007

SAMPLE LOCAT	ION / MW -	4		DATE:	6/14/2007	
PROJECT NAME:	CI	EMEX		ANALYSIS PERFORMED:	SEE CHAIN O	FCUSTODY
ADDRESS:	24325 L0	OMITAS I	DR.	SAMPLE TIME:	12:20	
CITY, STATE:	LEMON	ICOVE, C	A.	SAMPLE CONTAINERS:	2 - LITER PLA	STICS
SITE CONTACT:	GERAL	D COBUR	RN	PRESERVATIVES:	NEAT / HNO3	
CONSULTANT:				LAB. ANALYSIS BY:	DELLAVALLE	LABS.
PROJECT MANAGER	R: BEN	NYDAM		MONUMENT:	FLUSH	
SAMPLER:	DEL-TECH	I / DON L	IGHT	WELL CASING MATERIA	L: PVC	
SIGNED:	b b	give no	yde .	WELL CASING DIA. :	4" /	0.6528
SAMPLE MEDIA:	GROU	NDWATE	R	P.I.D. READING / ODOR:	N/A	NONE
TOP OF CASING ELE	EVATION:		MSL	COLOR: BROWN	TO LIGHT BROWN	N TO CLEAR
DEPTH TO WATER:	(feet.100th's)	6.12	FEET	CALC. PURGE VOL.:	14.69	GAL.
DEPTH OF WELL:	(feet.100th's)	28.63	FEET	TOTAL VOLUME PURGE	D: 44.08	GAL.
STANDING WATER (COLUMN:	22.51	FEET	DEPTH OF PUMP:	27	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E.C.	TEMP.	O.R.P.	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	8.45	590	21.0	72	11	1012
	14.69	"	"	8.10	498	20.1	84	9.4	149
	29.39		"	7.78	534	19.7	87	7.5	67
	44.08	"	"	7.66	561	19.7	84	6.6	44
PURG	E METHOD:		CENTRIFUG/	AL PUM	Р.				
SAMP	LE METHOD:		CENTRIFUGA	AL PUM	P.				
D. T. V	V. AFTER PURGE:				D. T. W. A	T SAMPLI	E TIME:	6.15'	
WELL	INTEGRITY:		CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:		SEE SITE MA	.P.					
REMA	RKS:		LOCK IS MI	SSING !	!				
WEAT	HER:		CLEAR / HOT	71		WIND:	_	NONE	
QUAL	ITY CONTROL:		ALL PURGING	G EQUIP	MENT AND S	AMPLING E	EQUIPMENT	WAS CLEANED IN	I THE
			FIELD WITH .	A STEAM	ICLEANER &	ALCONOX	SOAP. NEW	NITRILE GLOVES	
CONT.	AINMENT:		D.O.T. 17 55 (GAL. STE	EEL DRUM OI	R 60 GAL. P	OLY DRUM.		
INSTR	UMENTATION:		Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXYG	EN METER	
_			SOLINIST SLO	PE METE	R	THERMODI	NE 580B P.I.C		
_			KECK INTERF.	ACE MEI	ER	TURBIDITY	METER		

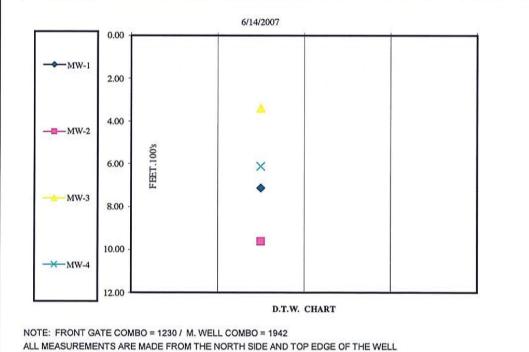


DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA. MONITORING WELL FIELD SUMMARY LOG 2007 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR.3	QTR.4	TOTAL
DATE		6/14/07			DEPTH
LOCATION					
MW-1		7.13			35.89'
MW-2		9.62			48.42'
MW-3		3.41			42.65'
MW-4		6.12			28.63'



CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE

CONDITION IS APPROPRIATE.



2008 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. August 28, 2008

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



SAM	PLE LOCATIO	N/MW-		1		DATE:			8/28/2008	
D THIN	The Location	47 MITT -			_	DAIL.			0/20/2000	
PROJ	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	FCUSTODY
ADDR	ESS:		24325 I	OMITAS DE	ε.	SAMPLE '	FIME:		14:47	
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAIN	ERS:	2 - LITER PLA	STICS
SITE (CONTACT:		GERA	LD COBURN	1	PRESERV			NEAT / HNO3	
CONS	ULTANT:					LAB. ANA	LYSIS BY	Ľ:	DELLAVALLE	LABS.
								_		
the second s	ECT MANAGER:			NYDAM		MONUME	NT:		POST	
SAMP	LER:			/ ASHLEY L		WELL CA	SING MA	TERIAL	Contract of the	
SIGNE	Contraction of the second s		3	San Figer	c	WELL CA	SING DIA	A. :	2" /	0.1632
SAMP	LE MEDIA:		GROU	JNDWATER		P.I.D. REA	DING / O	DOR:	N/A	NONE
the second s	OF CASING ELEVA	TION:			MSL	COLOR:		1000000	ROWN TO CLE.	AR
the second s	H TO WATER:		(feet.100th's)	7.90	FEET	CALC. PU	RGE VOI	L.:	4.57	GAL.
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V		URGED :		GAL.
STAN	DING WATER COI	LUMN:		27.99	FEET	DEPTH O	F PUMP:	_	34	FEET
				FIEI	LD PAI	RAMETE	RS			
TIME					YY	na		0.0.0	Discos uno	
INTE	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	
	CASING VOLUME	VOLUME	DOWN	RATE	1201120121		0325121-20700	12/01/12/10/17	OXYGEN	COLOR
_	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(M volts)	(PPM)	(N.T.U.)
	0	0	N/A	0.5 GPM	6.70	187	22.1	53	2.7	745
	4.57	4.5			6.14	172	23.8	61	2.2	193
	9.14	9	"		6.07	193	23.9	61	2.2	112
	13.70	13.5			6.02	208	24.1	59	2.2	73
PURGI	E METHOD:			CENTRIFUG	AL PUME	».				
SAMPI	LE METHOD:			CENTRIFUG	The second s					
D. T. W	V. AFTER PURGE:					D. T. W. A.	C SAMPLE	TIME:	8.00'	
WELL	INTEGRITY:			CAP & SEAL	ARE SEC	CURE.				
WELL	LOCATION:			SEE SITE MA	AP.					
REMA	RKS:									
WEAT	HER:			CLEAR / HOT	C1		WIND:		NONE	_
	ITY CONTROL:					ONITORING		TWASCLE	ANED AS NECES	SARY
- venu	are contractor								LL. NEW NITRIL	The second se
CONT	AINMENT:	_		NO CONTAIN				and the second se		5 610 1201
INSTR	UMENTATION:			Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSC	LVED OXY	GEN METER	
AL LO A AL				SOLINIST SLO	PE METER	2	TURBIDITY	METER		
INSIN										
	DRUMS ON SIGHT:			WATER:	0		SOIL:	0		



SAM	PLE LOCATIO	N / MW -		2		DATE:			8/28/2008	
	ECT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OI	CUSTODY
ADDR	ESS:		24325 L	OMITAS DE	ι.	SAMPLE '	гіме:		14:21	
	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAIN	ERS:	2 - LITER PLA	STICS
SITE C	CONTACT:		GERAI	LD COBURN		PRESERV	ATIVES:		NEAT / HNO3	
CONSI	ULTANT:					LAB. ANA	LYSIS BY	Y:	DELLAVALLE	LABS.
PROJE	ECT MANAGER:		BEN	NYDAM		MONUME	NT:		POST	
SAMP	LER:		DEL-TECH	/ ASHLEY L	IGHT	WELL CA	SING MA	TERIAL	PVC	
SIGNE	D:		Ochlez	t dight	-	WELL CA	SING DIA	A. :	4" /	0.6528
SAMP	LE MEDIA:		GROU	JNDWATER	(P.I.D. REA	DING / C	DOR:	N/A	NONE
TOP O	F CASING ELEVA	TION:			MSL	COLOR:	BI	ROWN TO	LIGHT BROWN	N TO CLEA
DEPTI	H TO WATER:		(feet.100th's)	10.54	FEET	CALC. PU	RGE VOI	L.:	24.73	GAL.
	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V	OLUME H	PURGED:	75	GAL.
STANI	DING WATER COL	LUMN:		37.88	FEET	DEPTH O	F PUMP:		47	FEET
				FIEI	D PAI	RAMETEI	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pН	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
NTARTARITS).	CASING VOLUME	VOLUME	DOWN	RATE	F				OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	0.5 GPM	6.57	591	21.4	58	3.2	165
	24.73	25	"	"	6.95	615	21.4	55	2.5	99
	49.46	50	"	u.	6.94	644	21.4	55	2.5	72
	74.18	75	"		6.93	683	21.4	56	2.6	59
PURGE	METHOD:			CENTRIFUG	AL PUMI	2				
SAMPI	E METHOD:			CENTRIFUG	AL PUME	P.				
D. T. W	. AFTER PURGE:					D. T. W. A7	SAMPLE	TIME:	18.13'	
WELL	INTEGRITY:			CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:			SEE SITE MA	P.					
REMAI	RKS:	-								
WEATI	CONTRACTOR OF THE OWNER OF			CLEAR / HOT			WIND:		NONE	
QUALI	TY CONTROL:			the second s				the second s	ANED AS NECES:	A CONTRACTOR OF THE OWNER OWNE
					and the second			And in case of the local data and the second d	LL. NEW NITRILI	E GLOVES.
CONTA	INMENT:			NO CONTAIN	MENT / I	PURGE WATE	R TO THE C	GROUND		
INSTRU	UMENTATION:			Y.S.I. 3560 FLC		9°	Y.S.I. DISSC	LVED OXY	GEN METER	
_				SOLINIST SLO	PE METEI	2	TURBIDITY	METER		



SAM	PLE LOCATION	N / MW -		3		DATE:			8/28/2008	
PROJI	ECT NAME:		(CEMEX		ANALYSI	SPERFO	RMED:	SEE CHAIN OI	CUSTOD
ADDR				OMITAS DR	2.	SAMPLE		CIVILID.	13:30	
	STATE:			NCOVE, CA		SAMPLE		ERS:	2 - LITER PLA	
	CONTACT:			LD COBURN		PRESERV			NEAT / HNO3	01100
	ULTANT:					LAB. ANA		ť:	DELLAVALLE	LABS.
							_			
	ECT MANAGER:			NYDAM		MONUME	Additional and a second second		POST	
SAMP			DEL-TECH	/ ASHLEY L	IGHT	WELL CA			The second se	
SIGNE				+ Olight		WELL CA			2" /	0.1632
SAMP	LE MEDIA:		GROU	JNDWATER	0	P.I.D. REA	DING / C	DOR:	N/A	NONE
	OF CASING ELEVA	TION:			MSL	COLOR:			CLEAR	
DEPTI	H TO WATER:		(feet.100th's)	4.11	FEET	CALC. PU	RGE VOI	.:	6.29	GAL.
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V	OLUME I	URGED:	18	GAL.
STAN	DING WATER COL	JUMN:	N	38.54	FEET	DEPTH O	F PUMP:		41	FEET
				FIEI	D PA	RAMETE	RS			_
ГІМЕ	CUMULATIVE	ACTIVITY	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISCOLVED	monto
INTE		ACTUAL	Sec. 2017 Classes	and the state of the	pn	E.C.	ILWIP.	0.K.F.	DISSOLVED	
	CASING VOLUME	VOLUME	DOWN	RATE	1211222		521210-00-101	62535 - JSN 16	OXYGEN	COLO
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	0.5 GPM	6.55	316	20.9	58	3.3	25
	6.29	6	. 1.00		6.43	243	19.5	63	2.7	17
_	12.58	12	"	",	6.38	240	19.5	64	2.4	11
_	18.87	18	н	"	6.23	242	19.7	67	2.3	10
PURGI	E METHOD:			CENTRIFUG	AL PUMI	».				
SAMPI	LE METHOD:			CENTRIFUG	AL PUMI	».				
D. T. W	AFTER PURGE:					D. T. W. A.	SAMPLE	TIME:	13.40'	
WELL	INTEGRITY:			CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:			SEE SITE MA						
REMA	RKS:									
WEAT	HER:	1		CLEAR / HOT	C!		WIND:		NONE	
QUALI	TY CONTROL:			ALL PURGIN	G AND M	ONITORING I	OUIPMEN	T WAS CLE	ANED AS NECES:	SARY.
00400000 - VA									LL. NEW NITRIL	
CONTA	AINMENT:			NO CONTAIN						
	UMENTATION:	_		Y.S.I. 3560 FLC	WCELL		Y.S.L DISSO	LVEDOXY	GEN METER	
INSTR				SOLINIST SLO			TURBIDITY			
INSTR										
INSTR			,	30211131 320			TOTO DIDITI T	THE FLAT		
INSTR				50LIN51 5L0	TE METE		101010111			

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

SAMPLE MEDIA:GROUNDWATERP.J.D. READING / ODOR:N/ANONTOP OF CASING ELEVATION:MSLCOLOR:BROWN TO LIGHT BROWN TO CLDEPTH TO WATER:(feet.100th's)8.50FEETCALC. PURGE VOL.:13.14GADEPTH OF WELL:(feet.100th's)28.63FEETTOTAL VOLUME PURGED:39GASTANDING WATER COLUMN:20.13FEETDEPTH OF PUMP:27FEEFIELD PARMETERSTIMECUMULATIVEACTUALDRAWPUMPINGPHE. C.TEMP.O.R.P.DISSOLVEDTURBICASING VOLUMEVOLUMEDOWNRATE0OXYGENCOLCOLPER PURGEPURGED(D.T.W.)(GPM/LPM)(units)(UmMHOS)(Celsius)(Mvolts)(PPM)(N.T.00N/A0.5 GPM7.0088723.1545.210013.1413""6.6396321.0593.44926.2826"""6.6396321.0593.449	SAMI	PLE LOCATIO	N/MW -		4		DATE:			8/28/2008		
ADDRESS: 24325 LOMITAS DR. SAMPLE TIME: 13:00 CITY, STATE: LEMONCOVE, CA. SAMPLE CONTAINERS: 2-LITER PLASTICS SITE CONTACT: GERALD COBURN PRESERVATIVES: NEAT / HNO3 CONSULTANT: LAB. ANALYSIS BY: DELLAVALLE LABS. PROJECT MANAGER: BEN NYDAM MONUMENT: FLUSH SAMPLE MEDIA: DELTECH / ASHLEY LIGHT WELL CASING MATERIAL : PVC SIGNED: COLANGUZ GEGACK WELL CASING MATERIAL : PVC SIGNED: COLANGUZ GEGACK WELL CASING MATERIAL : PVC SIGNED: GROUNDWATER PLD. READING / ODOR: N/A N/A TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEFTH TO WATER: (feet.100th's) 85.0 FEET CALC, URGE VOL.: 13.14 GA STANDING WATER COLUMN: 20.13 FEET DEPTH TO WATER: 0XYGEN COL CASING VOLUME VOLUME DRAW PUMPING PH E.C. TEMP. OXYGEN COL CASING VOLUME O N/A 0.5 GPM 7.00 887	PROJE	CT NAME:		(CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	CUSTODY	
SITE CONTACT: GERALD COBURN PRESERVATIVES: NEAT / HNO3 CONSULTANT: LAB. ANALYSIS BY: DELLAVALLE LABS. PROJECT MANAGER: BEN NYDAM MONUMENT: FLUSH SAMPLER: DEL-TECH / ASHLEY LIGHT WELL CASING MATERIAL: PVC SGNED: CALABAGY GC/A-4 WELL CASING DIA.: 4" / 0.65 SAMPLE MEDIA: GROUNDWATER P1.D. READING / ODOR: N/A NON TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL GRA DEPTH OF WELL: (feet.100th's) 8.50 FEET CALC, PURGE VOL: 13.14 GAI STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS TIME Cumulative ACTUAL DRAW PUMPING PH E. C. TEMP. O.R.P. DISSOLVED TURBI CASING VOLUME VOLUME DOWN RATE (units) (ImMHOS) (Celuit) (Mvolts) (PPM) (N.T.	ADDRI	ESS:		24325 1	OMITAS DR	ξ.			0100-00-00-00-00-00-00-00-00-00-00-00-00			
STTE CONTACT: GERALD COBURN PRESERVATIVES: NEAT / FN03 CONSULTANT: LAB. ANALYSIS BY: DELLAVALLE LABS. PROJECT MANAGER: BEN NYDAM MONUMENT: FLUSH SAMPLER: DELTCH/ASHLEY LIGHT WELL CASING MATERIAL: PVC SIGNED: CALABAGY CO/A WELL CASING DIA.: 4" / 0.65 SAMPLE MEDIA: GROUNDWATER PLD. READING / ODOR: N/A NON TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL GRA DEPTH OF WELL: (feet.100th's) 8.50 FEET CALC, PURGE VOL: 13.14 GAI DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEF VOLUME VOLUME DOWN RATE (mits) (ImMHOS) (Cabius) OXYGEN COL 13.14 13 " 6.63 913 21.2 59 3.4 49 <td< td=""><td>CITY,</td><td>STATE:</td><td></td><td>LEMO</td><td>NCOVE, CA</td><td></td><td>SAMPLE</td><td>CONTAIN</td><td>ERS:</td><td>2 - LITER PLA</td><td>STICS</td></td<>	CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAIN	ERS:	2 - LITER PLA	STICS	
PROJECT MANAGER: BEN NYDAM MONUMENT: FLUSH SAMPLER: DELTECH / ASHLEY LIGHT WELL CASING MATERIAL : PVC SIGNED: CLAMBAY 552954# WELL CASING MATERIAL : PVC SAMPLE MEDIA: GROUNDWATER PLD. READING / ODOR: N/A NO DOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET TOTAL VOLUME PURGED: 39 GAI CASING VOLUME VOLUME DAW RATE (units) (UmHOS) (Celus) (Mvolts) (PPM) (N.T. 0 0 N/A 0.5GPM 7.00 887 23.1 54 5.2 100 13.14 13 " 6.6.75 913 21.2 59 3.9 12 2.6.28 26 "	SITE C	CONTACT:		GERA	LD COBURN							
SAMPLER: DEL-TECH / ASHLEY LIGHT WELL CASING MATERIAL : PVC SIGNED: CAAMAY GOAL WELL CASING MATERIAL : PVC SIGNED: GROUNDWATER PLD. READING / ODOR: N/A NO TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEPTH TO WATER: (feet.100th's) 8.50 FEET CALC. PURGE VOL.: 13.14 GA DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GA STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS TIME CUMULATIVE ACTUAL DRAW PUMPING (PTM, (units) UnmMHOS) (Celsius) (Wools) (PPM, COL OXYGEN COL 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.55 976 20.7 60 3.4 30 22.6.28 26 " " 6.55	CONSU	ULTANT:					LAB. ANA	LYSIS BY	ť:	DELLAVALLE	LABS.	
SAMPLER: DEL_TECH / ASHLEY LIGHT WELL CASING MATERIAL : PVC SIGNED: CALMBAY GGAAT WELL CASING DIA. : 4* / 0.65 SAMPLE MEDIA: GROUNDWATER PLD. READING / ODOR: N/A N/A TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEPTH TO WATER: (feet.100th's) 8.50 FEET CALC. PURGE VOL.: 13.14 GA DEPTH OF WELL: (feet.100th's) 28.63 FEET DEPTH OF PURGE DROGED: 39 GA STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS FIELD PARAMETERS FIELD PARAMETERS OWNN QXYGEN COL 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.63 963 21.0 59 3.9 12.2 CENTRIFUGAL PUMP. <td cols<="" td=""><td>PROJE</td><td>CT MANAGER:</td><td></td><td>BEI</td><td>NYDAM</td><td></td><td>MONUME</td><td>NT:</td><td></td><td>FLUSH</td><td></td></td>	<td>PROJE</td> <td>CT MANAGER:</td> <td></td> <td>BEI</td> <td>NYDAM</td> <td></td> <td>MONUME</td> <td>NT:</td> <td></td> <td>FLUSH</td> <td></td>	PROJE	CT MANAGER:		BEI	NYDAM		MONUME	NT:		FLUSH	
SIGNED: COLMARY CONTACT WELL CASING DIA.: 4" / 0.65 SAMPLE MEDIA: GROUNDWATER P.J.D. READING / ODOR: N/A NO TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT	SAMPI	LER:		DEL-TECH	/ ASHLEY L	IGHT	WELL CA	SING MA	TERIAL			
SAMPLE MEDIA: GROUNDWATER P.J.D. READING / ODOR: N/A NOT TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEPTH OF WATER: (feet.100th's) 8.50 FEET CALC. PURGE VOL.: 13.14 GA DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED; 39 GA STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS FIELD PARAMETERS FIELD PARAMETERS ONY OUTLINE ONY OLUME DOWN RATE PER PURGE PURGED (D.T.W.) (GPM2.PM) (units) (UmMH0S) (Celsius) (Mvolts) (PPM) (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 D.T. W. AFTER PURGE: D.T. W. AT SAMPLE TIME: 19.17' WELL LOCATION: REPURGE PURGE D.T. W. AT SAMPLE T	SIGNE	D:					and the second se	a state of the sta			0.6528	
TOP OF CASING ELEVATION: MSL COLOR: BROWN TO LIGHT BROWN TO CL DEPTH TO WATER: (feet.100th's) 8.50 FEET CALC, PURGE VOL.: 13.14 GAI DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS FIELD PARAMETERS CUMULATIVE ACTUAL DRAW DOWN RATE DRAW DOWN RATE (umits) (UmMHOS) (Celsius) (Mvolts) (PPM) (N.T. 0 0 NA 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.63 963 21.0 59 3.4 44 39.42 39 " " 6.55 976 20.7 60 3.4 30 DEPTH OF PURGE DENTW AFTER PURGE DENTWATE CENTRIFUGAL PUMP. <td cols<="" td=""><td></td><td></td><td></td><td>the second se</td><td>the second s</td><td>0</td><td></td><td></td><td></td><td></td><td>NONE</td></td>	<td></td> <td></td> <td></td> <td>the second se</td> <td>the second s</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td>NONE</td>				the second se	the second s	0					NONE
DEPTH TO WATER: (feet.100th's) 8.50 FEET CALC. PURGE VOL.: 13.14 GAI DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS FIELD PARAMETERS TOTAL VOLUME PURGED (D.T.W.) PER PURGE PUMPING PH E.C. TEMP. O.R.P. DISSOLVED TURBI CUMULATIVE ACTUAL DRAW PUMPING PH E.C. TEMP. O.R.P. DISSOLVED TURBI OA 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.55 913 21.2 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 D D D D <td< td=""><td></td><td></td><td>TION:</td><td></td><td></td><td></td><td></td><td></td><td></td><td>the second s</td><td></td></td<>			TION:							the second s		
DEPTH OF WELL: (feet.100th's) 28.63 FEET TOTAL VOLUME PURGED: 39 GAI STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE STELD PARAMETERS FIELD PARAMETERS TOTAL VOLUME PURGED: 39 GAI COMULATIVE CASING VOLUME ACTUAL VOLUME DRAW VOLUME PUMPING RATE (units) PH E. C. TEMP. O.R.P. DISSOLVED OXYGEN TURBI COL 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.53 963 21.0 59 3.4 49 26.28 26 " " 6.55 976 20.7 60 3.4 30 29.42 39 " " 6.55 976 20.7 60 3.4 30 DET. TV. AFTER PURGE: D.T. W. AT SAMPLE TIME: 19.17' 6.55<				(feet.100th's)	8.50						GAL.	
STANDING WATER COLUMN: 20.13 FEET DEPTH OF PUMP: 27 FEE FIELD PARAMETERS TIME CUMULATIVE ACTUAL DRAW PUMPING pH E. C. TEMP. O.R.P. DISSOLVED TURBI CASING VOLUME PURGED (DT.W.) DOWN RATE (units) (UmMHOS) (Celsius) (Mvolts) (PPM) (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 102 13.14 13 " " 6.75 913 21.2 59 3.9 112 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 DIT. WATER PURGE: D.T. W. AT SAMPLE TIME: 19.17' WELL INTER PURGE: D.T. W. ATER PURGE: D.T. W. ATER PURGE: D.T. WATER PURGE: </td <td></td> <td>GAL.</td>											GAL.	
TIME CUMULATIVE ACTUAL DRAW PUMPING pH E. C. TEMP. O.R.P. DISSOLVED TURBI CASING VOLUME PURGED (D.T.W.) (GPMLPM) (units) (UmMHOS) (Celsius) (Mvolts) (PPM) (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.75 913 21.2 59 3.9 122 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 -<			LUMN:	(rectix voin 5)					UNGED.		FEET	
TIME CUMULATIVE ACTUAL DRAW PUMPING pH E. C. TEMP. O.R.P. DISSOLVED TURBI OXYGEN COL PER PURGE PURGED (D.T.W.) (GPM/LPM) (units) (UmMHOS) (Celsius) (Mvoits) (PPM) (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.75 913 21.2 59 3.9 12 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 -<					FIEI	D PA	RAMETE	RS				
CASING VOLUME PER PURGE VOLUME PURGED DOWN (D.T.W.) RATE (GPM/LPM) (umits) (UmMHOS) (Celsius) OXYGEN (Mvolts) COL (PPM) COL (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.75 913 21.2 59 3.9 12: 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 - <												
PER PURGE PURGED (D.T.W.) (GPM/LPM) (units) (UmMHOS) (Celsius) (Mvolts) (PPM) (N.T. 0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.75 913 21.2 59 3.9 12: 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30	TIME	CUMULATIVE	ACTUAL	A 200 A 200 A 200 A 200 A	**************************************	pH	E.C.	TEMP.	O.R.P.			
0 0 N/A 0.5 GPM 7.00 887 23.1 54 5.2 100 13.14 13 " " 6.75 913 21.2 59 3.9 122 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 PURGE METHOD: CENTRIFUGAL PUMP.		CASING VOLUME	VOLUME		RATE			10-00-00		OXYGEN	COLOF	
13.14 13 " " 6.75 913 21.2 59 3.9 122 26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 PURGE METHOD: CENTRIFUGAL PUMP. -		PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
26.28 26 " " 6.63 963 21.0 59 3.4 49 39.42 39 " " 6.55 976 20.7 60 3.4 30 PURGE METHOD: CENTRIFUGAL PUMP. - <td>_</td> <td></td> <td>0</td> <td>N/A</td> <td>0.5 GPM</td> <td>7.00</td> <td>887</td> <td>23.1</td> <td>54</td> <td>5.2</td> <td>1000</td>	_		0	N/A	0.5 GPM	7.00	887	23.1	54	5.2	1000	
39.42 39 " " 6.55 976 20.7 60 3.4 30 PURGE METHOD: CENTRIFUGAL PUMP. Image: Central pump. D. T. W. AFTER PURGE: D. T. W. AT SAMPLE TIME: 19.17' Image: Central pump. Image: Ce		13.14	13	"	"	6.75	913	21.2	59	3.9	128	
37.42 37 0.33 97.6 20.7 00 3.4 30 PURGE METHOD: CENTRIFUGAL PUMP. SAMPLE METHOD: CENTRIFUGAL PUMP. D. T. W. AFTER PURGE: D. T. W. AT SAMPLE TIME: 19.17' WELL INTEGRITY: CAP & SEAL ARE SECURE. WELL LOCATION: SEE SITE MAP. REMARKS: VEATHER: CLEAR / HOT! WIND: NONE QUALITY CONTROL: ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE. CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER		26.28	26	"		6.63	963	21.0	59	3.4	49	
SAMPLE METHOD: CENTRIFUGAL PUMP. D. T. W. AFTER PURGE: D. T. W. AT SAMPLE TIME: 19.17' WELL INTEGRITY: CAP & SEAL ARE SECURE. Well LOCATION: SEE SITE MAP. WELL LOCATION: SEE SITE MAP. MONE WEATHER: CLEAR / HOT! WIND: NONE QUALITY CONTROL: ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE. CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER		39.42	39	"	u	6.55	976	20.7	60	3.4	30	
SAMPLE METHOD: CENTRIFUGAL PUMP. D. T. W. AFTER PURGE: D. T. W. AT SAMPLE TIME: 19.17' WELL INTEGRITY: CAP & SEAL ARE SECURE. Well LOCATION: SEE SITE MAP. WELL LOCATION: SEE SITE MAP. MONE WEATHER: CLEAR / HOT! WIND: NONE QUALITY CONTROL: ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE. CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND NO INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER												
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WELL INTEGRITY: CAP & SEAL ARE SECURE. WELL LOCATION: SEE SITE MAP. REMARKS: SEE SITE MAP. WEATHER: CLEAR / HOT! WIND: NONE QUALITY CONTROL: ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE. CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER	SAMPL	E METHOD:			CENTRIFUG	AL PUMI	».					
WELL LOCATION: SEE SITE MAP. REMARKS: CLEAR / HOT! WIND: NONE QUALITY CONTROL: ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE. CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER	D. T. W	. AFTER PURGE:					D. T. W. A.	SAMPLE	TIME:	19.17'		
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DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVE CONTAINMENT: NO CONTAINMENT / PURGE WATER TO THE GROUND INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER	QUALI	TY CONTROL:			ALL PURGIN	G AND M	ONITORING I	EQUIPMEN	T WAS CLE	ANED AS NECES.	SARY.	
INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER					DEDICATED	PURGE	UBING IS IN:	STALLED IN	EACH WE	LL. NEW NITRIL	E GLOVES.	
	CONTA	INMENT:	_		NO CONTAIN	MENT / I	PURGE WATE	R TO THE C	ROUND			
SOLINIST SLOPE METER TURBIDITY METER	INSTRU	JMENTATION:			Y.S.I. 3560 FLC	WCELL		Y.S.I. DISSO	LVED OXY	GEN METER		
					SOLINIST SLO	PE METE	R	TURBIDITY	METER		_	



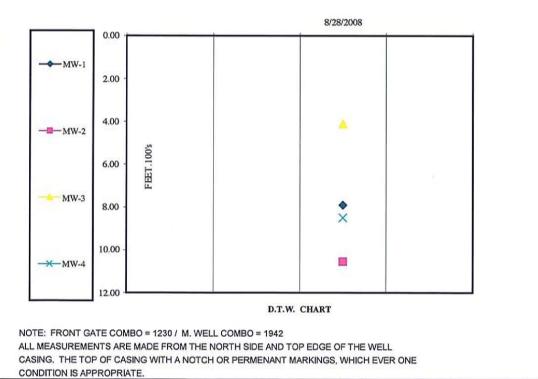
DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA. MONITORING WELL FIELD SUMMARY LOG 2008

DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR. 3	QTR.4	TOTAL
DATE			8/28/08		DEPTH
LOCATION					
MW-1			7.90		35.89'
MW-2			10.54		48.42'
MW-3			4.11		42.65'
MW-4			8.50		28.63'





2010 GROUNDWATER FIELD MONITORING SUMMARY REPORT

SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 23, 2010

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



SAM	PLE LOCATIO	DN/MW-		1		DATE:			6/23/2010	
		ANT DOWN				TON N.				And - Made Calleria
PROJI	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOI
ADDR	ESS:		24325 L	OMITAS DI	۲.	SAMPLE				
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAI	NERS:	3 - PLASTICS	
SITE (CONTACT:		GERAI	LD COBURN	V	PRESERV	ATIVES	: NI	EAT / HNO3 / H	CL
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.
a sub com		n William Will				Marring				
PROJI	ECT MANAGER:		BEN	I NYDAM		MONUMI	ENT:		POST	
SAMP	LER:		DEL-TECH/	ASHLEY A	VILLA	WELL CA	SING M.	ATERIAL	. PVC	
SIGNE	ED:		Gohla	y and	la	WELL CA	SING DI	A.:	2" /	0.1632
SAMP	LE MEDIA:		GROU	INDWATER		P.I.D. REA	ADING / G	DDOR:	N/A	NONE
TOP O	OF CASING ELEV.	ATION:			MSL	COLOR:		B	LACK TO CLE	AR
DEPTI	H TO WATER:		(feet.100th's)	5.80	FEET	CALC. PL	RGE VO	L.:	4.91	GAL.
DEPTI	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	OLUME	PURGED	15.0	GAL.
STAN	DING WATER CO	LUMN:		30.09	FEET	DEPTH O			34	FEET
_				FIEL	D PAI	RAMETE	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBID
	CASING VOLUME	VOLUME	DOWN	RATE	P	2.0.		Olatin .	OXYGEN	COLO
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.
_	0	0	N/A	3.0 GPM	7.11	407	23.9	155	N/A	1000+
	4.91	5	"	"	7.01	394	21.8	166	"	373
	9.82	10	"		6.99	392	20.7	164	"	111
-	14.73	15	"	"	7.04	392	20.9	163		23
	11110	10			7.04	574	20.7	105		45
N N N			Inter a second second				n	the doubles		
PURG	E METHOD:			CENTRIFUG	AL PUM	P.				
SAMP	LE METHOD:			CENTRIFUG	AL PUM	Р.	_			
D. T. W	V. AFTER PURGE:					D. T. W. A'	T SAMPLI	E TIME:	10.13'	
WELL	INTEGRITY:			CAP & SEAL	ARE SE	CURE.				
WELL	LOCATION:			SEE SITE MA	AP.					
REMA	RKS:			INSTALLEE	TUBIN	G.				
										_
WEAT				CLEAR / HO			WIND:		NONE	2001222
QUAL	ITY CONTROL:			and the second se		the second s	the second s		LEANED AS NEC	The local division of
CONT	AINIMENT-								VELL. NEW NITH	LILE GLOVE
CONT	AINMENT:			NO CONTAIN	WIENI /	PURGE WAT	EKIUTHE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FLO	OWCELL	_	Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLO		R	TURBIDITY			
	DRUMS ON SIGHT			WATER:			SOIL:			



PLE LOCATIO	N/MW -		2		DATE:			6/23/2010			
WARD TO DO DO DO				Starting!		1 1					
ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ESS:		24325 L	OMITAS DI	٤.							
STATE:		LEMOI	NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS						
		GERAI	LD COBURN	1	PRESERVATIVES: NEAT / HNO3 / HCL						
JLTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.		
			12 JUL 2				NOTE NO.				
ECT MANAGER:		BEN	I NYDAM		MONUMI	ENT:		POST			
LER:		A REAL PROPERTY OF A REAL PROPER	to be the contraction of the set		WELL CA	SING M.	ATERIAL				
D:					WELL CA	SING DI	A.:		0.6528		
LE MEDIA:		GROU	INDWATER			ADING / O	ODOR:		NONE		
and the second se	ATION:			MSL				and the second se			
		and the second se	a la statuta de la seconda de la se	FEET	and the second se	and the second second second second second second	and the second se		GAL.		
		(feet.100th's)							GAL.		
DING WATER CO	LUMN:		40.02	FEET	DEPTH O	F PUMP:		47	FEET		
			FIEI	D PA	RAMETE	RS					
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ACTUAL		10355 V/ 505A92	pH	E.C.	TEMP.	O.R.P.		101 101 101 101 101 10 10 10 10 10 10 10		
	VOLUME		RATE		_	_		OXYGEN	COLOR		
PER PURGE	PURGED		(GPM/LPM)	(units)		and the second se	(Mvolts)	(PPM)	(N.T.U.)		
0			3.0 GPM						51		
			"						38		
				Contraction of the local division of the loc	A COLUMN A DATA OF A				41		
78.38	78			8.20	553	22	125		30		
	aller								N. C.		
E METHOD:			CENTRIFUG	AL PUM	P.						
LE METHOD:			CENTRIFUG	AL PUM							
. AFTER PURGE:				_	the second se	T SAMPLI	E TIME:	15.45'	_		
service of processing and provide a state of the service of the			the second s		ECURE.						
			SEE SITE MA	AP.							
RKS:											
HER:			CLEAR / HO	T!		WIND:		NONE			
TY CONTROL:			and the second design of the	California and and an owner statements	and the second se	and the second se	and the second		And a state of the local data and the state of the state		
			a second by an and data designed a first of the second second					VELL. NEW NITH	ILE GLOVE		
AINMENT:			NO CONTAII	VMENT /	PURGE WAT	ER TO THE	E GROUND				
UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER			
			SOLINIST SLO	OPE METH	ER	TURBIDITY	METER				
									_		
	CT NAME: ESS: STATE: CONTACT: ULTANT: ULTANT: CCT MANAGER: LER: D: LE MEDIA: F CASING ELEV/ I TO WATER: I OF WELL: DING WATER CO CUMULATIVE CASING VOLUME PER PURGE 0 26.13 52.25 78.38 0 26.13 52.25 78.38 0 26.13 52.25 78.38 0 26.13 52.25 78.38 0 26.13 52.25 78.38	CCT NAME: ESS: STATE: CONTACT: ULTANT: ULTANT: CCT MANAGER: LER: D: LE MEDIA: F CASING ELEVATION: I TO WATER: I OF WELL: DING WATER COLUMN: I TO WATER COLUMN: CUMULATIVE ACTUAL VOLUME PER PURGE PURGE PURGED 0 0 0 26.13 26 52.25 52 78.38 78 2 3 4 5 5 2 78.38 78 2 5 5 2 7 8 3 8 7 8 5 2 7 8 3 8 7 8 5 2 7 8 3 8 7 8 5 2 7 8 3 8 7 8 7 8 3 8 7 8 7 8 7 8 7 8 7 8	CCT NAME:       C         ESS:       24325 L         STATE:       LEMO         CONTACT:       GERAI         ULTANT:       GERAI         CT MANAGER:       BEN         LER:       DEL-TECH /         D:       Condentation         CE MEDIA:       GROU         F CASING ELEVATION:       GROU         H TO WATER:       (feet.100th's)         I OF WELL:       (feet.100th's)         ING WATER COLUMN:       DRAW         VOLUME       PURGE         PER PURGE       PURGED         O       0         N/A       26.13         26       "         52.25       52         T       78.38         78.38       78         E METHOD:	CCT NAME:       CEMEX         ESS:       24325 LOMITAS DE         STATE:       LEMONCOVE, CA         CONTACT:       GERALD COBURN         ULTANT:       GERALD COBURN         ULTANT:       GERALD COBURN         CCT MANAGER:       BEN NYDAM         LER:       DEL-TECH / ASHLEY A'         D:       Cohley Could         F CASING ELEVATION:       GROUNDWATER         F TO WATER:       (feet.100th's) 8.40         I OF WELL:       (feet.100th's) 48.42         DING WATER COLUMN:       40.02         FIEI         CUMULATIVE       ACTUAL         DRAW       PUMPING         CASING VOLUME       VOLUME         DOWN       RATE         PER PURGE       PURGED         0       0         0       0         0       0         1       ACTUAL         DEVICATION:       (GPM/LPAD)         0       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0 <td>CCT NAME:       CEMEX         ESS:       24325 LOMITAS DR.         STATE:       LEMONCOVE, CA.         CONTACT:       GERALD COBURN         ULTANT:      </td> <td>CCT NAME:       CEMEX       ANALYSI         ESS:       24325 LOMITAS DR.       SAMPLE         STATE:       IEMONCOVE, CA.       SAMPLE         CONTACT:       GERALD COBURN       PRESERV         JUTANT:       I.AB. ANA         SCT MANAGER:       BEN NYDAM       MONUMI         LER:       DELTECH / ASHLEY AVILLA       WELL CA         DE       Carley Carles       WELL CA         F CASING ELEVATION:       MSL       COLOR:         TO WATER:       (feet.100th's)       8.40       FEET         CALC.PU       MARAMETE       DEPTH O       OLOR:         TO WATER:       (feet.100th's)       48.42       FEET       DEPTH O         IONG WATER COLUMN:       40.02       FEET       DEPTH O         CUMULATIVE       ACTUAL       DRAW       PUMPING       pH       E. C.         CASING VOLUME       PURGED       (D.T.W.)       (gPM/LPM)       (units)       (UmMHOS)         0       0       N/A       3.0 GPM       8.16       548         26.13       26       "       "       8.20       553         52.25       52       "       "       8.20       553         52.25<td>CCT NAME:       CEMEX       ANALYSIS PERFO.         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE CONTAI         OONTACT:       GERALD COBURN       PRESERVATIVES         JUTANT:       LAB. ANALYSIS B       IAB. ANALYSIS B         CCT MANAGER:       DEN NYDAM       MONUMENT:         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DI         CCT MANAGER:       GROUNDWATER       PLD. READING / G         D:       Cachley GNAlley       WELL CASING DI         ITO WATER:       (feet.100th's)       8.40       FEET         DIG WATER COLUMN:       40.02       FEET       DIC.C. PURGE VOLUME         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CASING VOLUME       VOLUME       DOWN       RATE       (umite)       (umMHOS)       (ceisus)         0       0       N/A       3.0 GPM       8.16       548       21</td><td>CT NAME:       CEMEX       ANALYSIS PERFORMED:         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TOME:         ONTACT:       GERALD COBURN       PRESERVATIVES:       NI         JLTANT:       LAB. ANALYSIS BY:       NI       LAB. ANALYSIS BY:         CCT MANAGER:       BEN NYDAM       MONUMENT:       LEB:       NELL CASING MATERIAL         D:       Clochder Coulder       WELL CASING MATERIAL       DI. READING / ODOR:       F         F CASING BLEVATION:       MSL       COLOR:       COLOR:       COLOR:         I TO WATER:       (feet.100th's)       840       FEET       TOTAL VOLUME PURGED         I OF WELL:       (feet.100th's)       48.42       FEET       TOTAL VOLUME PURGED         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       IDEPTH OF PUMP:         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       pH       E.C.       TEMP.       O.R.P.         CASING VOLUME       VOLUME       DOWN       RATE       (units)       (UmMHOS)       (Celosito)       (Mvolts)         0       0       N/A       3.0 GPM       8.26       553</td><td>CT NAME:       CEMEX       ANALYSIS PERFORMED:       SEE CHAIN O         ESS:       24325 LOMITAS DR.       SAMPLE TIME:       9-47         STATE:       LEMONCOVE, CA.       SAMPLE TIME:       9-47         SONTACT:       GERALD COBURN       PRESERVATIVES:       NEAT / HN03 / H         JLTANT:       LAB.ANALYSIS BY:       DELAYALLE         CT MANAGER:       DEN NYDAM       MONUMENT:       POST         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING MATERIAL       PVC         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DIA.:       4" /         LE MEDIA:       GROUNDWATER       PLD. READING / ODOR:       N/A         F CASING ELEVATION:       MSL       COLOR:       CLECR         ATO WATER:       (feet.100th's)       8-40       FEET       TOTAL VOLUME PURGED 78         ING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       47         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E.C.       TEMP.       O.R.P.       DISSOLVED         O       N/A       3.0 GPM       8.16       548       21.2       128       N/A         26.13       26       "</td></td>	CCT NAME:       CEMEX         ESS:       24325 LOMITAS DR.         STATE:       LEMONCOVE, CA.         CONTACT:       GERALD COBURN         ULTANT:	CCT NAME:       CEMEX       ANALYSI         ESS:       24325 LOMITAS DR.       SAMPLE         STATE:       IEMONCOVE, CA.       SAMPLE         CONTACT:       GERALD COBURN       PRESERV         JUTANT:       I.AB. ANA         SCT MANAGER:       BEN NYDAM       MONUMI         LER:       DELTECH / ASHLEY AVILLA       WELL CA         DE       Carley Carles       WELL CA         F CASING ELEVATION:       MSL       COLOR:         TO WATER:       (feet.100th's)       8.40       FEET         CALC.PU       MARAMETE       DEPTH O       OLOR:         TO WATER:       (feet.100th's)       48.42       FEET       DEPTH O         IONG WATER COLUMN:       40.02       FEET       DEPTH O         CUMULATIVE       ACTUAL       DRAW       PUMPING       pH       E. C.         CASING VOLUME       PURGED       (D.T.W.)       (gPM/LPM)       (units)       (UmMHOS)         0       0       N/A       3.0 GPM       8.16       548         26.13       26       "       "       8.20       553         52.25       52       "       "       8.20       553         52.25 <td>CCT NAME:       CEMEX       ANALYSIS PERFO.         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE CONTAI         OONTACT:       GERALD COBURN       PRESERVATIVES         JUTANT:       LAB. ANALYSIS B       IAB. ANALYSIS B         CCT MANAGER:       DEN NYDAM       MONUMENT:         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DI         CCT MANAGER:       GROUNDWATER       PLD. READING / G         D:       Cachley GNAlley       WELL CASING DI         ITO WATER:       (feet.100th's)       8.40       FEET         DIG WATER COLUMN:       40.02       FEET       DIC.C. PURGE VOLUME         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CASING VOLUME       VOLUME       DOWN       RATE       (umite)       (umMHOS)       (ceisus)         0       0       N/A       3.0 GPM       8.16       548       21</td> <td>CT NAME:       CEMEX       ANALYSIS PERFORMED:         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TOME:         ONTACT:       GERALD COBURN       PRESERVATIVES:       NI         JLTANT:       LAB. ANALYSIS BY:       NI       LAB. ANALYSIS BY:         CCT MANAGER:       BEN NYDAM       MONUMENT:       LEB:       NELL CASING MATERIAL         D:       Clochder Coulder       WELL CASING MATERIAL       DI. READING / ODOR:       F         F CASING BLEVATION:       MSL       COLOR:       COLOR:       COLOR:         I TO WATER:       (feet.100th's)       840       FEET       TOTAL VOLUME PURGED         I OF WELL:       (feet.100th's)       48.42       FEET       TOTAL VOLUME PURGED         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       IDEPTH OF PUMP:         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       pH       E.C.       TEMP.       O.R.P.         CASING VOLUME       VOLUME       DOWN       RATE       (units)       (UmMHOS)       (Celosito)       (Mvolts)         0       0       N/A       3.0 GPM       8.26       553</td> <td>CT NAME:       CEMEX       ANALYSIS PERFORMED:       SEE CHAIN O         ESS:       24325 LOMITAS DR.       SAMPLE TIME:       9-47         STATE:       LEMONCOVE, CA.       SAMPLE TIME:       9-47         SONTACT:       GERALD COBURN       PRESERVATIVES:       NEAT / HN03 / H         JLTANT:       LAB.ANALYSIS BY:       DELAYALLE         CT MANAGER:       DEN NYDAM       MONUMENT:       POST         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING MATERIAL       PVC         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DIA.:       4" /         LE MEDIA:       GROUNDWATER       PLD. READING / ODOR:       N/A         F CASING ELEVATION:       MSL       COLOR:       CLECR         ATO WATER:       (feet.100th's)       8-40       FEET       TOTAL VOLUME PURGED 78         ING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       47         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E.C.       TEMP.       O.R.P.       DISSOLVED         O       N/A       3.0 GPM       8.16       548       21.2       128       N/A         26.13       26       "</td>	CCT NAME:       CEMEX       ANALYSIS PERFO.         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE CONTAI         OONTACT:       GERALD COBURN       PRESERVATIVES         JUTANT:       LAB. ANALYSIS B       IAB. ANALYSIS B         CCT MANAGER:       DEN NYDAM       MONUMENT:         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DI         CCT MANAGER:       GROUNDWATER       PLD. READING / G         D:       Cachley GNAlley       WELL CASING DI         ITO WATER:       (feet.100th's)       8.40       FEET         DIG WATER COLUMN:       40.02       FEET       DIC.C. PURGE VOLUME         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E. C.       TEMP.         CASING VOLUME       VOLUME       DOWN       RATE       (umite)       (umMHOS)       (ceisus)         0       0       N/A       3.0 GPM       8.16       548       21	CT NAME:       CEMEX       ANALYSIS PERFORMED:         ESS:       24325 LOMITAS DR.       SAMPLE TIME:         STATE:       LEMONCOVE, CA.       SAMPLE TOME:         ONTACT:       GERALD COBURN       PRESERVATIVES:       NI         JLTANT:       LAB. ANALYSIS BY:       NI       LAB. ANALYSIS BY:         CCT MANAGER:       BEN NYDAM       MONUMENT:       LEB:       NELL CASING MATERIAL         D:       Clochder Coulder       WELL CASING MATERIAL       DI. READING / ODOR:       F         F CASING BLEVATION:       MSL       COLOR:       COLOR:       COLOR:         I TO WATER:       (feet.100th's)       840       FEET       TOTAL VOLUME PURGED         I OF WELL:       (feet.100th's)       48.42       FEET       TOTAL VOLUME PURGED         DING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       IDEPTH OF PUMP:         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       pH       E.C.       TEMP.       O.R.P.         CASING VOLUME       VOLUME       DOWN       RATE       (units)       (UmMHOS)       (Celosito)       (Mvolts)         0       0       N/A       3.0 GPM       8.26       553	CT NAME:       CEMEX       ANALYSIS PERFORMED:       SEE CHAIN O         ESS:       24325 LOMITAS DR.       SAMPLE TIME:       9-47         STATE:       LEMONCOVE, CA.       SAMPLE TIME:       9-47         SONTACT:       GERALD COBURN       PRESERVATIVES:       NEAT / HN03 / H         JLTANT:       LAB.ANALYSIS BY:       DELAYALLE         CT MANAGER:       DEN NYDAM       MONUMENT:       POST         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING MATERIAL       PVC         LER:       DEL-TECH / ASHLEY AVILLA       WELL CASING DIA.:       4" /         LE MEDIA:       GROUNDWATER       PLD. READING / ODOR:       N/A         F CASING ELEVATION:       MSL       COLOR:       CLECR         ATO WATER:       (feet.100th's)       8-40       FEET       TOTAL VOLUME PURGED 78         ING WATER COLUMN:       40.02       FEET       DEPTH OF PUMP:       47         FIELD PARAMETERS         CUMULATIVE       ACTUAL       DRAW       PUMPING       PH       E.C.       TEMP.       O.R.P.       DISSOLVED         O       N/A       3.0 GPM       8.16       548       21.2       128       N/A         26.13       26       "		



# $DEL\text{-}TECH \ \text{Geotechnical support services}$

- N- 11				1 - 12 Uni	3 L.M		Selection of			
SAM	PLE LOCATIO	N/MW-	•	3		DATE:			6/23/2010	
					119					
PROJE	ECT NAME:		C	CEMEX		ANALYSI		RMED:	SEE CHAIN O	F CUSTODY
ADDR				OMITAS DI		SAMPLE		9:03		
	STATE:		AND REAL PROPERTY AND REAL PRO	NCOVE, CA		SAMPLE	3 - PLASTICS			
and the second se	CONTACT:		GERAI	LD COBURN	V	PRESERV		EAT / HNO3 / HCL		
CONSU	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.
						BEE WELLER				
the second se	ECT MANAGER:			I NYDAM		MONUM			POST	
SAMP			DEL-TECH /			WELL CA		and the second se		
SIGNE				eganil		WELL CA			2" /	0.1632
	LE MEDIA:		GROU	INDWATER		P.I.D. REA	ADING / O	DDOR:	N/A	NONE
and the second se	F CASING ELEV	ATION:			MSL	COLOR:			CLEAR	
and the second se	H TO WATER:		(feet.100th's)	2.52	FEET	CALC. PU	and the second se	and the second se	6.55	GAL.
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
STANI	DING WATER CO	LUMN:		40.13	FEET	DEPTH O	F PUMP:		41	FEET
				FIEI	D PA	RAMETE	RS			
4 4 2		Margaren eta era da								وعيدالاعوا
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)		(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	3.0 GPM	7.16	369	21.5	99	N/A	9
	6.55	6.5	"		7.12	339	19.2	108	"	6
	13.10	13	"	"	7.06	341	18.5	112	"	4
	19.65	9.5			7.02	342	18.3	115		3
									and a strangers and an and an	and provinces of
	E METHOD:			CENTRIFUG				_		
	LE METHOD: /. AFTER PURGE:			CENTRIFUG	AL PUM	P. D. T. W. A	TCAMPT	TIME.	2.59'	
all and the second s	INTEGRITY:			CAP & SEAL	ADE SI		I SAMPLI	e mare:	2.39	
	LOCATION:			SEE SITE M		JUKE.				
REMA	And the second			SLL SITL M						
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE	
QUALI	TY CONTROL:			ALL PURGIN	IG AND N	<b>MONITORING</b>	EQUIPME	ENT WAS C	LEANED AS NEC	ESSARY.
				DEDICATED	PURGE	TUBING IS II	VSTALLED	IN EACH V	VELL. NEW NITR	ILE GLOVES
CONT	AINMENT:			NO CONTAI	VMENT /	PURGE WAT	ER TO THE	C GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OX	YGEN METER	
				SOLINIST SLO	OPE METH	ER	TURBIDITY	METER		



SAM	PLE LOCATIO	N/MW-		4		DATE:			6/23/2010			
1				STOL N								
PROJI	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	ESS:		24325 L	OMITAS DI	۲.	SAMPLE TIME: 8:40						
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS						
SITE C	CONTACT:		GERAI	LD COBURN	V	PRESERV	ATIVES	: NI	EAT / HNO3 / H	CL		
CONS	ULTANT:			LAB. ANALYSIS BY:					DELLAVALLE	ELABS.		
	N. C. State State 1 14			a indiana	12 14 3							
PROJI	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		FLUSH			
SAMP	LER:		DEL-TECH /	ASHLEY A	VILLA	WELL CA	SING M.	ATERIAL	. PVC			
SIGNE	ED:		Ashle	y and	la	WELL CA	SING DI	A.:	4" /	0.6528		
SAMP	LE MEDIA:		GROU	JNDWATER		P.I.D. REA	ADING / O	DDOR:	N/A	NONE		
TOP O	<b>OF CASING ELEV</b>	ATION:			MSL	COLOR:		LIGH	F BROWN TO C	CLEAR		
DEPTI	H TO WATER:		(feet.100th's)	5.62	FEET	CALC. PU	RGE VO	L.:	15.02	GAL.		
DEPTI	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V	OLUME	PURGED	45	GAL.		
STAN	DING WATER CO	LUMN:		23.01	FEET	DEPTH O	F PUMP:		27	FEET		
							D.C.					
				FIEL	LD PA	RAMETE	RS					
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI		
	CASING VOLUME	VOLUME	DOWN	RATE	pir	1.0.	A ASIVAL .	Oata .	OXYGEN	COLOI		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Coleine)	(Mvolts)	(PPM)	(N.T.U.)		
								39				
	0 15.02	0	N/A	3.0 GPM	8.08	1108 1476	22.9 21.7	43	N/A	171 30		
					7.08			45		19		
	30.04 45.06	30 45	"		7.00	1557 1552	21.1 23.0	45		19		
-	45.00	45			0.97	1552	25.0	49	77	15		
-										· · · · · · · · · · · · · · · · · · ·		
							- NO EX	Shok // S				
	E METHOD:			CENTRIFUG						1 House and the state		
	LE METHOD:			CENTRIFUG	AL PUM							
	V. AFTER PURGE:					D. T. W. A	T SAMPL	E TIME:	5.70'			
	INTEGRITY:			CAP & SEAI		ECURE.						
the second se	LOCATION:			SEE SITE M.	AP.					_		
REMA	RKS:	_		_	_					_		
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE			
	ITY CONTROL:				- A A A A A A A A A A A A A A A A A A A	IONITORING		ENT WAS C.	LEANED AS NEC	ESSARY.		
									VELL. NEW NITH			
CONT	AINMENT:			NO CONTAI	NMENT /	PURGE WAT	ER TO THE	GROUND				
-												
INSTR	UMENTATION:			Y.S.I. 3560 FL					YGEN METER			
				SOLINIST SLO	OPE METI	SR	TURBIDIT	Y METER		_		
		_			-			_				
					_							

### DEL-TECH GEOTECHNICAL SUPPORT

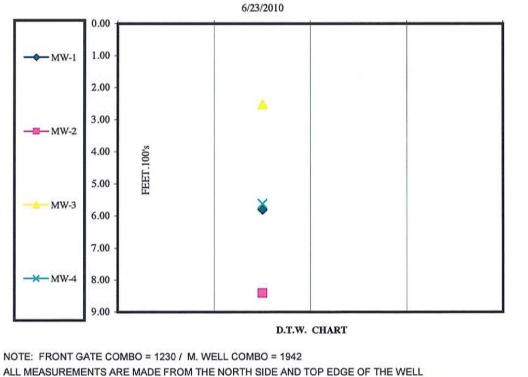


(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

CEMEX 24325 LOMITAS DR. / LEMON COVE, CA.

MONITORING WELL FIELD SUMMARY LOG 2010 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR. 3A	QTR. 3A	TOTAL
DATE		6/23/10			DEPTH
LOCATION					
MW-1		5.80			35.89'
MW-2		8.40			48.42'
MW-3		2.52			42.65'
<b>MW-4</b>		5.62			28.63'
		· · · · · · · · · · · · · · · · · · ·			



CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



### 2011 GROUNDWATER FIELD MONITORING SUMMARY REPORT

### SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. July 11, 2011

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



SAM	PLE LOCATIO	N/MW.		1		DATE:			7/11/2011			
							S ICWE					
PROJ	ECT NAME:		(	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOL		
ADDR	ESS:		24325 L	OMITAS DI	۲.	SAMPLE	TIME:		17:00			
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS						
	CONTACT:		GERAI	LD COBURN	1	PRESERV			EAT / HNO3 / H			
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.		
	EEX O		hand the second second	Mary Low Fr	ur unite	Address of the Street	In the		Sector and the sector sector			
PROJ	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		POST			
SAMP	LER:		DEL-TECH /	ASHLEY A	VILLA	WELL CA	SING M	ATERIAL	PVC			
SIGNI	ED:		aphle	y anil	la	WELL CA	SING DI	A.:	2" /	0.1632		
SAMP	LE MEDIA:		GROU	INDWATER		P.I.D. REA	DING / C	DDOR:	N/A	NONE		
гор (	OF CASING ELEV	ATION:			MSL	COLOR:		B	LACK TO CLEA	AR		
DEPT	H TO WATER:		(feet.100th's)	6.30	FEET	CALC. PL	RGE VO	L.:	4.83	GAL.		
DEPT	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	OLUME	PURGED	15.0	GAL.		
STAN	DING WATER CO	LUMN:		29.59	FEET	DEPTH O	F PUMP:		34	FEET		
1					11 12 4	RAMETE	U.C.					
-				FIEI	JD PA	KANICIC	RS			(C		
ГІМЕ	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBID		
	CASING VOLUME	VOLUME	DOWN	RATE		1.110.000.000.000	NY 1997 1998 1997 1999 1994		OXYGEN	COLO		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	3.0 GPM	7.18	469	19.6	96	N/A	7		
	4.83	5	0	"	7.09	464	19.0	102	0	3		
	9.66	10	"		7.05	465	19.2	107	"	2		
	14.49	15	"	"	7.06	465	19.1	105	"	2		
DUDO		2 - 1 /							19			
	E METHOD:			CENTRIFUG		New York Concerning of the Internet State of						
	LE METHOD:			CENTRIFUG	AL PUM	Contraction of the second s			0.001			
	V. AFTER PURGE:			010 A 051	A D E OF	D. T. W. A	I SAMPLI	s TIME:	8.99'			
	INTEGRITY:			CAP & SEAL		CURE.		_				
	LOCATION:			SEE SITE M	AP.		_					
REMA	KK5:											
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE			
QUAL	ITY CONTROL:			ALL PURGIN	G AND N	IONITORING	EOUIPME	ENT WAS C.	LEANED AS NEC	ESSARY.		
-				a la								
CONT	AINMENT:			DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE C NO CONTAINMENT / PURGE WATER TO THE GROUND								
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER			
				SOLINIST SLO	OPE METI	ER	TURBIDITY	METER				
_												
# OF T	RUMS ON SIGHT			WATER:	0		SOIL:	0				



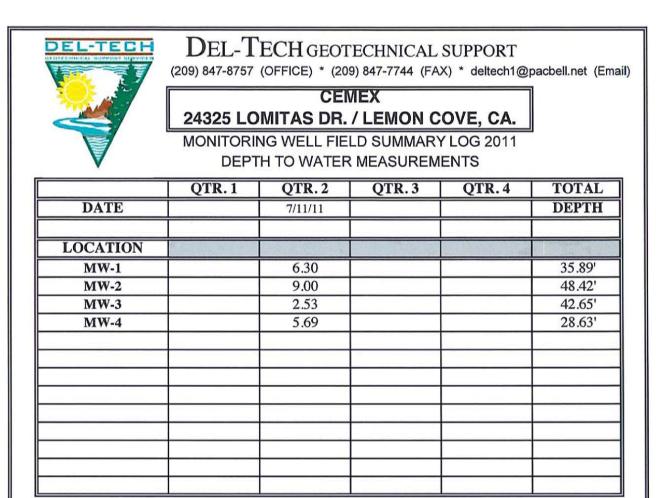
	PLE LOCATIO	NI / N/IXX7		-		DATE:	10	No. Sector of the sector	7/11/2011			
SAIVI	PLE LOCATIO	- WI WI WI -		2		DATE:			7/11/2011			
			n Alexandra II.		12411		HILL CA		and the second se	Marriage marries		
	ECT NAME:			CEMEX		ANALYSI		RMED:	SEE CHAIN O	FCUSTODY		
ADDR				OMITAS DI		SAMPLE			16:39			
	STATE:			NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS PRESERVATIVES: NEAT / HNO3 / HCL						
	CONTACT:		GERAI	LD COBURN	V	PRESERV						
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.		
		the day					autoratory.			A strange of the		
and the second second	ECT MANAGER:			NYDAM		MONUMI			POST	_		
SAMP	and the second se		DEL-TECH /	and the second se	interest of the second second second	WELL CA	and the second se			0 (840		
SIGNE	the second s			ey and		WELL CA		Contraction of the local division of the loc	4" /	0.6528		
	LE MEDIA:	most	GROU	INDWATER		P.I.D. REA	ADING / O	DDOR:	N/A	NONE		
	OF CASING ELEVA	ATION:	(A	0.00	MSL	COLOR:	monwo	*	CLEAR	0.17		
	H TO WATER: H OF WELL:		(feet.100th's) (feet.100th's)	9.00 48.42	FEET	CALC. PU TOTAL V	and the second se		25.73	GAL. GAL.		
	DING WATER CO	T TIMANI.	(feet.100th's)	39.42	FEET FEET	DEPTH O			47	FEET		
STAN	DING WATER CO.	L'UMIN:		39.42	FEEI	DEFINO	F PUMP:		4/	FEEI		
				FIEI	DPA	RAMETE	RS					
			New County of the last									
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI'		
	CASING VOLUME	VOLUME	DOWN	RATE	1.4 <b>7</b> .111.1	114401 6.0351	297.98949991		OXYGEN	COLOR		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	3.0 GPM	7.61	530	21.4	76	N/A	46		
	25.73	26	11	"	7.94	538	21.2	70	"	46		
	51.47	52	"	"	7.92	556	21.1	84	"	38		
	77.20	78	"	"	7.93	561	21.1	92	"	36		
4			and the second second		E.A					H - Transfer		
PURG	E METHOD:			CENTRIFUG	AL PUM	IP.						
SAMP	LE METHOD:			CENTRIFUG	AL PUM	IP.						
	V. AFTER PURGE:					D. T. W. A'	<b>F SAMPLI</b>	E TIME:	9.16'			
	INTEGRITY:			CAP & SEAI	LARE S	ECURE.						
	LOCATION:		· · · · · · · · · · · · · · · · · · ·	SEE SITE M.	AP.							
REMA	IRKS:											
NAME A COL	THER.			OLEAD (ITO	TI		NUT NO		NONE			
WEAT	and a second			CLEAR / HO		MONITOPRIC	WIND:	NT WAR C	NONE	FEGADY		
QUAL	ITY CONTROL:			CONTRACTOR OF A DESCRIPTION OF A DESCRIP	States on the second states of	NAMES OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.	Statement of the second s	A REAL PROPERTY AND A REAL	LEANED AS NEC VELL. NEW NITH	and the state in the local district of the local distribution of the l		
						PURGE WAT				ULE GLOVE.		
	AINMENT-			NOCONTAI	WIENI /	FUNCE WAI	ER IU IHI	GROUND				
	AINMENT:											
CONT		_		V S I 2560 EI	OWCELL		VSI DICC.	OI VED OVS	GEN METER			
CONT	AINMENT: UMENTATION:			Y.S.I. 3560 FL					GEN METER			
CONT				Y.S.I. 3560 FL SOLINIST SL			Y.S.I. DISS TURBIDITY		GEN METER			
CONT									GEN METER			
CONT									GEN METER			

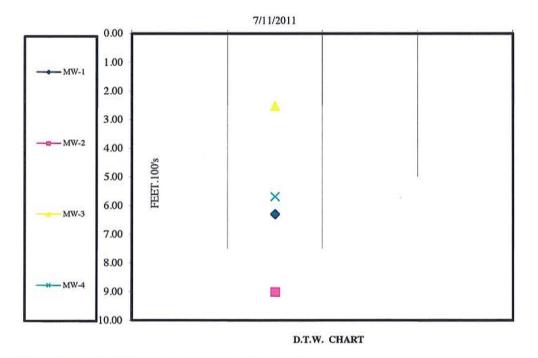


Constant of the local data	and the state of the	I I I I I I I I I I I I I I I I I I I			14 - MI	- Indentified in	Star Mar	1.1.2			
SAM	PLE LOCATIO	N/MW-		3		DATE:			7/11/2011		
112			Star 2							Station 2	
	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD	
ADDR	Contraction of the second s			OMITAS DI	all and the second s	SAMPLE			16:14		
	STATE:			NCOVE, CA		SAMPLE	the state of the s	3 - PLASTICS			
	CONTACT:		GERAI	LD COBURN	PRESERV			EAT / HNO3 / H			
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.	
3000		terri (cana i			ENZE	ALLON ALLONG	1.214.2				
	ECT MANAGER:		and the second se	I NYDAM		MONUMI	and the second se		POST		
SAMP			DEL-TECH /			WELL CA					
SIGNE				ey and		WELL CA			2" /	0.1632	
	LE MEDIA:		GROU	INDWATER		P.J.D. REA	ADING / C	DDOR:	N/A	NONE	
The state of the second second	OF CASING ELEVA	ATION:			MSL	COLOR:			CLEAR		
	H TO WATER:		(feet.100th's)	2.53	FEET	CALC. PU			6.55	GAL.	
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V			in the second seco	GAL.	
STAN	DING WATER CO	LUMN:		40.12	FEET	DEPTH O	F PUMP:		41	FEET	
				FIFI	DPA	RAMETE	DC				
				FIEI			IN S	907-75-2 <del>1</del> 1-909			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
	CASING VOLUME	VOLUME	DOWN	RATE	19				OXYGEN	COLOR	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	3.0 GPM	7.06	485	21.1	30	N/A	14	
	6.55	6.5			6.93	428	18.8	55	"	5	
	13.10	13	".		6.91	424	19.3	63	"	3	
	19.64	9.5	"	"	6.89	423	19.7	72	"	3	
						Versel 1	10 T 25				
PURG	E METHOD:			CENTRIFUG	AL PUM	P.					
the second s	LE METHOD:			CENTRIFUG	and the second se						
D. T. W	V. AFTER PURGE:					D. T. W. A'	T SAMPLI	E TIME:	2.55'		
WELL	INTEGRITY:			CAP & SEAI	LARE S	ECURE.					
WELL	LOCATION:			SEE SITE M	AP.	Arra Manuda / A					
REMA	RKS:										
	and a second										
				CLEAR / HC			WIND:	ATT WAR O	NONE	FORADY	
	HER:			ALL DUDGO	TO ANTO I	10 MITONIC			I RANKII AS NEC	PANARY	
	HER: ITY CONTROL:			ALL PURGIN							
QUALI				DEDICATEL	) PURGE		VSTALLED	IN EACH V	VELL. NEW NITH		
QUALI	ITY CONTROL:			DEDICATEL	) PURGE	TUBING IS II	VSTALLED	IN EACH V	VELL. NEW NITH		
QUALI	ITY CONTROL:			DEDICATEL NO CONTAL Y.S.I. 3560 FL	O PURGE NMENT / OWCELL	TUBING IS II PURGE WAT	VSTALLED ER TO THE Y.S.I. DISS	IN EACH V E GROUND	VELL. NEW NITH		
QUALI	ITY CONTROL: AINMENT:			DEDICATEL NO CONTAL	O PURGE NMENT / OWCELL	TUBING IS II PURGE WAT	NSTALLED ER TO THE	IN EACH V E GROUND	WELL. NEW NITH		
QUALI	ITY CONTROL: AINMENT:			DEDICATEL NO CONTAL Y.S.I. 3560 FL	O PURGE NMENT / OWCELL	TUBING IS II PURGE WAT	VSTALLED ER TO THE Y.S.I. DISS	IN EACH V E GROUND	WELL. NEW NITH		
QUALI	ITY CONTROL: AINMENT:			DEDICATEL NO CONTAL Y.S.I. 3560 FL	O PURGE NMENT / OWCELL	TUBING IS II PURGE WAT	VSTALLED ER TO THE Y.S.I. DISS	IN EACH V E GROUND	WELL. NEW NITH		



2							N. 18.					
SAM	PLE LOCATIO	N/MW-		4		DATE:			7/11/2011			
		Str. S.			W.W. IS	23.14	Arx Shr	High Para				
PROJI	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	ESS:		24325 L	OMITAS DI	R.	SAMPLE TIME: 15:55						
CITY,	STATE:		LEMO	NCOVE, CA	ν.	SAMPLE CONTAINERS: 3 - PLASTICS						
	CONTACT:		GERAI	ALD COBURN PRESERVATIVES:					EAT / HNO3 / H	CL		
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.		
on de		MILLES 6	1. 1. 1. 1.					En aller				
ргол	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		FLUSH			
SAMP	LER:		DEL-TECH /	ASHLEY A	VILLA	WELL CA	SING M.	ATERIAL	PVC			
SIGNE	ED:		Achle	y and	la T	WELL CA	SING DI	A.:	4" /	0.6528		
SAMP	LE MEDIA:		GROL	JNDWATER	L I	P.J.D. REA	ADING / O	ODOR:	N/A	NONE		
TOP C	<b>OF CASING ELEV</b>	ATION:			MSL	COLOR:			Γ BROWN TO C	LEAR		
	H TO WATER:	_	(feet.100th's)	5.69	FEET	CALC. PU			14.98	GAL.		
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.		
STAN	DING WATER CO	LUMN:		22.94	FEET	DEPTH O	F PUMP:		27	FEET		
				FIEI		RAMETE	RS					
				11.5								
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI		
	CASING VOLUME	VOLUME	DOWN	RATE	(Ad				OXYGEN	COLOR		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	3.0 GPM	7.97	937	23.9	177	N/A	1000+		
	14.98	15	U	11	7.41	998	20.9	-9		144		
	29.95	30			7.27	1013	20.9	-33	u	60		
	44.93	45	"	"	7.20	1024	20.7	-41	"	33		
						_						
	ante des constantes de la composición	ame (n	nan Manazara an									
PURG	E METHOD:			CENTRIFUC	GAL PUM	P.						
SAMP	LE METHOD:			CENTRIFUC	GAL PUM	P.						
D.T.W	V. AFTER PURGE:					D. T. W. A'	<b>FSAMPL</b>	E TIME:	6.09'			
WELL	INTEGRITY:			CAP & SEAI	LARE S	ECURE.						
WELL	LOCATION:			SEE SITE M	AP.							
REMA	RKS:	_										
WEAT	HER:			CLEAR / HC	)T!		WIND:		NONE			
	ITY CONTROL:					MONITORING	and the second second second second second	ENT WAS C.	LEANED AS NEC	ESSARY.		
									VELL. NEW NITH			
CONT	AINMENT:			and stated as a little state of the state of		PURGE WAT		and the second se	and the second se			
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.L DISS	OLVED OXY	GEN METER			
				SOLINIST SL	a country to the second second second	ER	TURBIDITY					





NOTE: FRONT GATE COMBO = 1230 / M. WELL COMBO = 1942 ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



### 2012 GROUNDWATER FIELD MONITORING SUMMARY REPORT

### SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. April 18, 2012

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



# $DEL\text{-}TECH \ \text{Geotechnical support services}$

SAM	PLE LOCATIO	N/MW-		1		DATE:			4/18/2012			
111	and the second				1.5					Were start		
PROJI	ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	ESS:		24325 L	OMITAS DI	۲.	SAMPLE TIME: 18:25						
	STATE:			NCOVE, CA		SAMPLE CONTAINERS: 3 - PLASTICS						
	CONTACT:		GERAI	LD COBURN	J	PRESERV			EAT / HNO3 / H			
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.		
1999 1 V		and the second										
	ECT MANAGER:			NYDAM		MONUMI	and a second		POST			
SAMP		_	DEL-TECH			WELL CA	and the second se	and the second second second second second		0.1/20		
SIGNE				y Jaght		WELL CA			2" /	0.1632		
and the second second second second	LE MEDIA: OF CASING ELEVA	TION	GROU	INDWATER	MSL	P.I.D. REA	aDING/C	JDOK:	N/A CLEAR	NONE		
	H TO WATER:	ATION:	(feet.100th's)	9.73	FEET	CALC. PU	PCF VO	r .	4.27	GAL.		
	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	and the second se	and the second se		GAL.		
	DING WATER CO		(leet.ivul s)	26.16	FEET	DEPTH O			34	FEET		
STAN	DING WATER CO	DOMIN.		20.10	I DOI	DETTIO	r r omr		34	T DDT		
				FIEI	D PA	RAMETE	RS					
						125.01						
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED			
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	2.0 GPM	7.25	562	19.1	154	N/A	19		
	4.27	4	"	"	7.03	565	18.1	117	"	6.5		
	8.54	8	"	"	7.05	567	18.1	138	"	6		
	12.81	12	"	"	7.02	569	18.2	166	"	0.99		
			· · · · · · · · · · · · · · · · · · ·				_					
					_							
			19 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -									
	E METHOD:		_	CENTRIFUG		2018 C						
	LE METHOD: V. AFTER PURGE:			CENTRIFUG	AL PUM	D. T. W. A	CAMPT 1	TIME.	9.75'			
and stationary and statement of the	INTEGRITY:	_		CAP & SEAI	ADE CE		ISAMPLI	e mare:	9.15			
	LOCATION:			SEE SITE M		COKE.						
REMA				REPLACED								
ALCIVITA.				REI LACED	LUCIA							
WEAT	HER:			CLEAR / HO	T!		WIND:		NONE			
	ITY CONTROL:					MONITORING	EOUIPM	ENT WAS C	LEANED AS NEC	ESSARY.		
				CONTRACTOR OF THE OWNER	All as an all show of the second	A CONTRACTOR OF		and the second se	VELL. NEW NITH	NUMBER OF STREET, STREE		
CONT	AINMENT:					PURGE WAT						
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OX	GEN METER			
				SOLINIST SLO	OPE MET	ER	TURBIDITY	Y METER				
_												



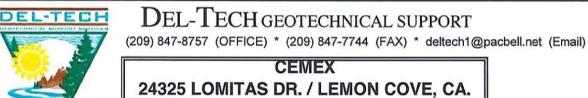
SAM	PLE LOCATIO	N/MW-	•	2		DATE:			4/18/2012		
		THE ST.	W. Martin Martin		******					HTA CE	
PROJI	ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD	
ADDR	ESS:		and the second se	OMITAS DI	R.	SAMPLE			18:05		
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAI	3 - PLASTICS			
SITE (	CONTACT:		GERAI					: NI	EAT / HNO3 / H	CL	
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	ELABS.	
				a tha an				1. N. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		E notesta	
PROJI	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		POST		
SAMP	LER:		DEL-TECH		IGHT	WELL CA	SING M	ATERIAL	. PVC		
SIGNE	ED:		Ochlez	t Right		WELL CA	SING DI	A.:	4" /	0.6528	
SAMP	LE MEDIA:		GROU	INDWATER		P.J.D. REA	DING / C	DDOR:	N/A	NONE	
гор с	<b>OF CASING ELEV</b>	ATION:			MSL	COLOR:			CLEAR		
and the second second second	H TO WATER:		(feet.100th's)	11.04	FEET	CALC. PL			24.40	GAL.	
	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V				GAL.	
STAN	DING WATER CO	LUMN:		37.38	FEET	DEPTH O	F PUMP:		47	FEET	
				FIEI	DPA	RAMETE	RS	- Andrewski - A			
				111/1	JUIA						
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI	
201 (2+3) (32/54/4	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLO	
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)	
	0	0	N/A	4.0 GPM	7.47	621	20.6	187	N/A	50.5	
	24.40	24.5	"		7.82	591	20.7	184	"	28	
	48.80	49	"	"	7.72	617	20.7	175	"	24	
	73.20	73.5	"		7.66	639	20.8	169	"	18	
-											
								Der seine haber.			
PURG	E METHOD:			CENTRIFUG	AL PUM	Р.		Contractor and a second second			
	LE METHOD:			CENTRIFUG	AL PUM						
	V. AFTER PURGE:					D. T. W. A'	<b>F SAMPLE</b>	E TIME:	21.65		
_	INTEGRITY:			CAP & SEAI		ECURE.					
	LOCATION:			SEE SITE M.	AP.						
REMA	RKS:		_				_				
WEAT	HER:			CLEAR / HO	/T!		WIND:		NONE		
QUAL	ITY CONTROL:			ALL PURGIN	G AND I	MONITORING	EQUIPME	ENT WAS C.	LEANED AS NEC	ESSARY.	
				Contraction of the second s				the second s	VELL. NEW NITH	the second s	
CONT	AINMENT:			NO CONTAI	NMENT /	PURGE WAT	ER TO THE	E GROUND			
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OX	GEN METER	_	
				SOLINIST SLO		ER	TURBIDITY				
_											



	LE LOCATIO	N/MW-				and the second se				
				3		DATE:			4/18/2012	
					Q. 24	UL DE CAR	王居安。			
PROJEC	CT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTODY
ADDRES			24325 L	OMITAS DI	۲.	SAMPLE		17:39		
CITY, ST	And the second se		and the second se	NCOVE, CA		SAMPLE			3 - PLASTICS	
	DNTACT:		GERAI	LD COBURN	1	PRESERV			EAT / HNO3 / H	
CONSUI	LTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.
	WARD WARD		NOSEL 1 SELEC							
CONTRACTOR OF THE OWNER OF THE OWNER	CT MANAGER:		and the second se	INYDAM		MONUMI			POST	
SAMPLE			DEL-TECH		IGHT	WELL CA				
SIGNED				y Olight		WELL CA			2" /	0.1632
	E MEDIA:		GROU	INDWATER		P.J.D. REA	ADING / C	DDOR:	N/A	NONE
	CASING ELEVA	ATION:			MSL	COLOR:		22	CLEAR	
	TO WATER:		(feet.100th's)	14.52	FEET	CALC. PL			4.59	GAL.
	OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V				GAL.
STANDI	NG WATER CO	LUMN:		28.13	FEET	DEPTH O	F PUMP:		41	FEET
				FIEI	D PA	RAMETE	RS			
	and aver a sum one later		e lutti a se a s	a manga sarang m				STATES IN THE STATES		
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	A REAL PROPERTY OF A REAL PROPER
9	CASING VOLUME	VOLUME	DOWN	RATE	_		_		OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)		(Mvolts)	(PPM)	(N.T.U.)
	0	0	N/A	1.0 GPM	7.12	465	20.4	164	N/A	13
	4.59	4.6	"	"	7.04	515	19.3	163	"	6
	9.18	9		"	7.03	526	19.2	169	"	2
	13.77	13.8	"		7.04	562	19.1	183		1
e denne			and the second					1999 - S		
PURGE N	METHOD:			CENTRIFUG	AL PUM	P.				
SAMPLE	E METHOD:			CENTRIFUC	AL PUM					
	AFTER PURGE:					D. T. W. A'	<b>F SAMPLI</b>	E TIME:	14.70'	
WELL IN	NTEGRITY:			CAP & SEAI	and the second se	ECURE.				
and the second se	OCATION:			SEE SITE M	AP.					
REMARI	KS:									
WEATH	ER:			CLEAR / HC	T!		WIND:		NONE	
QUALIT	Y CONTROL:			ALL PURGIN	G AND	MONITORING	EQUIPME	ENT WAS C.	LEANED AS NEC	ESSARY.
				DEDICATEL	PURGE	TUBING IS II	VSTALLED	IN EACH W	VELL. NEW NITH	ULE GLOVES
CONTAI	NMENT:			NO CONTAL	NMENT /	PURGE WAT	ER TO THI	E GROUND		
INSTRUM	MENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SL		ER	TURBIDITY			

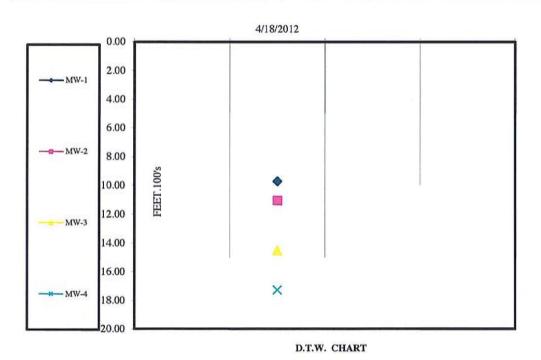


CAM	PLE LOCATIO	NI / NATAN		4		DATE:			4/18/2012			
SAW	PLE LOCATIO	- <b>WI WI / IVI W</b>		4		DATE:			4/10/2012			
					and the series		- LINE AND - F			n.		
	ECT NAME:			CEMEX		ANALYSI	and the second se	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	a des constantes de la constante	_	the second s	OMITAS DI		SAMPLE			17:17			
	STATE:		and the second se	NCOVE, CA		SAMPLE			3 - PLASTICS			
	CONTACT:		GERAI	LD COBURN	NN	PRESERV			EAT / HNO3 / H			
CONS	ULTANT:					LAB. ANA	LYSIS B	<u>¥:</u>	DELLAVALLE	LABS.		
		12.4			2 1.1							
Property and appropriate spectra with the	ECT MANAGER:		Contraction of the local data and the local data an	NYDAM		MONUMI	and the second se		FLUSH			
SAMP			DEL-TECH		IGHT	WELL CA				0 (500		
SIGNE				+ Olight		WELL CA			4" /	0.6528		
and the second se	LE MEDIA:	mon	GROU	JNDWATER		P.I.D. REA	ADING / C		N/A	NONE		
	OF CASING ELEVA	ATION:	(P	17.00	MSL	COLOR:	DOENO		F BROWN TO C			
	H TO WATER:		(feet.100th's)	17.28	FEET	CALC. PU			7.41	GAL.		
	H OF WELL: DING WATER CO	T TIMENT.	(feet.100th's)	28.63 11.35	FEET FEET	TOTAL V DEPTH O			22 27	GAL. FEET		
STAN	DING WATER CO.			11.55	FEEI	DEFIHO	F FUMF:		27	FEEI		
				FIEI	D PA	RAMETE	RS					
							A DOC - MILL		ALC: NOT THE OWNER			
ГIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI		
	CASING VOLUME	VOLUME	DOWN	RATE	12				OXYGEN	COLOI		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
	0	0	N/A	1.0 GPM	7.91	1188	21.8	202	N/A	629		
	7.41	7.4		"	7.41	967	20.9	187	"	52		
	14.82	15	H		7.13	1001	20.8	173	"	16		
	22.23	22.2	"	"	7.05	1001	20.5	166	"	9		
1												
DUDC	E METHOD:			CENTRIFUC		P						
	LE METHOD:			CENTRIFUC								
	V. AFTER PURGE:			CENTRIFUC	AL FUM	D. T. W. A'	T SAMPL	TIME.	17.39'			
	INTEGRITY:			CAP & SEAL	ARE S		I SAWII LI	S TRIVILS.	11.57			
	LOCATION:			CAP & SEAL ARE SECURE. SEE SITE MAP.								
REMA	Contraction of the second s			SEE SITE W	<b>M</b> I.							
KEWIA	KR5.				_			_				
WEAT	HER:			CLEAR / HC	T!		WIND:		NONE			
	ITY CONTROL:			ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY.								
									WELL. NEW NITH			
CONT	AINMENT:			NO CONTAL	NMENT /	PURGE WAT	ER TO THI	E GROUND	)			
INSTR	UMENTATION:			Y.S.I. 3560 FL					YGEN METER			
				SOLINIST SL	OPE MET	ER	TURBIDITY	Y METER				
					_							



MONITORING WELL FIELD SUMMARY LOG 2012 DEPTH TO WATER MEASUREMENTS

	QTR.1	QTR.2	QTR.3	QTR.4	TOTAL
DATE		4/18/12			DEPTH
LOCATION					
MW-1		9.73			35.89'
MW-2		11.04			48.42'
MW-3		14.52			42.65'
MW-4		17.28			28.63'



NOTE: FRONT GATE COMBO = 1230 / M. WELL COMBO = 1942

ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



### 2013 GROUNDWATER FIELD MONITORING SUMMARY REPORT

#### SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. June 12, 2013

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



SAMPLE LOCATION / MW - 1									6/12/2013			
					and the second	DATE:	1200					
PROI	ECT NAME:		(	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN O	F CUSTOD		
ADDR	and the second			OMITAS DI	R.	SAMPLE	the second s	Rivit/D.	10:50	CODIOD		
	STATE:			NCOVE, CA		SAMPLE		NERS:	3 - PLASTICS			
	CONTACT:			LD COBURN		PRESERV			EAT / HNO3 / H	CL		
	ULTANT:					LAB. ANA			DELLAVALLE			
			E VI TO DE T	V Strates	or other							
PROJ	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		POST			
SAMP	the second s			H / DON LIC	GHT	WELL CA		ATERIAL	Man Constant States			
SIGNE				Sight .		WELL CA	and the second se		2" /	0.1632		
SAMP	LE MEDIA:			INDWATER		P.J.D. REA	ADING / C	DDOR:	N/A	NONE		
TOP C	F CASING ELEVA	ATION:	2. A 14. A 14. A 14.		MSL	COLOR:			CLEAR			
DEPT	H TO WATER:		(feet.100th's)	10.86	FEET	CALC. PL	RGE VO	L.:	4.08	GAL.		
DEPT	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	OLUME	PURGED	12.0	GAL.		
STAN	DING WATER CO	LUMN:		25.03	FEET	DEPTH O	F PUMP:		~ 34	FEET		
				Data Dat			TTE					
				FIEI	JD PA	RAMETE	KS					
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI		
	CASING VOLUME	VOLUME	DOWN	RATE	P	2.0.	· Diver ·	oute .	OXYGEN	COLOR		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
10:18	0	0	N/A	0.5 GPM	7.87	579	21.0	214	N/A	16		
10:26	4.08	4	"	"	7.50	505	17.6	200	"	13		
10:34	8.17	8	"	.0	7.26	504	17.1	197	"	9		
10:42	12.25	12	"	n	7.01	501	17.2	199	11	5		
10:50	16.34	16	"		7.00	500	17.1	199		5		
										「市 論」を		
PURG	E METHOD:			CENTRIFUC	AL PUM	P.						
SAMP	LE METHOD:			CENTRIFUC	AL PUM	P.						
D. T. W	AFTER PURGE:				_	D. T. W. A'	<b>F SAMPLI</b>	E TIME:	10.89'			
WELL	INTEGRITY:			CAP & SEAI	L ARE SE	ECURE.						
WELL	LOCATION:			SEE SITE M	AP.							
REMA	RKS:		_									
-		_		OLEVE				_	NONE			
WEAT				CLEAR	IC AND	CONTORING	WIND:	THE WAR C	NONE	FORIDV		
QUAL	TY CONTROL:			COLUMN AND ADDRESS OF THE OWNER O		D MONITORING EQUIPMENT WAS CLEANED AS NECESSARY. SE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVI						
CONT	AINMENT:					PURGE WAT				ILE GLOVE		
CONT	ATTAINTELLT:			NO CONTAI	WIENT /	FURGE WAL	ER TO THE	GROUND				
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL	L Y.S.J. DISSOLVED OXYGEN METER						
SOLINIST SLOPE ME						ER	TURBIDITY					



SAM	PLE LOCATIO	$\mathbf{N}/\mathbf{MW}$		2		DATE:			6/12/2013			
-		A weather	<b>DURWhite</b>			The second second	Watt and					
PROJ	ECT NAME:		(	CEMEX ANALYSIS PERFORMED:					SEE CHAIN O	F CUSTOL		
ADDR	A REAL PROPERTY AND A REAL		24325 L	OMITAS DI	R.	SAMPLE	TIME:		11:27			
	STATE:		LEMO	NCOVE, CA		SAMPLE			3 - PLASTICS			
	CONTACT:		GERAI	LD COBURN	J	PRESERV			EAT / HNO3 / H	Non-Television		
CONS	ULTANT:				-	LAB. ANA	ALYSIS B	Y:	DELLAVALLE	ELABS.		
								RMBLIN				
	ECT MANAGER:			NYDAM		MONUM	and the second se		POST			
SAMP				H / DON LIC	GHT	WELL CA						
SIGNE				- Sight		WELL CA			4" /	0.6528		
and the second se	LE MEDIA:		GROU	JNDWATER		P.J.D. REA	ADING / O		N/A	NONE		
	OF CASING ELEVA	ATION:			MSL	COLOR:			DY RUST TO C			
	H TO WATER:		(feet.100th's)	12.83	FEET	CALC. PI			23.23	GAL.		
	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V				GAL.		
STAN	DING WATER CO	LUMN:		35.59	FEET	DEPTH O	F PUMP:		~ 47	FEET		
				FIEI	D PA	RAMETE	RS					
TIME	CULAUL ATTREE	L COTTAL LA	DD ANU	DIDEDTO	TI	E.C.	TEMP	ODD	DISSOLVED			
INE	CUMULATIVE	ACTUAL	DRAW DOWN	PUMPING RATE	pH	E.C.	TEMP.	O.R.P.	OXYGEN			
	CASING VOLUME PER PURGE	VOLUME PURGED			(	(U-MHOE)	(Califica)	(3.614)	2223333373223739	COLO		
0:55	0		(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	and the second se	(Mvolts)	(PPM)	(N.T.U.		
11:05	23.23	0 23	N/A	2.5 GPM	7.40	676	22.4 21.8	166 152	N/A	43		
11:15	46.47	46	"	"	7.98	458 552	21.8	165		28		
11:25	69.70	69		"	7.80	644	22.1	156		11		
	02.70			2,552	7.00		22.4	150	46	0		
						1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.						
PURG	E METHOD:			CENTRIFUG	AL PUM	P						
	LE METHOD:			CENTRIFUG	and the second se					_		
	AFTER PURGE:			obiiii oo	THE FORM	D. T. W. A'	TSAMPLI	TIME:	18.72'			
	INTEGRITY:			CAP & SEAL ARE SECURE.								
and the second second second	LOCATION:			SEE SITE MAP.								
REMA	RKS:											
WEAT	HER:			CLEAR	_		WIND:		NONE			
QUAL	TY CONTROL:			ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY.								
				DEDICATED PURGE TUBING IS INSTALLED IN EACH WELL. NEW NITRILE GLOVI								
CONT	AINMENT:			NO CONTAI	VMENT /	PURGE WAT	ER TO THE	E GROUND				
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER			
				SOLINIST SLO	OPE METI	ER	TURBIDITY	METER		_		
_												



				10			1202.0					
SAM	PLE LOCATIO	N/MW-		3		DATE:			6/12/2013			
				1			12 21 - 3	1				
	CT NAME:			CEMEX		ANALYSI	and the second se	RMED:	SEE CHAIN O	And the second se		
ADDR	A CONTRACTOR OF A CONTRACTOR OFTA CONT			OMITAS DI		SAMPLE		-	11:50			
	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS			
	CONTACT:		GERAI	LD COBURN	V	PRESERV			EAT / HNO3 / H			
CONSI	ULTANT:					LAB. ANA	LYSIS B	<u>Y:</u>	DELLAVALLE	ELABS.		
Nya Numa							Server A	for the file				
CONTRACTOR OF THE OWNER	CT MANAGER:			NYDAM		MONUMI			POST			
SAMP				H / DON LIC	GHT	WELL CA						
SIGNE		_		- Siger		WELL CA	the second s	D. T. C.	2" /	0.1632		
	LE MEDIA:	TION	GROU	INDWATER		P.J.D. REA	DING / C	DDOR:	N/A	NONE		
	F CASING ELEVA	ATION:	(Foot 100this)	4.70	MSL	COLOR: CALC. PL	DOENO	ř .	CLEAR	CAT		
	HOF WELL:		(feet.100th's) (feet.100th's)	4.72	FEET FEET	TOTAL V			6.19 18	GAL. GAL.		
	DING WATER CO	I TIMN.	(ieet.iootiis)	37.93	FEET	DEPTH O			~ 41	FEET		
STAN	MIG WATER CO	LUMIN.		51.95	TUUT	DEITHO	r r own.		~ 41	TEET		
				FIEI	LD PA	ARAMETERS						
FIME	CUDAU ATUZ	ACTUAL	DDAW	DUDADING	- U	E.C.	TEMP.	O.R.P.	DISSOLVED	TUDDID		
TIVIC	CUMULATIVE CASING VOLUME	VOLUME	DRAW DOWN	PUMPING RATE	pH	E.C.	I EMF.	O.K.F.	OXYGEN	COLO		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)		
11:30	0	0	N/A	1.0 GPM	(units) 7.96	418	18.5	152	N/A	9		
11:36	6.19	6	19/75	1.0 GPW	7.90	410	18.3	167	1N/A	7		
11:42	12.38	12	"		6.98	419	18.2	171		7		
11:48	18.57	18		"	6.86	419	18.3	175	"	4		
						1 Pant Starts	19 Million	21262 I	And the owned the	Art standing with the		
PURGI	METHOD:			CENTRIFUG	AL PUM	P.						
Contraction of the local division of the loc	E METHOD:			CENTRIFUG	and the second se							
	. AFTER PURGE:			obritter oo	1.101.011	D. T. W. A'	<b>SAMPLI</b>	TIME:	5.18'			
	INTEGRITY:			CAP & SEAI	ARE SI							
WELL	LOCATION:			SEE SITE MAP.								
REMA	RKS:											
WEATI	HER:			CLEAR			WIND:		NONE			
	TY CONTROL:				G AND N	IONITORING	of the second	And the local division of the local division	LEANED AS NEC	ESSARY.		
									VELL. NEW NITH			
CONTA	INMENT:			NO CONTAI	NMENT /	PURGE WAT	ER TO THE	E GROUND	,			
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER			
				SOLINIST SLO	OPE METI	ER	TURBIDITY	METER				
			_									



SAM	PLE LOCATIO	N/MW_		4		DATE:			6/12/2013			
SAN	I LE LOCATIO			4		DATE.	E THE PARTY		0/12/2013			
P.P.O.F												
and the second se	ECT NAME:			CEMEX		ANALYSI		RMED:	SEE CHAIN O	F CUSTOD		
ADDR		_	Contraction of the second s	OMITAS DI	10-01-0	SAMPLE		mpa	12:20			
the second s	STATE:			NCOVE, CA		SAMPLE			3 - PLASTICS	ar		
	CONTACT: ULTANT:		GERAI	LD COBURN	N	PRESERV LAB. ANA			EAT / HNO3 / H	1233		
CONS	ULTANT:					LAB. ANA	L 1515 B	<u>Y:</u>	DELLAVALLE	LABS.		
<b>BBO</b> B	COR MANA CER.	and the second	DEN			MONTHA		الليج المالي وال	FRIDIA			
The sum of the state of the second second	ECT MANAGER:		the second se	NYDAM	TTT	MONUMI		TEDIAT	FLUSH			
SAMP				H/DONLIC	JHI	WELL CA			, PVC 4" /	0 6500		
SIGNE	LE MEDIA:			INDWATER		WELL CA	and the second se			0.6528 NONE		
THE R. P. LEWIS CO., LANSING MICH.	DF CASING ELEVA	ATION.	GROU	NDWATER	MSL	COLOR:	DING/		T RUST TO CI			
	H TO WATER:	ATION.	(feet.100th's)	6.92	FEET	CALC. PL	PCF VO		14.17	GAL.		
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V				GAL.		
	DING WATER CO	LUMN	(ieei.iooui s)	28.05	FEET	DEPTH O			~ 27	FEET		
<b>OTTEN</b>	DING WATER CO	DOMIN		<i>2</i> 1.71	TEET	DEITHO	r r own.		<u></u>	TEDI		
				FIEI	D PA	RAMETE	RS					
an salar ta							a-langes at a same					
ГIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED			
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOI		
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	and the second second	(Mvolts)	(PPM)	(N.T.U.)		
11:59	0	0	N/A	2 GPM	6.99	682	21.6	170	N/A	358		
12:06	14.17	14	"		7.30	887	21.3	163		103		
12:13	28.34	28	"	"	7.27	900	21.2	158	11	40		
12:20	42.52	42			7.26	900	21.2	151	"	15		
					Service of				A Page 200 State			
PURG	E METHOD:			CENTRIFUG	AL PUM	P.						
	LE METHOD:			CENTRIFUG	and the state of t	A Second S						
	AFTER PURGE:					D. T. W. A'	<b>FSAMPLI</b>	TIME:	7.17'			
WELL	INTEGRITY:			CAP & SEAI	ARE SI	ECURE.						
WELL	LOCATION:			SEE SITE MAP.								
REMA	RKS:											
				waters at the state state						_		
WEAT	the state of the s			CLEAR			WIND:		NONE			
QUAL	TY CONTROL:								LEANED AS NEC			
CONT	ATABATCATO			And the sub-state of the sub-state of the sub-		and a subscription of a subscription of the su	the second second second second		VELL. NEW NITH	ale glove		
CONT	AINMENT:			NO CONTAI	WMENT /	PURGE WAT	ERTOTH	GROUND		_		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		Y S I DISS	OLVED OVY	GEN METER			
INDIA				SOLINIST SLO		FR	TURBIDITY		<b>GER METER</b>			
				50LINI51 3D	OF E MET	un	TORDIDIT	METER				

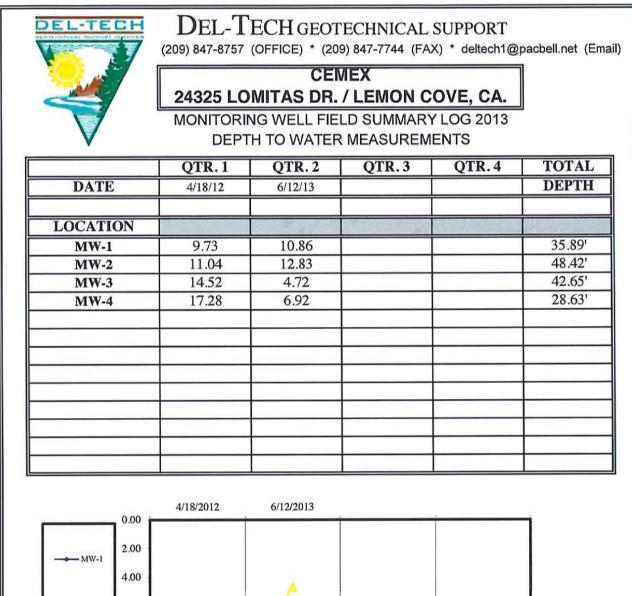


 Image: MW-1
 2.00

 Image: MW-2
 8.00

 Image: MW-2
 8.00

 Image: MW-3
 12.00

 Image: MW-4
 18.00

 Image: M

CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.



### 2014 GROUNDWATER FIELD MONITORING SUMMARY REPORT

### SITE:

CEMEX QUARRY 24325 LOMITAS DR. LEMONCOVE, CA. July 30, 2014

10624 OLIVE AVE., OAKDALE, CALIF. 95361 * OFFICE (209) 847-8757 * FAX (209) 847-7744



		14 HE	19 52 5		1 Plants		IN STATES						
SAM	PLE LOCATIO	)N / MW -		1		DATE:			7/30/2014				
	And the second second						- NE or M						
PROJI	ECT NAME:		(	CEMEX	EMEX ANALYSIS PERFORMED: SEE CHAIN OF CU								
ADDR	THE REAL PROPERTY OF THE PROPERTY OF THE REAL PROPE			OMITAS DI		SAMPLE			20:22				
	STATE:		the second se	NCOVE, CA		SAMPLE			3 - PLASTICS				
	CONTACT:		GERAI	LD COBURN	1	PRESERV	and the second se		EAT / HNO3 / H				
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.			
-		and the second second second second	and the second s		- Ser harden og		arta mén quènen		and an in the second	alian and a strange of the state of the			
The second s	ECT MANAGER:			NYDAM	N FT	MONUMI			POST				
SAMP SIGNE				H/DONLIC	JH1	WELL CA		and the second se	2 PVC 2" /	0.1632			
and the second se	LE MEDIA:			INDWATER		P.I.D. REA		and the second sec	N/A	NONE			
and the second se	F CASING ELEV.	ATION:	GROC	AD WAILK	MSL	COLOR:	wind /		LT. RUSTY TO				
	H TO WATER:		(feet.100th's)	14.91	FEET	CALC. PL	RGE VO		3.42	GAL.			
DEPT	H OF WELL:		(feet.100th's)	35.89	FEET	TOTAL V	Children and Chi	and the second se	and the second se	GAL.			
STAN	DING WATER CO	LUMN:		20.98	FEET	DEPTH O	F PUMP:	A WEARING -	~ 34	FEET			
				FIEI	D PA	RAMETE	RS						
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TUDBIDITY			
1 IIIII	CASING VOLUME	VOLUME	DOWN	RATE	pii	L. C.	I LOWIE .	U.K.I.	OXYGEN	COLOR			
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)			
20:09	0	0	<u>, , , , , , , , , , , , , , , , , , , </u>	1.0 GPM	6.93	732	22.4	4	(	(11111)			
20:13	3.42	4		"	6.70	709	22.2	5	C. State State State				
20:17	6.85	8		"	6.61	706	22.2	42		The state of the s			
20:21	10.27	12		"	6.58	709	22.4	60		4			
20:22	SAMPLED												
ling pro-			and a second				1		Tarminan and a series				
	E METHOD:			CENTRIFUG									
	LE METHOD:			CENTRIFUG	AL PUM				15 001				
	V. AFTER PURGE: INTEGRITY:			CAD & CEAL	ADE CE	D. T. W. AT SAMPLE TIME: 15.00'							
	LOCATION:			CAP & SEAL ARE SECURE. SEE SITE MAP.									
REMA	and the second se			SEE SITE MA	<u>л</u> .								
						_		_					
WEAT	HER:			PARTLY CL	OUDY / I	НОТ	WIND:		NONE				
QUAL	TY CONTROL:			ALL PURGING AND MONITORING EQUIPMENT WAS CLEANED AS NECESSARY.									
				DEDICATED	PURGE	TUBING INS	TALLED IN	EACH WE	ELL. NEW NITRIL	E GLOVES.			
CONT	AINMENT:			NO CONTAII	MENT /	PURGE WAT	ER TO THE	C GROUND					
Thioms		_						011000 0000					
INSTR	UMENTATION:			Y.S.I. 3560 FL		20			GEN METER				
				SOLINIST SLO	PEMET	SK	TURBIDITY	METER					
2													



# $DEL\text{-}TECH \ \text{Geotechnical support services}$

### MONITORING WELL FIELD LOG 2014

SAM	PLE LOCATIC	<b>DN / MW -</b>		2		DATE:			7/30/2014	
				wietu	S with			1.784		
PROJ	ECT NAME:		C	EMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OF	CUSTODY
ADDR	ESS:		24325 L	OMITAS DI	R.	SAMPLE			20:00	
CITY,	STATE:		LEMO	NCOVE, CA		SAMPLE	CONTAL	NERS:	3 - PLASTICS	
SITE (	CONTACT:		GERAI	LD COBURN	V	PRESERV	ATIVES	: NI	EAT / HNO3 / H	CL
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.
	SAX BUTLE				all in the p			12.5 1.00	N. Company	- And And And And
PROJ	ECT MANAGER:		BEN	I NYDAM		MONUMI	ENT:		POST	
SAMP	and the second se			H / DON LIC	GHT	WELL CA		ATERIAL		
SIGNE				Sight -		WELL CA			4" /	0.6528
and the second se	LE MEDIA:			INDWATER		P.I.D. REA	and the second se	A CONTRACTOR OF THE OWNER OWNE	N/A	NONE
TOP C	F CASING ELEV.	ATION:			MSL	COLOR:			RUSTY	
	H TO WATER:	an da an	(feet.100th's)	18.61	FEET	CALC. PU	RGE VO	L.:	19.46	GAL.
	H OF WELL:		(feet.100th's)	48.42	FEET	TOTAL V	and the second			GAL.
STAN	DING WATER CO	LUMN:		29.81	FEET	DEPTH O			~ 47	FEET
								-	and the second se	
				FIEI	D PA	RAMETE	RS			
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
	CASING VOLUME	VOLUME	DOWN	RATE	pri	1.0.	I LIVIA .	O.K.I .	OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:49	0	0	(D.1.11)	10 GPM	6.78	680	23.8	50	(1114)	(11.1.0.)
				"	7.80	555	23.3	36		
19:51 19:40 20 7						527	21.8	23		
19:55	58.38	60			7.91	518	21.6	16		
19:59	77.84	100		"	7.07	795	21.9	26		1250
20:00	SAMPLED				7107					1000
									CONTRACTOR OF	10
PURG	E METHOD:			3" GRUNDE	OS SUBN	IERSIBLE PU	MP			
	LE METHOD:					IERSIBLE PU				
	AFTER PURGE:			o ononori	00000	D. T. W. A'		TIME:	42.10'	
	INTEGRITY:			CAP & SEAL	ARE SI	and the second se				
WELL	LOCATION:			SEE SITE M		and the control of the control of the				
REMA	RKS:			WELL TUR	NED VE	RY TURBID,	DARK RU	STY DISC	HARGE WATER	٤.
				RAN ADDIT	IONAL	PURGE TO S	EE IF IM	PROVED.	WORSENED.	
WEAT	HER:			PARTLY CL	OUDY / I	HOT	WIND:		NONE	
QUAL	TY CONTROL:			ALL PURGIN	G AND N	MONITORING	EQUIPME	NT WAS CI	LEANED AS NECH	ESSARY.
				DEDICATED	PURGE	TUBING INS	TALLED IN	EACH WE	LL. NEW NITRIL	E GLOVES.
CONT	AINMENT:			NO CONTAII	VMENT /	PURGE WAT	ER TO THE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FL	OWCELL		YSL DISS	OLVED OXY	GEN METER	-
III ISIN				SOLINIST SLO		ER	TURBIDITY		SEAT METER	
				55561101 554	or to Manual I	187 N	. or of other th	THE LER		



# DEL-TECH GEOTECHNICAL SUPPORT SERVICES

### MONITORING WELL FIELD LOG 2014

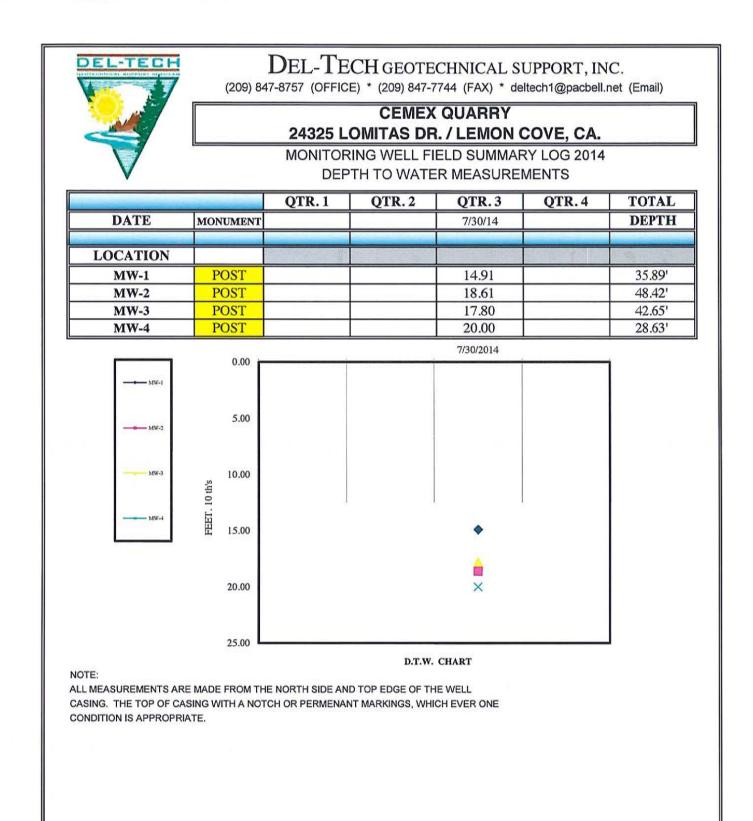
SAM	PLE LOCATIC	DN / MW -		3		DATE:			7/30/2014	
		1000		CONTRACT OF				N 1976, 10		
and the second s	ECT NAME:			CEMEX		ANALYSI	and the second se	RMED:	SEE CHAIN O	FCUSTODY
ADDR				OMITAS DI		SAMPLE			19:41	
	STATE:		and the second se	NCOVE, CA		SAMPLE	the second s		3 - PLASTICS	
	CONTACT:		GERAI	LD COBURN	1	PRESERV		100 C 100 C	EAT / HNO3 / H	
CONS	ULTANT:					LAB. ANA	LYSIS B	Y:	DELLAVALLE	LABS.
			LUGIT HE S					JE I A	I LEAN THE REAL PROPERTY OF	
	ECT MANAGER:		BEN	I NYDAM		MONUM	ENT:	_	POST	
SAMP	the second se			H / DON LIC	HT	WELL CA	SING M.	ATERIAI		
SIGNE	and the second se		Par	Size _		WELL CA			2" /	0.1632
	LE MEDIA:		GROU	JNDWATER		P.J.D. REA			N/A	NONE
	F CASING ELEV.	ATION:		THE REPORT OF TH	MSL	COLOR:			LT. BROWN T	
	H TO WATER:		(feet.100th's)	17.80	FEET	CALC. PU			4.06	GAL.
	H OF WELL:		(feet.100th's)	42.65	FEET	TOTAL V		and the set of the same set.		GAL.
STAN	DING WATER CO	LUMN:		24.85	FEET	DEPTH O	F PUMP:		~ 41	FEET
- 101 - 117 - 117 - 117 - 117				DIDI	DBAI	DANGETTE	DC			
CAVE IS				FIEL	JD PAI	RAMETE	KS			and the second
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDIT
	CASING VOLUME	VOLUME	DOWN	RATE	P	2.0.			OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:28	0	0	(	1.0 GPM	7.04	796	25.3	6	(11)	(
19:32	4.06		6.92	725	24.5	-41				
19:32         4.06         4         "         6           19:36         8.11         8         "         6						702	22.7	15		
19:40	12.17	12			6.78	688	22.3	35	1.000	3
19:41	SAMPLED			1.0000				00	Contraction of the local distance	
							1 Br D			
PURG	E METHOD:			CENTRIFUG	AL PUM	P.				
	LE METHOD:			CENTRIFUG						
D. T. W	AFTER PURGE:					D. T. W. A	T SAMPLI	E TIME:	18.16'	
WELL	INTEGRITY:			CAP & SEAL	ARE SH					
WELL	LOCATION:			SEE SITE MA	AP.					
REMA	RKS:									
WEAT	LIFD.			DADTINO		IOT	NUT NIT		NONE	
	TY CONTROL:			PARTLY CLO		Contraction of Contra	WIND:	NT WAS C	NONE LEANED AS NECT	TECADY
QUAL	III CONTROL:			the local of the state of the local part of the local state of	Contract of the other states of the second states o	And in the second second data was a second se	and the second second second second second	and the second se	ELL. NEW NITRIL	Contraction of the second s
CONT	AINMENT:			NO CONTAIN						L OLOVES.
INSTR	UMENTATION:			Y.S.I. 3560 FLC	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
_		_		SOLINIST SLC	PE METE	ER	TURBIDITY	METER		
_										



## DEL-TECH geotechnical support services

## MONITORING WELL FIELD LOG 2014

SAM	PLE LOCATIO	NIMW		4		DATE:			7/30/2014	
SAM	ILE LOCATIO	14 / 101 00 -		4	The Art	DATE:		31-43-5	7730/2014	
PROJI	ECT NAME:		C	CEMEX		ANALYSI	S PERFO	RMED:	SEE CHAIN OI	CUSTODY
ADDR	and a second		24325 L	OMITAS DE	٤.	SAMPLE	- China de Contra de Canada de		19:19	
CITY,	STATE:			NCOVE, CA		SAMPLE	CONTAL	NERS:	3 - PLASTICS	
	CONTACT:		a laboration of the second	LD COBURN		PRESERV		and the second se	EAT / HNO3 / H	CL
	ULTANT:					LAB. ANA			DELLAVALLE	
		IN SHERE IN				1.8.89.1	The Name			
PROJI	ECT MANAGER:		BEN	NYDAM		MONUMI	ENT:		FLUSH	
SAMP	LER:		DEL-TEC	H / DON LIC	HT	WELL CA	SING M	ATERIAL	. PVC	
SIGNE	D:		San	Sight .		WELL CA	SING DI	A.:	4" /	0.6528
SAMP.	LE MEDIA:		GROU	INDWATER		P.J.D. REA	ADING / G	DDOR:	N/A	NONE
TOP O	F CASING ELEVA	ATION:			MSL	COLOR:		RUS	STY TO LIGHT	ΓΑΝ
DEPTI	H TO WATER:		(feet.100th's)	20.00	FEET	CALC. PU	<b>JRGE VO</b>	L.:	5.63	GAL.
	H OF WELL:		(feet.100th's)	28.63	FEET	TOTAL V	OLUME	PURGED	18	GAL.
STAN	DING WATER COI	LUMN:		8.63	FEET	DEPTH O	F PUMP:		~ 27	FEET
				FIEI	D PAI	RAMETE	RS	international and particular		
		Manager and -		TIDL			<b>N</b> D	a da se de la		
TIME	CUMULATIVE	ACTUAL	DRAW	PUMPING	pH	E.C.	TEMP.	O.R.P.	DISSOLVED	TURBIDI
	CASING VOLUME	VOLUME	DOWN	RATE					OXYGEN	COLOR
	PER PURGE	PURGED	(D.T.W.)	(GPM/LPM)	(units)	(UmMHOS)	(Celsius)	(Mvolts)	(PPM)	(N.T.U.)
19:00	0	0		1.0 GPM	8.08	912	25.9	79		
19:06	5.63	6		"	7.52	858	24.1	91		
19:12 11.27 12 " 7						873	23.9	83		
19:18	16.90	18		"	6.98	859	23.8	71		8
19:19	SAMPLED		Network Controls		-	1				
										_
					A starting		11			
	E METHOD:			CENTRIFUG.						_
	LE METHOD:			CENTRIFUG.	AL PUM			-	00.141	
State Street of Street Street	AFTER PURGE:			010 0 0511	100 01	D. T. W. A'	<b>F SAMPLI</b>	E TIME:	20.16'	
	INTEGRITY:			CAP & SEAL		ECURE.				
	LOCATION:			SEE SITE MA	ųΡ.					
REMA	KK5:						_			
WEAT	HER:			PARTLY CLO	OUDY / I	TOF	WIND:		NONE	
	TY CONTROL:			ALL PURGIN	G AND N	10NITORING	EQUIPME	ENT WAS CI	LEANED AS NEC	ESSARY.
					The second second second second	and the second	the second s	a hard hard the state of the ball of the state of the	LL. NEW NITRIL	The second s
CONT	AINMENT:			NO CONTAIN	MENT /	PURGE WAT	ER TO THE	GROUND		
INSTR	UMENTATION:			Y.S.I. 3560 FLO	OWCELL		Y.S.I. DISS	OLVED OXY	GEN METER	
				SOLINIST SLC		ER	TURBIDITY		Can't man Lin	



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3728 ) 233-6129	t Mgr nitoring	L L	0.004 0.1 3120B	0.2 3.1 1.6	
ssno, CA 90 9896 - (559)	urn - Pin mdwtr Mc	×	0.3 0.5 3120B 200.7	3.2 6.3 4.6	
y, Suite 110, Fre 174 - (800) 228-	93772 5/11/2006 5/12/2006 Gerald Coburn - Plnt Mgr 5/19/2006 Stillwell -Grndwfr Monitoring	Na	0.2 1.0 3120B 200.7	26.4 48.8 76.7 65.9	
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 93772 Sample Date 5/11/2 Sample Time 5/11/2 Submitted Date 5/12/2 Submitted by Gerald Reported Date 5/19/2 Location/Project Stillwe Fax e-mail	BW	0.1 0.1 3120B 200.7	8.5 30.2 25.2 21.7	۲. ۲
	S S S S S S S S S S S S S S S S S S S	S	0.1 0.1 3120B 200.7	45.0 61.8 89.7 78.2	tions (Title 2
<u>.0</u>		Ю.	0.03 0.1 300.0 300.0	15.8 33.5 32.8	nitoring Regula
Analysi		HCO3	caco ₃ 5 2320B	126 259 285 286	uality and Mc 995
Water		So So	0.9 1 2320B	ᠵᢦᢦᢦ	terred when estic Water Q ar, 19th ed., 19 vise Indicated.
Report of Water Analysis		Total Alkalinity	as cacco 10 2320B	126 259 285 285	*See external laboratory documentation NOTE: For dissolved metals (bolded), all water samples were filtered when neceived in the laboratory and acidified with HNO ₃ to pH <2 ND = None Detected MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.
	93626	TDS	10 10 2540C	263 613 660 605	ntation of, all water fed with HIN fed with HIN coording to the coording to the coording to the deporting Lin hation of Wal
	CA	so,	0.03 0.2 300.0	007 007 007 007 007 007 007 007 007 007	rry docurnel etais (bolde y and acldff nant Level a Limit; RL = F Limit; RL = F sr the Exami ection Agent
	11-11-1 (K. 18)	NO3	0.04 1.0±14.0 0.45 4500H-B 4500NO3E 300.0	22.6 52.5 59.8 79.1	*See external laboratory documentation NOTE: For dissolved metals (bolded), all water samples we received in the laboratory and acidified with HNO ₃ to pH <2 ND = None Detected MCL = Maximum Contaminant Level according to the California I MCL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Waste EPA = Environmental Protection Agency methods used unless of Records retained for 5 yrs.
AVALLE [®] fictory, inte. d consultants	Cernex 13475 N Friant Rd Friant 13588 58 58 d: Water	pH	1.0 <u>+</u> 14.0 4500H-B	7.2 7.8 7.5	*See external labora NOTE: For dissolved received in the laborat ND = None Detected MCL = Maximum Conta MDL = Method SM = Standard Methods EPA = Environmental Pr Records retained for 5 y
DELLAVALLE Lefterationy, Inc.	Ceme 13475 Friant 13588 58 58 Material Submitted: Water	No. Description	MDL> RL> SM> EPA>	1 MW1 17:00 2 MW2 16:24 3 MW3 15:00 4 MW4 14:05	

Approved By: ELAP Certification #1595

CELLAVALLE [®] Laboratory, frec.	WILLE"				Repor	t of W	Report of Water Analysis	Analy	SIS		5 Z	10 W. McKinis X (559) 268-8	y, Suite 110, 174 - (800) 22	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	
	RMC Pacific 24325 Lomita Lemon Cove 13588 08	Materia as Dr. P	ls lant 133 CA	93244						Sam Sami Submitt Submitt Report Report	Lab No. 85263 Sample Date 5/19/2l Sample Time Submitted Date 5/20/2l Submitted by Gerald Reported Date 6/1/20 Location/Project Stillwell	85263 5/19/2005 5/20/2005 G/1/2005 Stillwell Protect - Stillwell Protect -	ourn edt - Ground	85263 5/19/2005 5/20/2005 Gerald Coburn 6/1/2005 Stillwell Protect - Groundwater Monitoring	
Material Submitted	_													2	
No. Description		- Luit	SCL	Ra	×	5	Ŵ	-mg/L-	g	HCO	Total	so.	Ň	e	
-							2		0		Alkalinity as CaCO.				
MDL>			10	1.5	0.3	0.1	0.1		6.0			0.03	0.04	0.004	
SM->		4500H-B	10 2540C	3120B	3120B	0.1 3120B	0.1 3120B	4500CI C 2320B		2320B	2320B	0.2 0.45 4500SO4 E 4500NO3E		0.1 3120B	
EPA>								300.0				300.0	300.0		
Monitoring Well MW1	11:08am	7.0	206	29.1	2.5	33.3	6.4	17.6	ম	101	101	43.5	17.1	6.0	
MWZ	12:24pm	7.9	489	60.6	6.1	55.3	30.2	24.8	<del>م</del>	179	179	127	67.7	4.3	
	12:48pm	7.5	652	90.2	5.0	92.3	25.4	46.1	<b>ت</b> ک	293	293	143	44.3	0.5	
MV4	13:20pm	7.6	559	74.0	3.5	81.2	21.5	34.9	₽	233	233	108	83.5	2.4	
		NOTE: For dissolved metals (bolded), all water samples were filtered when	dissolved	metais (bolt	ded), all wa	ter samples	were filter	ed when							
		received in the laboratory and acidified with HNO $_{\rm 3}$ to pH <2	the laborat	ory and acit	tified with F	tivo s to pt	1<2								
		MDL = Method Detection Limit; RL = Reporting Limit	od Detectio	n Limit; RL =	Reporting	Limit									
		SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.	ard Methods onmental Pr	s for the Exal rotection Age	nination of V ncy method	Vater and W s used unle	fastewater, ' ss otherwise	19th ed., 19 indicated.	95						
							id the	An newn inder				ELAP Certification #1595	tion #1595		8

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring	Copy To Fax e-mail geraldw.cobum@cemex.com	Total Total Total	NO ₃ -N NO ₃ TDS Ca Mg Na	mg/L mg/L mg/L mg/L mg/L mg/L 10 45 500	0.0443 10 0.1	U.1 U.45 1U 0.1 0.1 1 4500NO3F 4500NO3F 2540 C 3120 B 3120 B 3120 B	300	9/1/2008 9/1/2008 9/1/2008 9/1/2008 9/1/2008	2.8 12.3 148 23.8 4.1 11	78.8 432 65.6 23.0	73.4	118 548 78.3 21.6	*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals ( <b>bolded</b> ) were filtered. MBAS molecular weight = 340 grams. OACC available upon request.
Analysis				CI SO4	mg/L mg/L 250 250		70 17		8/17/2/01/8 8/10/2/01/8	67.34		39.2 95.4		California Domestic Water Q nit and Wastewater, 19th ed., 1 d unless otherwise indicated
Report of Water Analysis			НСО3	CaCO ₃ as CaCO ₃ as CaCO ₃	mg/L n	о ч	8	60000000	× .			253 39		*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Quali MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QA/QC available upon request. REAP Certification #1585
ort of			ິດ	as CaCO ₃	mg/L	0.9	2320 B	0000000		⊽	V	V	V	intation evel according to the Ci RL = Reporting Limit Examination of Water at Agency methods used filtered. ams. Approved By:
Rep			Ю		mg/L		2320 B	BUDGUNG	000700185	⊽	V	⊽	۷	documenta ninant Leve n Limit, R for the Exal otection Age d) were filte = 340 gram aquest. Api
			Total Alkalinity	as CaCO ₃ as	лбш	Ut	2320 B	BUUCULA		80	180	253	222	al laboratory num Contar od Detectioi of Methods numental Pr stats ( <b>bolde</b> ular weight ular weight
				Hd	nuit	1 0 to 14 0	4500H B	BUUCUNG		7.5	7.2	7.4	6.9	*See external laboratory documentation MCL = Maximum Contaminant Level acc MDL = Method Detection Limit; RL = SM = Standard Methods for the Examina EPA = Environmental Protection Agency Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QA/QC available upon request. Approv
DELLAVALLE [®] Lathourstory, inc. Comits and Consultants	Cernex 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water		s	WCL>	MDL> RL>	SM>	Analysis Date:					004 Caines - Domestic Well 07:45	

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-6174 - (800) 228-9896 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring	Copy To Fax e-mail geraldw.coburn@cernex.com															1
Report of Water Analysis			Total Dissolved	K *Fe	mg/L	0.3	0.5 3120 B	9/11/2008 Send Out	1.9 *	3.4 *	3.8 *	2.8 *					
CONTRACTOR INC.	Cernex 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water	Total	Fe	mg/L mg/L 0.30		SM-> 3120 B	Analysis Date: 0/1/2008	Weller - Domestic Well 08:25	Stillwell - Domestic Well 08:10		004 Caines - Domestic Well 07:45 0.15					

Page 2 of 2

		Total Fe mg/L 0.004 0.01 3120 B 3120 B	2.912.042.0.42
			19-01 - 19-19 - 19-05
		. тоЛ . тоЛ  В 3120 В а.и.гоов	8.1 2 2 2 4 2 0 2 4 2 0 4 2 0 1 4 2 0 1 4 2 0 1 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
129	D E	Na mg/L 0.2 3120 B 342008	2 T 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
, 93728 559) 233-6	nt Mgr onitorin	Mg mg/L 0.1 3120 B 8442006	4.3 6.4 24.2
1910 W. McKnliey, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	ab No. 120142 a Date 8/28/2008 a Time d Date 8/28/2008 ted by Gerald Coburn-Plant Mgr ted by Gerald Coburn-Plant Mgr ted by Gerald Coburn-Plant Mgr factor Project Stillwell Proj-GW Monitoring py To Fax e-mail geraldw.coburn@cemex.com	Ca mg/L 0.1 3120 B 8/4/2008	25.4 37.2 23.3 85.0 85.0
	120142 8/28/2008 8/28/2008 Gerald Co 9/16/2008 Stillwell Pr Stillwell Pr geraldw.cc	TDS mg/L 500 10 2540 C 2540 C	596 375 580 580 ulations (
1910 W. McKii FAX (559) 268	Lab No. Sample Date 8 Sample Date 8 Submitted Date 8 Submitted by 6 Reported Date 9 Location/Project 3 Copy To Fax 8	NO ₃ mg/L 45 0.0443 0.0443 0.0443 0.0443 0.045 8282008	2.03 24.3 <0.45 304 anitoring Reg
	San Submi Submi Repo Locatic	NO ₃ -N mg/L 10 0.01 4500NO3 F 300 82822008	6.8       89       <1
ysis		SO4 mg/L 250 0.03 0.03 0.2 300 8/28/2008	7.1 99.6 1.6 501 ic Water C ic Water C is Mater C
r Anal		CI mg/L 250 0.03 0.1 828/2008	9 3.1 7.1 22 20.6 99.1 11 0.8 1.6 22 355 50 ⁻ 22 355 50 ⁻ 22 355 50 ⁻ 16 16 0 mestic Wat mit r and Wastewater, 19th e ed unless otherwise indic
Report of Water Analysis		Total         Cotal           Alkalinity         OH         CO ₃ HCO ₃ as CaCO ₃ mg/L         mg/L         mg/L         mg/L           1         0.9         3         3           10         1         0.9         5         3           2320 B         2320 B         2320 B         2320 B         8292008           erzerzose         erzerzose         erzerzose         8292008         8292008	6.8       89       <1
ort of		CO ₃ as CaCO ₃ mg/L 0.9 1.0 2320 B 8/29/2008	<1 89 <1 192 <1 111 <1 111 <1 222 <1 222 entation Level according to the G RL = Reporting Limit Examination of Water at Agency methods used ifitered. Frams.
Rep		OH as CaCO ₃ 4 mg/L 1 2320 B 8/29/2008	<ul> <li>&lt;1</li> &lt;</ul>
		Total Alkalinity as CaCO ₃ mg/L 10 2320 B 8/28/2006	6.8 89 <1 < 7.9 192 <1 < 7.2 111 <1 <1 < 7.5 212 <1 <   7.5 212 <1.1 <
		pH unit 1.0 to 14.0 4500H B 8/29/2008	6.8 7.9 7.5 7.5 7.5 7.5 7.5 7.5 Ma MDL = Ma MDL = Ma
DELLANALLE® Labourgitoury, Inc.	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MDL> RL> SM> EPA> Analysis Date:	001 MW-1 14:47 002 MW-2 14:21 003 MW-3 13:30 004 MW-4 13:00 004 MW-4 13:00 005 MW-4 13:00 005 MW-4 13:00 006 MW-4 13:00 007 MW-4 13:00 000 MW-4 13:00 007 MW-4 10 007 MW-4 10 007 MW-4 10 007 MW-4 10 007 WW-4 100 000 WW-4 100 000 WW-4 100 000 WW-4 000 000 WW-4 0000 WW-4 000000000000000000000



July 31, 2006

Gerald Coburn CEMEX #13588 13475 N. Friant Road Friant, Ca 93626

Re: Lab No. 95594, 95595

Dear Gerald,

Enclosed are the results of analysis for the domestic well water and pond water samples recently collected to meet Tulare Counties annual sampling requirements.

If you have any questions, please call me.

Respectfully, Ben Ilydam

Ben Nydam Certified Crop Advisor # 22552

BN/sd

Enclosures

<b>Report of Water Analysis</b> Fax (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 95594 Sample Date 6/26/2006 Sample Time Submitted Date 6/26/2006 Submitted by Gerald Coburn-P M Reported Date 7/7/2006 Location/Project Stillwell D.Well Monitoring Copy To Fax e-mail	CO ₃ HCO ₃ CI Ca as as CaCO ₃ CaCO ₃ CI Ca 0.9 3 0.03 0.1 1 5 0.1 0.1 2320B 2320B 4500CI C 3120B 31 300.0	167 220 217 217 217 217 200 Basic Labora <i>fittered when</i> Domestic Water Qual Mater, 19th ed., 1995 therwise Indicated.
Rep	93626	TDS Total Alkalinity as CaCO ₃ 10 10 10 10 10 10	7.5       53.36       48.0       398       167       <1
	S	so, 0.03 300.0 2	48.0 398 84.1 565 56.4 515 56.4 515 atory documen atory and acidifie of metals (boldec tory and acidifie aminant Level ac aminant Level ac on Limit, RL = R aminant Level ac on Limit, RL = R s for the Examin Protection Agency yrs.
	Friant R	NO ₃ 0.04 300.03E	53.36 75.75 81.52 81.52 <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>dissolved</i> <i>distolved</i> <i>dissolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>distolved</i> <i>disto</i>
under Carlos	Cemex 13475 N Friant Rd Friant 13588 08 : Water	unit pH 1.0 ± 14.0 4500H-B 46	7.5 53.36 4 7.8 75.75 8 7.5 81.52 5 7.5 81.52 5 81.52 5 81.52 5 81.52 5 81.52 6 81.52 5 81.52 6 81.52 7 81.52 6 81.52
DELLAVALLE® Lathourationy, Inte.	Cerme 13475 Friant 13588 08 08 Material Submitted: Water	No. Description MDL> RL> SM> EPA>	1 Stillwell - domestic well 07:35 2 Morton - domestic well 07:20 3 Calmes - domestic well 07:00

	DELLANALLE Laboratory, Inc.	ALLE [®] Ty, Inc.				Report of Water Analysis	f Water	Analysi	S	4 C	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	r, Suite 110, Fre 74 - (800) 228-6	sno, CA 9372 9896 - (559) 23	
J	Cerne 13475 Friant 13588 08 08 Material Submitted: Water	Cemex 13475 N Friant Rd Friant 13588 08 : Water		cA	93626					Subi S. Subi S.	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	95595 6/26/2006 Gerald Coburn-Plant Manager 7/7/2006 Stillwell Project - Ponds	urm-Plant M ject - Ponds	anager
No.	Description	E rit	NO3	s0,	TDS	Total	co	НСО3	CI CI	g	BW	Na	Ę	¥
	MDL> RL> SM> EPA>	0.04 1.0 <u>+</u> 14.0 4500H-B 4500NO3E 300.0	0.04 0.45 500NO3E 300.0	0.03 0.2 300.0	10 10 2540C	Alkalinity as CaCO ₃ 10 2320B	as CaCO ₃ 0.9 1 2320B	as CaCO ₃ 3 2320B	0.03 0.1 300.0	0.1 0.1 3120B	0.1 0.1 3120B	1.5 1 3120B	0.004 0.1 3120B	0.3 0.5 3120B
5 7	Pump Basin 08:30 Recharge Basin 08:40	7.7 7.8 7.8	<0.40 3.18	19.6 15.5	200 113	141 69	<b>ম</b> ম	141 69	11.7 7.3	41.1 21.6	7.8 4.0	13	0.6 0.1	4.0 1.7
		* See external laboratory documentation for NOTE: For dissolved metals (bolded), all wate received in the laboratory and acidified with HA ND = None Detected MCL = Maximum Contaminant Level according to MCL = Method Detection Limit; RL = Reporting Li SM = Standard Methods for the Examination of W EPA = Environmental Protection Agency methods Records retained for 5 yrs. Approved E	dissolved n dissolved n fie faborato od Detected od Detection d Methods i mmental Pro ned for 5 yrs	ory docume retals (bolde ry and acidit limit; RL = F for the Exami lection Agen s.	*See external laboratory documentation for Ferrous Iron <i>NOTE: For dissolved metals (bolded), all water samples we</i> <i>received in the laboratory and acidified with HNO ₃ to pH &lt;2 ND = None Detected MCL = Maximum Contaminant Level according to the California I MCL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Waste EPA = Environmental Protection Agency methods used unless o Records retained for 5 yrs. Approved By:</i>	*See external laboratory documentation for Ferrous Iron from Basic Laboratory NOTE: For dissolved metals (bolded), all water samples were filtered when received in the laboratory and acidified with HNO ₃ to pH <2 ND = None Detected MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1895 EPA = Environmental Protection Agency methods used unless otherwise Indicated. Records retained for 5 yrs. 	Iron from Basic Labors s were fiftered when H <2 mia Domestic Water Qua Vastewater, 19th ed., 199 vastewater, 19th ed., 199 ses otherwise indicated. ELAP Certification #1595	ioratory tuality and Mc 995	nitoring Regula	tions (Title 22				



June 19, 2006

Gerald Coburn Cemex #13588 13475 N. Friant Road Friant, CA 93626

Lab No.: 93772 & 94297

Dear Gerald,

Enclosed are the results for the annual monitoring well water samples recently collected on May 11, 2006.

If you have any questions, please call me.

Respectfully,

Ben Nydam

Ben Nydam Certified Crop Advisor # 22552 Dellavalle Laboratory, Inc.

BN:pjm Enclosures

F:\2005-2006\2005-2006 Jun\BN\Cemex93772,94297.doc

		8-5-8	
3728 ) 233-6128	t Mgr nitoring	Fe 0.004 0.1 3120B	3.1 0.3 1.6
resno, CA 9; 1-9896 - (559)	burn - Plni indwfr Mo	0.3 0.5 3120B 200.7	3 7 9 8 3 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9
r, Suite 110, F 74 - (800) 228	93772 5/11/2006 5/12/2006 Gerald Coburn - Plnt Mgr 5/19/2006 Stillwell -Gmdwtr Monitoring	0.2 0.2 3120B 200.7	26.4 48.8 76.7 65.9 65.9
1910 W. McKinley, Suite 110, Fresno, CA 83728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6128	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	Mg 0.1 31208 200.7	
	S S S S S S S S S S S S S S S S S S S	Ca 0.1 3120B 200.7	45.0 61.8 89.7 78.2 78.2 ions (Ttile 22
S		mg/L CI 0.03 0.1 300.0 300.0	15.8 20.5 33.5 32.8 32.8 nitoring Regulat
Analys		HCO ₃ as cacO ₃ 3 2320B	126 259 285 286 286 286 095 095
Water		CO ₃ as CaCO ₃ 0.9 2320B	<ul> <li>&lt;1</li> &lt;</ul>
Report of Water Analysis		Total Alkalinity as CaCO ₃ 10 2320B	7.2       22.6       <0.2
	93626	TDS 10 2540C	263 613 650 660 605 605 <i>all water</i> <i>ball water</i> <i>ed with HNC</i> <i>eording</i> to th coording to th ceorting Lim attion of Wate y methods u
	CA	SO4 0.03 0.2 300.0	<ul> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.2</li> <li>&lt;0.4</li> <li>&lt;0.4</li> <li>&lt;0.4</li> <li>&lt;0.4</li> <li>&lt;0.4</li> <li>&lt;0.4</li> <li>&lt;0.5</li> <li>&lt;0.5</li></ul>
	Cernex 13475 N Friant Rd Friant 13588 13588 S8 Mater	unit pH NO ₃ 1.0 ± 14.0 0.45 4500H-B 4500NO3E 300.0	7.2       22.6       <0.2
DELLAVALLE [®] Laboratory, Inc. Annise and Consultants	Cemex 13475 N Friant 13588 58 58 58 58 58 58 58	unit PH 1.0 <u>1</u> 14.0 4500H-B	7.2 22.6 7.8 52.5 7.3 59.8 7.5 79.1 7.5 79.1 7.5 79.1 Å See external labora NOTE: For dissolved received in the laborat NOTE: For dissolved Recorda Methods EPA = Environmental Pr Records retained for 5 y
	Cerme 13475 Friant 13588 58 58 Material Submitted: Water	No. Description MDL> RL> SM> EPA>	MW1 MW2 MW4
	II.		- N 0 4

Approved By: ELAP Certification #1595

Cemex Construction Material LP #13588/08 Attn Gerald Coburn Project: Stillwell Project-Domestic Well Monitoring

basic	Voice 530,243,7224 (ux 530,243,749)	2218 Railroud Avenus Redding, California 96001
Report To:	DELLAVALLE LABORAT	ORY. INC

wayinsici b.com

inchoire io.	DELENVALLE LADORATORI, INC
	1910 W MCKINLEY, SUITE 110
	FRESNO, CA 93728
Attention:	DELLAVALLE LABORATORY, INC
<b>Project:</b>	GENERAL TESTING 108518

Lab No: 7100307 Reported: 10/19/07 Phone: (559) 233-6129 P.O. # 24974

**General Chemistry** 

Analyte		Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
108518-1 WELLER	Water	(7100307-01)	Sampled:10/0	8/07 13:00	Received:10/	09/07 1	0:20			
Ferrous Iron		ug/l	ND		20	50	HACH 8146	10/09/07	10/09/07	B730220
108518-2 STILLWEL	L Wate	er (7100307-0	2) Sampled:10	0/08/07 12:5	0 Received:1	0/09/07	10:20			
Ferrous Iron		ug/l	ND		20	50	HACH 8146	16/09/07	10/09/07	8730220
108518-3 MORTON	Water	(7100307-03)	Sampled:10/	08/07 12:40	Received:10	09/07 1	0:20			
Farrous Iron	_	ug/l	ND		20	50	HACH 8146	10/09/07	10/09/07	B730220
108518-4 CAINES \	Nater	(7100307-04)	Sampled:10/08	B/07 12:30	Received:10/0	9/07 10	:20			
Ferrous Iron		ug/l	ND		20	50	HACH 8146	10/09/07	10/09/07	8730220

**Notes and Definitions** 

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the detection limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- < Less than reporting limit
- ≤ Less than or equal to reporting limit
- > Greater than reporting limit
- Greater than or equal to reporting limit
- MDL Method Detection Lin:t RL/ML Minimum Level of Quantitation
- MCL/AL Maxium Contaminant Level Action Level
- mg/kg Results reported as wet weight
- TTLC Total Threshold Lim't Concentration

STLC Soluble Threshold Limit Concentration

TCLP ToxIdty Characteristic Leachate Procedure

Approved By

Basic Laboratory, Inc. California D.O.H.S. Cert #1677



July 20, 2006

Cemex #13588 13475 N Friant Rd Friant, CA 93626

Re: Lab No. 104616

Dear Gerald:

Enclosed are the results for the annual monitoring well water samples recently collected on June 14, 2007.

If you have any questions, please call me.

Respectfully,

Bon Nydam

Ben Nydam Irrigation Specialist, BS, CCA

BN:If

Enclosures

DELLAVALLE Construction of Water	93626	Material Submitted: Water	Total Alkalinity OH CO3 HCO3 pH as CaCO3 as CaCO3 as CaCO3			10th 140 10 1 10 5	2320 B 2320 B 2320 B 23		1002/01/0	141 <1 <1	<1 <1	7.7 109 <1 <1 109	234 <1 <1	*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	EX A LE
of Water Analysis			so	mg/L mg/L	250 250		C 450	300 300 EMERANT EMERANT EV	Innacin	37.2	107	13.4 27.1	79.4	fornia Domestic Water Qua	Wastewater, 19th ed., 19t less otherwise indicated.
	Sar Subm Subm Repo		N-EON		10 45		45(	300 300 445007 5445007	1007010 1007010			1.5 6.78	12.3 54.6	ality and Monitoring	S
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 104616 Sample Date 6/14/2007 Sample Time Submitted Date 6/14/2007 Submitted by G Coburn Reported Date 6/29/2007 Location/Project Stillwell Pr	Eax e-mail	TDS Ca		500 40 0.1		0	200.7				205 30.4		Regulations (Title 22	
ite 110, Fresno, (800) 228-9896	104616 6/14/2007 6/14/2007 G Coburn/A Light/Del-Tech 6/29/2007 Stillwell Proj-GW Monitoring		ßM	-	10	0.1	(85) 0528	200.7 BH50007					19.3		
CA 93728 - (559) 233-6129	/Del-Tech Monitoring		Na K	E	0.2 0.3			200.7 200.7 BUTENDOT		24 2.0		17 1.6			
			Total Fe	mg/L	0.30	0.01		THORNEY I		1.69	15.4	0.46	1.97		

ELAP Certification #1595 Approved By:

DELLAVALLE [®] Laboratoury, finc.			Rep	ort of	Report of Water Analysis	r Ana	lysis		1910 W. McK FAX (559) 28	ünley, Suite 1 8-8174 - (800	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	A 93728 559) 233-612	
Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water							San Subm Subm Repc Locati	Lab No. Sample Date Sample Time Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail		7 oburn roject-Do	108120 9/25/2007 10:45 9/25/2007 Gerald Coburn 10/4/2007 Stillwell Project-Domestic Well Monitoring	ell Monito	bu
		Total Alkalinity	Ю	CO3	HC03								
	Hd	as CaCO3 as		as CaCO3	CaCO3 as CaCO3 as CaCO3	U	SO4	NO ₃ -N	NO3	TDS	Ca	BM	Na
MCL>	unit	тgл	mg/L	mg/L	mg/L	mg/L 250	mg/L 250	mg/L 10	mg/L 45	mg/L 500	шgЛL	mg/L	mg/L
MDL>			•	0.9	0	0.03	0.03	0.01	0.0443	10	0.1	0.1	0.2
RL->	1.0 to 14.0	9	•	1.0	S	0.1	0.2	0.1	0.45	10	0.1	0.1	-
SM−>	4500H B	2320 B	2320 B	2320 B	2320 B	4500CI C	4500SO4 E	4500NO3 E	4500NO3 E	2640 C	3120 8	3120 B	3120 B
EPA>						300	300	300	300		200.7	200.7	200.7
Analysis Date:	9/27/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007	9/26/2007	9/26/2007	9/26/2007	9/26/2007	10/1/2007	9/26/2007	9/26/2007	9/26/2007
001 Maller Demestic Well 10:45		150	1	7	4EA	177	6 40	16.0	0.02	206	3 64	10.0	76
001 Stillwall Domestic Mail 10:30		182	7 1	7 7	201	1.11	110	10.0	78 5	105	0.74	0.01	3
	0.7	235	7	7 7	235	0.00	787	1.11	124		0.10	246	NA NA
	72	218	7	$\overline{v}$	218	75.5	107	18.4	81.5	562	82.9	23.4	53
	"See extern	*See external laboratory documentation	documenta	tion									
	MCL = Maxi	mum Contar	ninant Leve	according	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	mia Domest	ic Water Qu	ality and Mo	initoring Reg	ulations (Tit	le 22)		
	MDL = Meth	MDL = Method Detection Limit;	n Limit; R	RL = Reporting Limit	ng Llmit			•		•	2		
	CIL - Cland	CN8 - Ctandard Mathode fo	for the Even	-indian of	FIAInter and IA		OF PUTTO	20					

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams.

ELAP Certification #1595 Approved By:

S 1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-8129	Lab No. 108120 Sample Date 9/25/2007 Sample Time 10:45 Submitted Date 9/25/2007 Submitted by Gerald Coburn Reported Date 10/4/2007 Location/Project Stillwell Project-Domestic Well Monitoring Copy To Fax e-mail		
Report of Water Analysis		Total Fe mg/L 0.30 0.004 0.01 3120 B 7 10472007	0.48 0.21 0.25 0.25
	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	K MCL> MDL> RL> RL> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> SM> Analysis Date:	001Weller-Domestic Well10:454.7002Stillwell-Domestic Well10:302.6003Morton-Domestic Well10:204.1004Cairnes-Domestic Well10:103.0

Page 2 of 2

1910 W. McKinley, Suite 110, Fresno, CA 83728 FAX (559) 268-8174 - (800) 228-9898 - (559) 233-6129

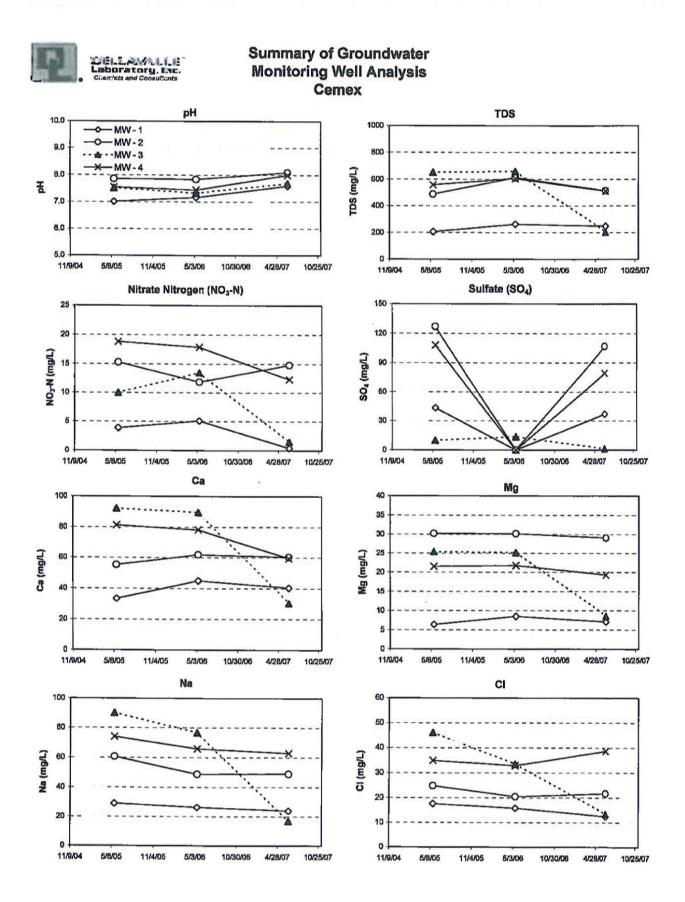
> DELLAVALLE Laboratory, Int.

Summary of Groundwater Monitoring Well Analysis Cemex

									linn								
Lab				Total Alkalinity	Ю	CO3	HCO3		2								Total
No.	Date	TIME	펍	as CaCO ₃	as CaCO ₃	as CaCO ₃	as CaCO ₃ as CaCO ₃ as CaCO ₃	ວ	SO4	SO4 NO3-N NO3		TDS	Ca	ßN	Na	¥	Fe
, mun																	
F - VVM	<b>ENDINE</b>	11-DR AM	01	101	Ţ	1	101	17.6	101	00	47.4	and	22.2	K S	100	36	00
01772	5/11/06	5-DD PM	0.1	101	7	7	126	15.8		, r , r	226	263	45.0	5	26.4	2 0	0.0
104616	6/14/07	2:10 PM	7.6	141	۲	7	141	12.4	37.2	0.4	1.59	248	40.4	7.1	24.0	2.0	1.7
C - MM																	
85263	5/19/05	12:24 PM	7.9	179		¥	179	24.8	127	15.3	67.7	489	55.3	30.2	60.6	6.1	4.3
93772	5/11/06	4:24 PM	7.8	259		۲	259	20.5	<0.2	11.9	52.5	613	61.8	30.2	48.8	6.3	3.1
104616	6/14/07	1:43 PM	8.1	228	4	¥	228	21.7	107	14.8	65.5	515	60.4	29.1	49.0	5.6	15.4
MW - 3																	
85263	5/19/05	12:48 PM	7.5	293		₽	293	46.1	143	10.0	44.3	652	92.3	25.4	90.2	5.0	0.5
93772	5/11/06	3:00 PM	7.3	285		۲	285	33.5	<0.2	13.5	59.8	660	90	25.2	7.97	6.3	0.3
104616	6/14/07	12:45 PM	7.7	109	۶	⊽	109	13.4	27.1	1.5	6.78	205	30.4	8.6	17.0	1.6	0.5
MW - 4																	
85263	5/19/05	1:20 PM	7.6	233		₽	233	34.9	108	18.8	83.5	559	81.2	21.5	74.0	3.5	2.4
93772	5/11/06	2:05 PM	7.5	286		₽	286	32.8	<0.2	17.9	79.1	605	78.2	21.7	62.9	4.6	1.6
104616	6/14/07	12:20 PM	8.0	234	Ł	¥	234	38.7	79.4	12.3	54.6	512	59.5	19.3	63.0	2.8	2.0

Dissolved metals (bolded) were filtered.

F:\Client C\CEMEX #13588\2007\[MW Analysis Summary 05-07.xls]Table



CELLAVAILE® Lebourstory, Inc. Comute and Corutions			Repo	Report of Water Analysis	Nater	- Anal	lysis			1910 W. McK FAX (559) 28 Lab No.	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-9896 - (559) 233-6129 Lab No. 104616	10, Fresno, ( ) 228-9896 -	CA 93728 - (558) 233	-6129	
Cemex 13475 N Friant Rd Friant CA 93626 13588 08									Sam Samit Submit Repor Location		6/14/2007 6/14/2007 G Coburn/A Light/Del-Tech 6/29/2007 Stillwell Proj-GW Monitoring	r VA Light roj-GW I	Del-Ter Monitori	ца Li	
Material Submitted: Water										Fax e-mail					
		Total Alkalinity	Ю	cos	HC03										Total
	H	as CaCO3 as CaCO3 as (	as CaCO3 a		CaCO3 as CaCO3	Ū	SO4	NO ₃ -N	NO3	TDS	Ca	Mg	Na	¥	Fe
	unit	шgЛ	тиви	mg/L	шg/L	mg/L	mg/L	mg/L	J/Bm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MDL->			-	0.9	5	0.03	0.03	0.01	0.0443	5 <del>6</del>	0.1	0.1	0.2	0.3	0.004
RL>	1.0 to 14.0	10	-	1.0	5	0.1	0.2	0.1	0,45	10	0.1	0.1	۲	0.5	0.01
SM->	4500H B	2320 B	2320 B	2320 B	2320 B	o	4500SO4 E 4500NO3 E		4500NO3 E	2540 C	3120 B	3120 B	1000	3120 B	3120 B
Analysis Date:	6/15/2007	6/16/2007	6/16/2007	6/16/2007	6/16/2007	300	300	300	300	6/15/2007	200.1	200.1	8/15/2007 6/15/2007		625/2007
5															ľ
1 MM	7.6	141	⊽	⊽	141	12.4	37.2	0.4	1.59	248	40.4	7.1	24	2.0	1.69
MW2	8.1	228	₽	₽	228	21.7	107	14.8	65.5	515	60.4	29.1	49	5.6	15.4
MW3	7.7	109	⊽	۲	109	13.4	27.1	1.5	6.78	205	30.4	8.6	17	1.6	0.46
004 MW 4 12:20	8.0	234	4	۲	234	38.7	79.4	12.3	54.6	512	59.5	19.3	63	2.8	1.97
	*See extern MCL = Maxi MDL = Meth	*See external laboratory documentation MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit	documentat ninant Level Limit; RI	tation vel according to the C RL = Reporting Limit	o the Califo g Limit	imia Dome	stic Water C	Juality and M	Monitoring R	egulations	(Tritle 22)				
	SM = Stand EPA = Envir Dissolved m	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated. Dissolved metals (bolded) were filtered.	for the Exan stection Age d) were filter	ination of V ncy method ed.	Vater and V s used unk	Vastewater ess otherwi	, 19th ed., 1 se indicated	1995 J.							
	MBAS mole	MBAS molecular weight = 340 grams.	= 340 grams	034											

Approved By: ELAP Certification #1595



September 23, 2008

Cemex

Lab # : 120659, Dear Gerald,

Enclosed are the results for the annual monitoring well water samples recently collected on September 9, 2008

203

Respectfully

Son / lydam

Ben Nydam Certified Crop Advisor # 22552 Dellavalle Laboratory, Inc.



Invoicing:

4 - Monitoring well: purging, monitoring of field parameters (PH, EC, DO), logging, data collection, water sampling @ 3333339	= \$
4 - Water sample analysis for pH, NO3, SO4, TDS, CO3, HCO3, CI, Ca, Mg, Na, TK, Total Alkalinity Total Iron, Ferrous Iron (2) 1 100 (2) 100 (2)	- 1 - 033 60

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-9896 - (559) 233-8129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring Copy To Fax e-mail geraldw.coburn@cemex.com	Total         Total         Total         Total           NO ₃ TDS         Ca         Mg         Na           mg/L         mg/L         mg/L         mg/L         mg/L           45         500         0.1         0.1         1.5           0.0443         10         0.1         0.1         1.5           0.045         10         0.1         0.1         1.5           0.05         2540 C         3120 B         3120 B         3120 B           300         8462009         8470209         84712009         84712009	7.5       80       <1       <1       80       7.9       23.0       2.8       12.3       148       23.8       4.1       11         7.2       180       <1       <1       11       80       7.9       23.0       2.8       12.3       65.6       23.0       32         7.4       253       <1       <1       180       17.8       78.8       432       65.6       23.0       32         6.9       222       <1       <1       253       39.2       95.4       16.9       74.7       592       73.4       20.9       51         6.9       2222       <1       <1       222       23.8       74.9       26.5       118       548       78.3       21.6       47         See external laboratory documentation         MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)       MDL       46.1       1955         MDL = Method Detection Limit;       RL = Reporting Limit       SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995       555       555       555       555       555       555       555       555       555       555       555       555       555
	Sa Subr Subr Cocati	NO ₃ -N mg/L 10 0.01 4500N03 F 30003 F 30003 F	2.8 16.9 26.5 85
ysis		SO4 mg/L 250 0.03 0.03 0.2 300 8/10/2008	23.0 49.7 95.4 74.9 ic Water Qu 19th ed., 19 e indicated.
Report of Water Analysis		CI mg/L 250 0.03 0.03 8/10/2008	7.9 18.8 39.2 23.8 mla Domest Vastewater, iss otherwis
Wate		HCO ₃ as CaCO ₃ mg/L 3 5 2320 B <i>\$</i>	80 180 253 222 222 21 222 253 253 25 222 253 25 222 253 253 2
ort of		OH CO ₃ HCO ₃ CaCO ₃ as CaCO ₃ as CaCO ₃ mg/L mg/L mg/L 1 0.9 3 1 1.0 5 1220 B 2320 B 2320 B	<pre>&lt;1 80 &lt;1 180 &lt;1 253 &lt;1 253 &lt;1 222 &lt;1 222 </pre>
Rep		0H as CaCO ₃ mg/L 1 2320 B <i>2</i> 320 B	<pre>&lt;1 &lt;1 &lt;</pre>
		Total Alkalinity as CaCO ₃ as mg/L 10 2320 B 2 2320 B 2 2320 B	7.5       80       <1
		pH unit 4500H B 46028	7.5       80       <1
CHARALLE [®] Labouration y, Inc.	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MDL> RL> SM> EPA> Analysis Date:	001 Weller - Domestic Well 08:25 002 Stillwell - Domestic Well 08:10 003 Morton - Domestic Well 07:55 004 Caines - Domestic Well 07:45

Approved By: ELAP Certification #1595

CEMEX Construction Materials LP - Gerald Coburn, Plant Mgr - #13588/08 Project: Stillwell Proj - GW Monitoring

## Wetlab Results

#### ARF: 56872

Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

APPL Inc. 4203 West Fresno, CA	Swift Avenue 93722		Attn: ANGELA SIMPSON				
Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date	
APPL ID: A	(83187 -Client Sample II	D: 120142-1 MW1	-Sample Collection D	ate: 08/28/08	Project: 120142	2	
SM3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08	
APPL ID: A	(83188 -Client Sample II	2: 120142-2 MW2	-Sample Collection D	ate: 08/28/08	Project: 120142	2	
M3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08	
APPL ID: AX	(83189 -Client Sample ID	); 120142-3 MW3	-Sample Collection D	ate: 08/28/08	Project: 120142	1	
M3500FeB	Ferrous Iron	Not detected	1.0	mg/L	08/29/08	08/29/08	
APPL ID: AX	83190 -Client Sample IC	2: 120142-4 MW4	-Sample Collection D	ate: 08/28/08	Project: 120142	1	
M3500FeB	Ferrous tron	Not detected	1.0	mg/L	08/29/08	08/29/08	

Printed: 09/02/08 9:07:03 AM

CEMEX - Lemon Cove Plant #133 - Gerald Coburn - #13588/08 Project: Stillwell Project - Domestic Well Monitoring

Wetlab Results

#### ARF: 56935

Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

APPL Inc. 4203 West Fresno, CA		enue		Attn	ANGELA S	IMPSON	
Method	Analyte		Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	X83500	-Client Sample ID	120659-1 WELLER DOMESTIC	-Sample Collection D	Date. 09/09/08	Project: 120659	
SM3500FeB	Ferr	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08
APPL ID: A	X83501	-Client Sample ID	120659-2 STILLWELL DOMESTI	-Sample Collection D	Date: 09/09/08	Project: 120659	
M35D0FeB	Fern	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08
APPL ID: A	X83502	-Client Sample ID	120659-3 MORTON DOMESTIC	-Sample Collectica D	Date: 09/09/08	Project: 120659	
5M3500FeB	Fern	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08
APPL ID: A	X83503	-Client Sample ID	120659-4 CAINES DOMESTIC W	-Sample Coilection D	Date: 09/09/08	Project: 120659	
M3500FeB	Ferr	ous Iron	Not detected	1.0	mg/L	09/09/08	09/09/08

These results are preliminary and represent information available on 9/10/08 at 9:48am

Printed: 09/10/08 9:-18:47 At.1

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 120659 Sample Date 9/9/2008 Sample Time Submitted Date 9/9/2008 Submitted by Gerald Coburn-Plant Manager Reported Date 9/23/2008 Location/Project Stillwell Project - Domestic Well Monitoring Copy To Fax e-mail geraldw.coburn@cemex.com		
Report of Water Analysis		Total Dissolved К *Fe mg/L 0.3 3120 B 3120 B send Out	1.9 3.8 2.8 * * * *
		Total T Fe mg/L 0.30 0.004 0.013 3120 B 3120 B	1.33 0.15 0.15
	Cemex 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MDL> RL> SM> EPA> Analysis Date:	001 Weller - Domestic Well 08:25 002 Stillwell - Domestic Well 08:10 003 Morton - Domestic Well 07:55 004 Caines - Domestic Well 07:45

Page 2 of 2

	•		Rep	ort of	Report of Water Analysis	. Anal	ysis		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8886 - (559) 233-6129	nley, Suite 11 1-8174 - (800)	0, Fresno, CA 228-9896 - (5	. 93728 59) 233-6129			
Cernex 13475 N Friant Rd Friant CA 93626 13588 08								Sarr Sam Submi Sub Repol Locatio	Lab No. Sample Date 1 Sample Time Submitted Date 1 Submitted by 6 Reported Date 2 Location/Project 3 Copy To	120142 8/28/2008 8/28/2008 Gerald Coburn-Plant Mgr 9/16/2008 Stillwell Proj-GW Monitoring	oburn-Pla roj-GW M	nt Mgr onitoring			
Material Submitted: Water									Fax e-mail (	Fax e-mail geraldw.cobum@cemex.com	obum@c	emex.com			
		Total													
		Alkalinity	Ю	လို	HCO ₃										Total
	H	as CaCO ₃ as CaCO ₃ as CaCO ₃ as CaCO ₃	as CaCO ₃	as CaCO ₃	as CaCO ₃	ច	SO4	NO ₃ -N	NO3	TDS	Ca	Mg	Na	¥	Fe
	unit	mg/L	mg/L	mg/L	тgл	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	шgЛ	mg/L	mg/L
			,	00	e	250	250	6 9	45	00ç	10	10	60	60	0.004
	1 0 to 14 0	ţ		10	2 40	0.1	0.0	10.0	0.45	2 8	0.1	0.1	; -	0.5	0.01
<-WS	4500H B	2320 B	2320 B	2320 B	2320 B			3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B	3120 B	3120 B
EPA>						300	300		300						
Analysis Date:	8/23/2008	8/28/2008	8/29/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/29/2008	8/29/2008	8/28/2008	9/4/2008	8/4/2008	8/4/2008	8/4/2008	8/4/2008
001 MW-1 14:47	6.8	88	v	₽	89	3.1	7.1	0.5	2.03	596	25.4	4.3	10	2.2	2.42
	7.9	192	v	V	192	20.6	99.66	5.5	24.3	375	37.2	29.8	52	8.1	2.91
	7.2	111	V	V	111	0.8	1.6	€0.1	<0.45	132	23.3	6.4	12		0.42
	7.5	222	۲	₽	222	355	501	68.7	304	580	85.0	24.2	78		2.04
	*See exten	*See external laboratory documentation	/ documents	ation											
	MCL = Max	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	minant Lew	el according	to the Califo	mia Domes	lic Water Qu	uality and Mc	onitoring Rec	gulations (TI	tie 22)				
	MDL = Met	MDL = Method Detection Limit;	n Limit;	RL = Reporting Limit	ng Limit										
	SM = Stand	SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995	s for the Exa	imination of	Water and V	Vastewater,	19th ed., 19	395							

EPA = Environmental Protection Agency methods used unless otherwise Indicated. Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams. QA/QC available upon request.

Approved By:

ELAP Certification #1595

SEP-08-0	9 TUE 04:01 PM		FAX NO.			P. 02/02
Wetlab ARF: 59	Results 9643	CE	1910	avalle Labor W. MicKinie	atory, Inc. by Ave. #110	<i>#</i> 13588/08
APPL Inc.			ries	ino, CA 9372	28	
908 North Clavis, CA	Temperance Avenue 93611		Attn;	Peggy Mille	r	
Method	Analyte	Result	PQL	Units	Prep Date	Analysis Dat
			The second se		a tob part	Large Add
APPL. ID; A SM3500FcB	V02374 -Client Sample ID: 1 Ferrous Iron	134963-1 MW-1 Not detected	-Sample Collection D 1.0		Project: Filter t 09/01/09	
APPL ID: A	Ferrous Iron	Not detected		Date: 08/31/09 mg/L,	Project: Filter	Station 09/01/09
APPL ID: A M3500FeB	Ferrous Iron <b>Y02375</b> -Cilent Sample ID: 1	Not detected 34963-2 MW-2 Not detected	1.0 -Sample Collection D	oate: 08/31/09 mg/L, ale: 08/31/09 mg/L	Project: Filter ( 09/01/09 Project: Filter (	Station 09/01/09 Station 09/01/09

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Wetlab F ARF: 597	0-10		Cemex #13 Proj: Sti	영영에 관심을 가지?	Domestic	Well 19	llavalle Labora 10 W. McKinle Isno, CA 9372	y Ave. #110	
908 North Te	empera	nce Avenue				0.44	Dogou Millor		
Clovis, CA 9						All	n: Peggy Mille	ſ	
Method	Analy	0		Resu	lt	PQL	Units	Prep Date	Analysis Date
APPL ID: AY	03302	-Client Sample ID	: 135564-1		-San	ple Collection	Date: 09/15/09	Project: Filter	Station
SM3500FeB	Fen	rous Iron		Not detec	ted	1.0	mg/L	09/15/09	09/15/09
APPL ID: AY	03303	-Client Sample IC	: 135564-2		-San	ple Collection	Date: 09/15/09	Project: Filter S	Station
SM3500FeB	Fen	ous Iron		Not detec	ted	1.0	mg/L	09/15/09	09/15/09
APPL ID: AY	03304	-Client Sample ID	: 135564-3		-San	ple Cotlection	Date: 09/15/09	Project: Filter 8	Slation
SM3500FeB	Fen	ous Iron		Not detec	ted	1.0	mg/L	09/15/09	09/15/09
	03305	-Client Sample ID	: 135564-4		-San	ple Collection	Date: 09/15/09	Project: Filter S	Station
APPL ID: AY									

			Report		of Water Analysis	r Anal	lysis		1910 W. McKinley, Suite 110, Fresno, CA 93728	inley, Suite	110, Fresno,	CA 93728			
Chemician Consultants	artus								FAX (559) 288-8174 - (800) 228-9896 - (659) 233-8129	8-8174 - (80	0) 228-9896	- (659) 233-(	<b>6129</b>		
									Lab No.	135904					
								San	Sample Date	9/22/2009	6				
Cemex Construction Materials LP	als LP							San	Sample Time						
N Friant Rd								Submi	Submitted Date	9/23/2009	6				
Friant CA 93626	56							Sub	Submitted by						
13588								Repo	Reported Date	10/5/2009	6				
08								Locatio	Location/Project Stillwell Project-GW Monitoring	Stillwell	Project-0	SW Monit	oring		
									Copy To		í.				
Material Submitted: Water	1								Fax						
									e-mail	pete.loca	astro@ce	e-mail pete.locastro@cemex.com			
															I
		Total	Ю	CO3	HCO3					Dissolved					
		Alkalinity	as	as	as					Solids					Total
	Hd	as CaCO3	CaCO3	CaCO3	CaCO3	0	<b>S04</b>	N-EON	NO3	TDS	Ca	BM	Na	Ч	Fe
	unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL>						250	250	10	45	500					0.00
MDL>			-	0.9	9	0.03	0.03	0.01	0.0443	10	0.1	0.1	0.2	0.3	0.281
RL>	1.0 to 14.0	10	-	1.0	2	0.1	0.2	0.1	0.45	9	0.1	0.1	-	0.5	0.5
SM->	4500H B	2320 B	2320 B	2320 B	2320 B			4500NO3 F	4500NO3 F	2540 C	3120 B	3120 B	3120 B	3120 B	3120 B
EPA>						300	300	300	300		0.0	0.0	0.0	0.0	
Analysis Date:	8/23/2009	9/23/2009	8/23/2009	9/23/2008	9/23/2009	8/23/2009	9/23/2009	8/23/2008	8002/22/8	8/25/2009	8/24/2008	9/24/2009	8/24/2008	8/24/2009	8/29/2009
			a de la compañía de l Compañía de la compañía												
	6.4	165	v	v	165	17.0	25.0	0.8	3.40	307	43.6	10.1	26	6.0	1.52
	7.6	165	V	۲	165	20.5	106	0.6	2.61	360	22.8	27.4	52	7.8	5.93
	6.4	86	1v	v	86	13.7	19.7	0.4	1.76	195	26.7	6.9	16	3.3	0.56
004 MW 4 12:20	6.9	241	₽	₽ V	241	76.8	90.8	13.2	58.6	620	79.1	26.7	81	5.2	2.57

*See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) RL = Reporting Limit MDL = Method Detection Limit;

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams.

QA/QC available upon request.

Approved By:

ELAP Certification #1595

Approved By: ELAP Certification #1595

	Lab No. 135564 Sample Date 9/15/2009 Submitted Date 9/15/2009 Submitted by Gerald Coburn Reported Date 9/28/2009 Location/Project Stillwell Domestic Wells	Fax Fax e-mail pete.locastro@cemex.com				
Report of Water Analysis			Total [*] Ferrous K Fe	mg/L 0.2 3120 B 31209 Send Out	3.6 * 3.7 * 5.0 * 3.1 *	
CELAVALLE [®] Lethogradizing, Inc.	Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water		MCL> MDL> RL> SM> EPA> Analysis Date:	001 Weller 10:30 002 Stillwell 10:20 003 Morton 10:10 004 Cairnes 10:00	

Page 2 of 2

tesult	Attr	n: Elisa Sanch	ez	
legulé				
Populé	and the second sec	and the second se		
Coun	PQL	Units	Prep Date	Analysis Date
-	Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
etected	1.0	mg/L	08/23/10	06/23/10
•••••			*********	******
÷	Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
etected	1.0	mg/L	06/23/10	06/23/10
-	Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
	1.0	mg/L	06/23/10	06/23/10
	Sample Collection	Date: 06/23/10	Project: STILL	WELL PROJGW
	1.0	mg/L	06/23/10	06/23/10
	etected  etected 	etected 1.0 -Sample Collection etected 1.0 -Sample Collection letected 1.0 -Sample Collection	-Sample Collection Date: 06/23/10 etected 1.0 mg/L -Sample Collection Date: 05/23/10 letected 1.0 mg/L -Sample Collection Date: 06/23/10	etected 1.0 mg/L 06/23/10 -Sample Collection Date: 06/23/10 Project: STiLLN etected 1.0 mg/L 06/23/10 -Sample Collection Date: 06/23/10 Project: STILLN letected 1.0 mg/L 06/23/10 -Sample Collection Date: 06/23/10 Project: STILLN

Cemex Construction Materials LP DELLAVALLE[®] Laboratory, Inc. Chantee and Constants 13475 N Friant Rd

CA 93626 13588 Friant 80

Material Submitted: Water

Report of Water Analysis

FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129 1910 W. McKinley, Suite 110, Fresno, CA 93728

Location/Project Stillwell Project - GW Monitoring Submitted by Pete Locastro Submitted Date 6/23/2010 Sample Date 6/23/2010 Reported Date 7/8/2010 Lab No. 144382 Copy To Sample Time

Fax

e-mail pete.locastro@cemex.com

	Total	K Fe *Ferous Fe			0.3 0.28				V28/2010 7/13/2010 Send Out	
					0.15 0.				628/2010 6/28/	
		Mg	mg/L		0.1	0.1	3120 B		6/28/2010	
		Ca	mg/L		0.1	0.1	3120 B		6/28/2010	
		TDS	mg/L	500	10.0	10.0	2540 C		6/24/2010	10
		NO3					•			
		NO ₃ -N								
		CI SO4	mg/L	250	0.03	0.2	M 4500-SO4	300	6/24/2010	
		ច	mg/L	250	0.03	0.1	SM 4500-CI E	300	6/24/2010	
HC03	as	CaCO ₃							6/24/2010	
cos	SIS	CaCO ₃	mg/L		0.9	1.0	2320 B		6/24/2010	
Б	as	CaCO ₃	mg/L		۲	٣	2320 B		6/24/2010	
I otal	Alkalinity	as CaCO ₃	mg/L			9	2320 B		6/24/2010	
		Fa	unit			1.0 to 14.0	4500H B		6/24/2010	
				MCL->	MDL->	RL->	<b>SM</b> J	EPA>	Analysis Date:	

0.74 1.78 0.36 1.79 3.3 8.7 2.4 5.6 23 55 132 10.4 26.4 9.1 38.7 15.9 35.4 42.0 132 257 340 220 910 1.69 3.58 2.75 74.9 0.4 0.8 0.6 16.9 34.6 94.6 29.0 126 18.9 21.6 18.4 205 134 154 112 272  $\nabla \nabla$ v v v  $\nabla$   $\nabla$   $\nabla$ 134 154 112 272 7.2 8.2 7.1 002 MW 2 0 09:47 003 MW 3 0 09:03 004 MW 4 0 08:40 001 MW 1 @ 10:25

See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)

RL = Reporting Limit MDL = Method Detection Limit,

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams.

QA/QC available upon request.

ELAP Certification #1595 Approved By:

Cemex #13588/08

Wetlab Results

ARF: 63597

Clovis, CA 93611

APPL Inc.

Method

SM3500FeB

SM3500FeB

908 North Temperance Avenue

Proj: Stillwell Domestic Well 1910 W. McKinley Ave. #110 Fresno, CA 93728

Dellavalle Laboratory, Inc.

Attn: Elisa Sanchez Analysis Date Units **Prep Date** POL Result Analyte Project: STILL WELL DOMESTI -Sample Collection Date: 01/10/11 APPL ID: AY29764 -Client Sample ID: 152347-1 01/10/11 01/10/11 1.0 mg/L FERROUS IRON Not detected Project: STILL WELL DOMESTI -Sample Collection Date: 01/10/11 APPL ID: AY29765 -Client Sample ID: 152347-2 01/10/11 01/10/11 1.0 mal FERROUS IRON Not detected ..... Project: STILL WELL DOMESTI note Collection Date: 01/10/11 Sa

APPL ID: AY2	9766 -Client Sample ID: 152347-3		-Sample Collection D		riejoot. ornat r	The set of
SM3500FeB	FERROUS IRON	Not detected	1.0	mg/L	01/10/11	01/10/11
APPL ID: AY2			-Sample Collection D	ate: 01/10/11	Project: STILL V	VELL DOMESTI
SM3500FeB	FERROUS IRON	Not detected	1.0	mg/L	01/10/11	01/10/11

Printed: 01/11/11 8:36:49 AM

ARF: 65 APPI Inc.	emperance A	Proj:	Construction #13 Stillwell Projec Monitoring	3588/08 st-DW	191 Fres	avalle Labor 0 W. McKinie ino, CA 9372 Elisa Sanct	ey Ave. #110 28	
Method	Analyte		Result	-	PQL	Units	Prep Date	Analysis Date
APPL ID: A) SM3500FeB	41173 -Client FERROUS	Sample ID: 159 IRON	705-1 MW-1 Not detected	-Sample	Collection D 1.0	eate: 07/11/11 mg/L	Project: STILL	WATER PROJECT 07/12/11
APPL ID: AY SM3500FeB	41174 -Client FERROUS		705-2 MW-2 Not detected	-Sample (	Collection D 1.0	ate: 07/11/11 mg/L	Project: STILLA 07/12/11	WATER PROJECT 07/12/11
APPL ID: AY SM3500FeB	41175 -Client FERROUS	Sample ID; 1597 IRON	05-3 MW-3 Not detected	-Sample C	Collection D. 1.0	ate: 07/11/11 mg/L	Project: STILLV 07/12/11	WATER PROJECT 07/12/11
APPL ID: AY	41176 -Client FERROUS	Sample ID: 1597 IRON	05-4 MW-4 Not detected	-Sample C	ollection Da 1.0	ale: 07/11/11 mg/L	Project: STILLV 07/12/11	ATER PROJECT 07/12/11

			Rep	ort of	Wate	Report of Water Analysis	lysis		1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-8896 - (559) 233-6129	ley, Suite 110 8174 - (800) ;	, Fresno, CA 228-9896 - (5f	93728 99) 233-6129	
								U.	Lab No. Samile Date	Lab No. 159705 Na Data 7/11/2011	5		
Cemex Construction Materials LP								s S	Sample Time				
13475 N Friant Rd								Sub	Submitted Date	7/12/2011	11		
Friant CA 93626								S	Submitted by		castro		
13588								Re	Reported Date		-		
00								FOCE	LOCALION/Project Copy To		roject-noi	Suiweil Project-Domestic Well Monitoring	Monitoring
Material Submitted: Water									Fax	Fax (925) 426-2226	6-226		
						ĺ			e-mai	I pete.loc	astro@ce	e-mail pete.locastro@cemex.com	
		ļ	į										
		I otal	НО	CO3	HC03								
		Alkalinity	as	as	as						,		
	Hd	as CaCO ₃	CaCO ₃	CaCO ₃	CaCO ₃	ប	SO4	NO3-N	NO3	TDS	Ca	Mg	Na
	unit	mg/L	mg/L	тgл	mg/L	mg/L	шgЛ	mg/L	mg/L	mg/L	Шg/L	mg/L	mg/L
WCL->						250	250	10.2	45.0	200			
MDL>			-	0.9	e	0.03	0.03	0.01	0.04	10.0	0.1	0.1	0.15
RL->	1.0 to 14.0	9	**	1.0		0.1	0.2		0.45		0.1	0.1	1.0
SM->	4500H B	2320 B	2320 B	2320 B	2320 B	SM 4500-CI EM 4500-SO4	M 4500-SO4		Let 10:107.05.1.A Lat. 10.107.05.1.A	A 2540 C	3120 B	3120 B	3120 8
EPA>						300	300	300	300				
Analysis Date:	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/19/2011	7/19/2011	7/19/2011	7/19/2011	1122/2011	113/2011	7/13/2011	1/13/2011
DOLT O TIME FOO	C [	445	1	1		0.00	0.01	90	60 0	000	101		00
	1.1	C+1	7	<b>v</b>	143	22.3	40.0	0.0	CO.2	020	4.00	1.21	9
	7.9	158	v	v	158	18.9	89.4	1.9	8.59	440	22.4	28.6	51
1.1	7.2	530	۲	V	530	217	124	18.0	79.5	1190	237	87.8	20
004 MW-4 @ 15:55	7.4	233	₽	۲	233	92.2	90.4	15.2	67.4	687	74.6	27.1	107
	*See extern	*See external laboratory documentation	documenta	lion									
	MCL = Max	imum Contan	inant Leve	according t	the Califo	mia Domes	tic Water Qu	ality and Mor	MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)	lations (Title	22)		
	MDL = Met	MDL = Method Detection Limit;		RL = Reporting Limit	ng Limit								
	SM = Stand	SM = Standard Methods for the		nination of \	Nater and V	Examination of Water and Wastewater, 19th ed., 1995	19th ed., 19	95					

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered.

MBAS molecular weight = 340 grams. QA/QC available upon request.

ELAP Certification #1595 Approved By:

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9996 - (559) 233-6129	Lab No. 159705 Sample Date 7/11/2011 Sample Time Submitted Date 7/12/2011 Submitted by Pete Locastro Reported Date 8/1/2011 Location/Project Stillwell Project-Domestic Well Monitoring Copy To Fax (925) 426-2226		
Report of Water Analysis		*Ferous Fe Send Out	* * * *
		Total Fe mg/L 0.3 0.004 0.01 3120 B	0.1 2.02 1.99
		K mg/L 0.5 3120 B 3120 B	3.5 7.2 5.3 5.3
Laboratory, Inc.	Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water	MCL> MDL> RL> SM> EPA> Analysis Date:	001 MW-1 @ 17:00 002 MW-2 @ 16:39 003 MW-3 @ 16:14 004 MW-4 @ 15:55

Page 2 of 2

			Na	mg/L	0.15	1.0	3120 B	1/12/2011	11	11	58	53	
728 233-6129	/ells ex.com		Mg	mg/L n	0.1		3120 B 31	1/12/2011 1/1	5.1		1020		
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	ab No. 152347 e Date 1/10/2011 e Time d Date 1/10/2011 tted by Pete Locastro d Date 1/26/2011 Project Stillwell Domestic Wells opy To Fax e-mail pete.locastro@cemex.com		Ca	mg/L	0.1	0.1	3120 B	1/12/2011 1/	6.0	5.9	68.3		
y, Suite 110, 174 - (800) 2	152347 1/10/2011 1/10/2011 Pete Locastro 1/26/2011 Stillwell Dome pete.locastro@		TDS	mg/L	10.0	10.0	2540 C	1/18/2011	135	135	505	515	
1910 W. McKinle FAX (559) 268-8	Lab No. 152347 Sample Date 1/10/20 Sample Time 1/10/20 Submitted Date 1/10/20 Submitted by Pete Lo Reported Date 1/26/20 Location/Project Stillwell Copy To Fax e-mail pete.loc		NO ₃	mg/L	0.04	0.45	at. 10.107.05.1.A	300	<0.45	<0.45	48.9	106	
	Subi S. S. S.		NO ₃ -N	mg/L	0.01	0.1	Let .	300	<0.1	<0.1	11.0	23.9	
ysis			SO4	ng/L	0.03	0.2	M 4500-SO4	300	1.6	1.5	75.6	55.3	
Report of Water Analysis			ច	mg/L	0.03	0.1	SM 4500-CI EM 4500-SO4	300	1.7	2.0	33.4	17.2	
Wate		HCO3 as	CaCO ₃	mg/L	e	2	2320 B	1/11/2011	54	5	208	181	
ort of		CO3 as	CaCO ₃	mg/L	8.0	1.0	2320 B	1/11/2011	₽	₽	V	Ł	
Rep		OH as	CaCO ₃	mg/L	٢	Ŧ	2320 B	1/11/2011	۲	₽	۲	2	
		Total Alkalinity	as CaCO ₃	шg/L		10	2320 B	1/11/2011	54	54	208	181	
			Ha	unit		1.0 to 14.0	4500H B	1/11/2011	7.3	7.3	7.6	7.4	
DELLANALLE [®] Lednorationy, Inc.	Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08 Material Submitted: Water				MDL>	RLJ	SM->	EPA> Analysis Date:	001 Weller 12:40	002 Stillwell 12:58	003 Morton 11:39	004 Cairnes 11:30	

*See external laboratory documentation

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 EPA = Environmental Protection Agency methods used unless otherwise indicated.

Dissolved metals (bolded) were filtered. MBAS molecular weight = 340 grams.

**QA/QC** available upon request.

Approved By:

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-9174 - (800) 228-9898 - (559) 233-6125	Lab No. 152347 Sample Date 1/10/2011 Sample Time Submitted Date 1/10/2011 Submitted by Pete Locastro Reported Date 1/26/2011 Location/Project Stillwell Domestic Wells Coov To	Fax e-mail pete.locastro@cemex.com												
Report of Water Analysis			*Ferous Fe				Send Out		•	*				
			Total Fe	mg/L 0.3	0.01	3120 B	1/12/2011	<0.10	<0.10	<0.10	<0.10			
			×	T/gm	0.5	3120 B	1/12/2011	1.3	1.2	3.5	2.4			
	Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08	Material Submitted: Water				SM> EPA>	Analy	001 Weller 12:40		003 Morton 11:39	004 Cairnes 11:30			

Page 2 of 2

R						
	Bact	eriolog	ical Wa	Bacteriological Water Analysis	ysis	1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9898 - (559) 233-6129
Chamists and Consultants					Lab No. Sample Date	
13475 N Friant Rd					sample rime Sampler	Proctor
Friant	CA	93626		S	Submitted Date	
13300					Submitted by Reported Date	Gerald Coburn 1/11/2011
				Lo	Location/Project	Routine
Material Submitted:					Copy To	
					email	pete.locastro@cemex.com
				Total		
			Rec'd	MPN	MPN	Residual
	Date	Time	Temp	Coliform	E-Coli	Chlorine
	Started	Started	ပ္	per 100 ml	per 100 ml	mg/L
RL->	5000			12	41	
SM->				9223	9223	Field test
Analysis Date:	1/11/2011	1/11/2011	1/11/2011	1/11/2011	1/11/2011	
001 Morton	1/10/011	16:00	20	₽	v	
			20	8		
		ND = None De SM = Standar	etected d Methods for t	he Examination o	f Water and Was	ND = None Detected SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995
		Records retain mg/L = ppm	led for 5 yrs.			
					Approved By:	
						ELAP Certification #1595

# Wetlab Results

## ARF: 67538

APPL Inc. 908 North Temperance Avenue

### Cemex #13588/08 Proj: Stillwell Proj GW Monitoring Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

Clovis, CA		uce Avenue		Altn	Elisa Sanch	ez	
Method	Analy	9	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: A	Y59312	-Client Sample ID: 169985-1		-Sample Collection D	late: 04/18/12		_
SM3500FeB	FEF	ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	<b>Y59</b> 313	-Client Sample ID: 169985-2		-Sample Collection D	ate: 04/18/12		
SM3500FeB	FER	ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	Y59314	-Client Sample ID: 169985-3		-Sample Collection D	ale: 04/18/12		
SM3500FeB	FER	ROUS IRON	Not detected	1.0	mg/L	04/19/12	04/19/12
APPL ID: A	¥89315	-Client Sample ID: 169985-4		-Sample Collection D	ate: 04/18/12		
SM3500FeB	FER	ROUSIRON	Not detected	1.0	mg/L	04/19/12	04/19/12

Printed: 05/07/12 3:50:40 PM

<u>Wetlab</u> ARF: 67	S-2.05//46	<u>'S</u>		#13588/08 Stillwell Well	Domestic	Dellavalle Labon 1910 W. McKinle Frasno, CA 9372	ay Ave. #110	
APPL Inc. 908 North Clovis, CA		ce Avenue				Atin: Elisa Sanci	16Z	
Method	Analyte			Result	PQ	L Units	Prep Date	Analysis Date
APPL ID: A	¥60853	-Client Sample ID: 17	1014-1		-Sample Colle	etion Date: 05/09/12	Project: Stillwe	Il Domestic Well
SM3500FeB	FER	ROUS IRON	ñ	lot detected	1.0	n mg/L	05/10/12	05/10/12
APPL ID: A	YE0854	-Client Sample ID: 171	1014-2		-Sample Colle	ction Date: 05/09/12	Project: Stillwa	H Domestic Well
		-Client Semple ID: 171 ROUS IRON		lot detected	-Sample Colls 1.0		Pioject: Stillive 05/10/12	H Domestic Well 05/10/12
APPL ID: A SM3500FeB	FER		•	lot defected	1.0		05/10/12	
SM3500FeB	FER <b>Y60855</b>	ROUS IRON	N 1014-3	lot detected lot detected	1.0	ng/L.	05/10/12	05/10/12
SM3500FeB	FER <b>780885</b> FER	Cilent Sample ID: 171	N 1014-3 N		-Sample Colls 1.0	ng/L.	05/10/12 Project: Stillwa 05/10/12	05/10/12 Il Camestic Well

			Total	mg/L	0.3	0.004	0.1	3120 8	5/14/2012	15:58	<0.10	<0.10	0.15	0.10
			×	mg/L		0.3	0.5	3120 B	5/14/2012	12:19	4.1	2.5	3.6	e 22)
28 33-6129			Ra Ra	mg/L		0.15	1.0	3120 6	5142012	12:19	24	32	56	51 Sons (Tit
10, CA 937 96 - (559) 2		U	W	T/Bm		0.1	0.1	3120 B	514/2012	12:19	15.8	23.6	20.0	22.1 Regutat
110, Fresr 00) 228-98	- III-I	veils emex.c	5	mg/L		0.1		3120 B		12:19	36.2	62.5	67.0	75.7 Diltoring
inley, Suite 8-8174 - (81	ilson	2226 1son@c	LDS	mg/L	500	10.0		2540 C	521/2012 5/14/2012	4:00	1030	212	175	y and Mc
1910 W. McKinley, Sulle 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	171014 N. Olson 05/09/12 Ramon Neilson 05/29/12	roject Stilweil Domestic Weils py To Fax (925) 426-2226 e-mail <u>ramon.neilson@cemex.com</u>	Őz	mg/L	45.0	0.04	2.0	300.0	~	17:58	30.6	95.6	86.9	118 ater Qualit ed., 1995
		Locauon/Project Copy To Fax e-mail	NON	mg/L	10.2	0.01	0.1	300.0	5/10/2012	17:58	6.9	21.6	19.6	7.0       201       <1
S	Subm Sut Repo	Locatio	SO	mg/L	250	0.03	0.5	300.0	5/10/2012	17.58	38.3	55.6	66.9	63.4 allfornia D ind Waste
alysi			5	mg/L	250	0.03	0.1	300.0	5/10/2012	17:58	16.2	22.4	19.5	to the C ing Limit
of Water Analysis			Total Akalinity OH CO ₃ HCO ₃	mg/L		e	5	2320 B	5/10/2012	11:03	133	171	214	201 17.0 201 17.0 d time. wel according to the C RL = Reporting Limit xamination of Water a
f Wat			CO3	mg/L		0.9	91	2320 B	5/10/2012	11:03	⊽	۲	₽	<1 21 21 21 21 21 21 21 21 21 21 21 21 21
			HO	mg/L		-	-	2320 B		11:03	v	₽	⊽	<1 ratory do e of 15 n contamin tection L thods fo ided) wen n request n request
Report			Total Alkalinity	- mayr				2320 B	5/10/2012 5/10/2012	11:03	133	171	214	7.0 201 <1 <1 2 *See external laboratory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level acc MDL = Method Detection Limit; RL = I SM = Standard Methods for the Examina Dissolved metals (bolded) were filtered. QA/QC available upon request.
			7	i is			1.0 to 14.0	4500H B	5/10/2012		6.8	6.8	7.1	7.0 7.0 MCL = M MDL = M MDL = M SM = Sta Sissolved i Dissolved i
	93626	Water	Ĭmo	Sampled							10:00	9:25	10:50	
		ubmitted:	ate C	Sampled							05/09/12	05/09/12	05/09/12	05/09/12
<b>COELLAWALLE</b> * Lethoretory, htt: Combinerary Converted	on Mate	Material Submitted: Water			MCL>	MDL>	ר אר גר	EPA-	Analysis Date:	Analysis Time:		-	1	
	Cemex Constructic 13475 N Friant Rd Friant	08									Weller	Stillwell		
			I								00	002	003	004

Approved By: ELAP Certification #1595

Page 1 of 2



Cemex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

Time	Sampled								10:00	9:25	10:50	10:30
Date	Sampled								05/09/12	05/09/12	05/09/12	05/09/12
		MCL>	<ndi< td=""><td><b>₽</b></td><td>SM-&gt;</td><td>EPA&gt;</td><td>Analysis Date:</td><td>Analysis Time:</td><td></td><td></td><td></td><td></td></ndi<>	<b>₽</b>	SM->	EPA>	Analysis Date:	Analysis Time:				
									001 Weller	Stillwell	003 Morton	Caimes
									6	002	003	004

			Ч		5	08		012	2	-	2		0	
		¥	шg/L	0.3	0.5	3120 B		5/1/2012	10:15	4.1	6.5	3.3	4.9	ie 22)
5728 233-6129		Na	mg/L	0.15	1.0	3120 B		5/1/2012	10:15	쳤	5	\$	86	ttions (Tri
sno, CA 93 3896 - (559)	toring	Mg	J/Bm	0.1	0.1	3120 B		5/1/2012	10.15	15.2	27.6	14.7	25.6	ig Regula
la 110, Fre 800) 228-(	Light W Moni	ទី	mg/L	0.1	0.1	3120 B		5/1/2012	10:15	62.2	30.7	56.1	83.8	Aonitoria
(Inley, Suil	Ashley I eilson roject-G -2226 ilson@c	S	mg/L	500 10.0	10.0	2540 C		5/9/2012	12:30	363	373	343	620	ty and h
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	b No. 169985 mpler Del-Tech/Ashley Light Date 04/19/12 ed by Ramon Neilson Date 5/14/12 roject Stillwell Project-GW Monitoring py To Fax (925) 426-2226 Fax (925) 426-2226 e-mail ramon.neilson@cemex.com	Ő	тg/L	45.0	2.0		300.0	4/18/2012		4.00	23.5	11.9	67.3	/ater Quali
	Lab No. Sampler Submitted Date Submitted by Reported Date Location/Project Copy To Fax e-mail	N-"ON	mg/L	10.2	0.1		300.0	4/18/2012		0.9	53	27	15.2	ormestic V water, 19th
S	Subm Suk Repo Locati	so	mg/L	250 0.03	0.5		300.0	4/18/2012		52.4	87.7	49.8	81.8	alifornia C
alysi		0	mg/L	250 0.03	0.1		300.0	4/18/2012		26.0	7.00	29.8	63.3	to the C ing Limit f Water
ort of Water Analysis		OH CO ₃ HCO ₃ tes caco, as caco,	mg/L	ę	5	2320 B		4/19/2012		179	162	161	259	*See external laboratory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22) MDL = Method Detection LImit; RL = Reporting Limit SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995 Dissolved metals (bolded) were filtered. QAQC available upon request.
f Wat		co3 caco	mg/L	0.9	1.0	2320 B		4/19/2012		₽	V	v	. ∠	*See external laboratory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level aco MDL = Method Detection LImit; RL = I SM = Standard Methods for the Examina Dissolved metals (bolded) were filtered. QAQC available upon request.
ort o		OH	шðЛ	F	F	2320 B		4/19/2012		V	V	v	⊽	rratory d le of 15 i Contami tection l ethods fc ethods fc olded) we
Rep		Total Alkalinity es ceco.	тдл		10	2320 B		4/19/2012		179	162	161	259	ermal labo zed ousic aximum ( ethod De ndard M metals (b
		핌	ţ		1.0 to 14.0	4500H B		4/19/2012		6.9	75	6.8	8.0	*See external laboratory documentation pH analyzed ouside of 15 min hold time. MCL = Maximum Contaminant Level acc MDL = Method Detection LImit; RL = F SM = Standard Methods for the Examine Dissolved metals (bolded) were filtered. QA/QC available upon request.
	93626 Water	Time	Sampled							18:25	18-05	17:39	17:17	
۳1 ۳	ction Materials LP Rd CA 93626 CA 93626 Material Submitted: Water	Date	Sampled							04/18/12	04/18/12	04/18/12	04/18/12	
AVAIL foorty. b	n Materi C terial Su			MCL>	RL-,	SM->	EPA>	Analysis Date:	s Time:	ľ	6			
DELLANALLE ⁴ Laboratory, Inc. Contes ad Constants	instructio riant Rd			~ ~				Analys	Analysis Time:					
	Cernex Construction Materials LP 13475 N Friant Rd CA 13588 13588 08 Material Submittee									MW 1	C MW	MW 3	MW 4	
	04148									001 M	002 M			
										. 0	0	0	0	

Approved By:

Page 1 of 4

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 288-8174 - (800) 228-9896 - (559) 233-6129	No. 169985 Date Del-Tech/Ashley Light Date 04/19/12 Date 5/14/12 Date 5/14/12 Siect Stillwell Project-GW Monitoring y To	e-mail ramon.neilson@cemex.com										Page 2 of 4
Report of Water Analysis	Lab No. Sampler Submitted Date Submitted by Reported Date Location/Project Copy To	e-mai	al *Ferrous Fe			8	12 Send Out					
	g	ar			0.004	3120 B	51/2012	13:26	18:25 2.14	17:39 <0.10	0.66	
• .	LP 93626	itted: Wat	1	pied Sampled								
DELLANALLE [®] Labourefoury, Inc.	Cernex Construction Materials LP 13475 N Friant Rd Friant CA 13588 08	Material Submitted: Water	Date	Sampled MCL>	RL	SM> EPA>	Analysis Date:	Analysis Time:	V 1 04/18/12		V 4 04/18/12	
	88 33 Literation Central 23 Centr								001 MW 1	003 MW 3	004 MV	

CELLAVALLE® Lathourstanty, Inc.		Rep	orto	sf Wa	Report of Water Analysis	alysi	S		1910 W. Mc FAX (559) 2	Kinley, Sult 68-8174 - (	le 110, Fre: 800) 228-9	1910 W. McKinley, Sulte 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	28 233-6129	
Cemex Construction Materials LP 13475 N Friant Rd							Subr	Lab No. 169985 Sampler Del-Tech/Ashle Submitted Date 04/19/12 Submitted by Ramon Neitson	Lab No. 169985 Sampler Del-Tech/Ashley Light ted Date 04/19/12 nitted by Ramon Neiton	/Ashley I	∟ight			
Friant CA 93626 13588							Rep	Reported Date 5/14/12 Location/Project Stillwell Project-GW Monitoring	5/14/12 Stillwell P	roject-G	W Monite	orina		
80								Copy To	/ To Eav (025) 425 2226	9000		D		
Material Submitted: Water								e-mail	e-mail ramon.neilson@cemex.com	ilson@c	emex.col	E		
		Total												
		Alkalinity	НО	ő	HCO3									
Date Time	Hd	as CaCO ₃	as CaCO ₃	as CaCO ₃	as CaCO ₃ as CaCO ₃ as CaCO ₃ as CaCO ₃	ū	SO₄	NO ₃ -N	NO3	TDS	Ca	BM	Na	¥
Sampled Sampled	unit	тgл	шg/L	mg/L	mg/L	mg/L	тудт	mg/L	mg/L	шg/L	mg/L	mg/L	mg/L	тgл
WCL>						250	250	10,2	45.0	500				
<tom< td=""><td></td><td></td><td>-</td><td>0.9</td><td>8</td><td>0.03</td><td>0.03</td><td>0.01</td><td>0.04</td><td>10.0</td><td>0.1</td><td>0.1</td><td>0.15</td><td>0.3</td></tom<>			-	0.9	8	0.03	0.03	0.01	0.04	10.0	0.1	0.1	0.15	0.3
RL->	1.0 to 14.0	9	T	1.0	5	0.1	0.5	0.1	2.0	10.0	0.1	0.1	1.0	0.5
SM->	4500H B	2320 B	2320 B	2320 B	2320 B					2540 C	3120 B	3120 B	3120 B	3120 B
EPA>						300.0	300.0	300.0	300.0					
Analysis Date:	4/19/2012 4/19/2012	4/18/2012	4/19/2012	4/19/2012	V19/2012 4/19/2012 4/19/2012	4/18/2012	4/18/2012	4/18/2012	4/18/2012	59/2012 5/1/2012		51/2012	51/2012	5/1/2012
Analysis Time:										12:30	10:15	10:15	10:15	10:15
					ELAP	ELAP Certification #1595	on #1595							

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	Lab No. 169985 Sampler Del-Tech/Ashley Light ed Date 04/19/12		py To Fax (925) 426-2226 e-mail ramon.neilson@cernex.com									Page 4 of 4
Report of Water Analysis	Lab No. Sampler Submitted Date	Reported Date Location/Project	Copy To Fax e-mail	*Ferrous Fe			Send Out					
DELLAVALLE [®] Lettomretiony, Inc.	Cemex Construction Materials LP	Friant CA 93626 13588	08 Material Submitted: Water	Date Time Fe Sampled Sampled mg/L	MCL> 0.3 MNI> 0.004	SM-> 3120 B	EPA> Anahysis Date: 5/1/2012				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	

# Wetlab Results

### ARF: 70419

APPL Inc.

**908 North Temperance Avenue** 

Cemex #13588/08 Dellavalle Laboratory, Inc. 1910 W, McKinley Ave. #110 Fresno, CA 93728

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Attn: Elisa Sanchez Clovis, CA 93611 Method Analyte Result PQL Unite **Prep Date** Analysis Date APPL ID: AV78543 -Client Semple ID: 185149-1 -Sample Collection Date: 04/08/13 SM3600FeB FERROUS IRON Not detected 1.0 mg/L 04/08/13 04/09/13 ****** ........... APPL ID: AY78544 -- Client Sample ID: 185149-2 -Sample Collection Date: 04/08/13 SM3500FeB **FERROUS IRON** Not detected 1.0 mg/L 04/09/13 04/08/13 APPL ID: AY78546 -CCent Sample ID: 185148-3 -Sample Collection Date: 04/08/13 FERROUS IRON SM3600FeB Not detected 1.0 mg/L 04/09/13 04/09/13 APPL ID: AY78546 -Client Sample ID: 185148-4 -Sample Collection Date: 04/08/13 SM3500FeB **FERROUS IRON** Not detected 1.0 mg/L 04/09/13 04/09/13 

#### Printed: 06/06/13 1:29:17 PM

W	etl	ab	Resu	lts
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#### ARF: 70959

APPL Inc. 908 North Temperance Avenue CEMEX #13588/08 Project: Stillwell Project-Groundwater Monitoring

Dellavalle Laboratory, Inc. 1910 W. McKinley Ave. #110 Fresno, CA 93728

Attn: Elisa Sanchez Clovis, CA 93611 Method Analyte Result PQL Unite Prep Date Analysis Date APPL ID: AY81824 -Cilent Sample ID: 189742-1 -Sample Collection Date: 06/12/13 SM3500FeB FERROUS IRON Not detected 1.0 mg/L 06/13/13 06/13/13 -----...... -----APPL ID: AV81825 -Client Sample ID: 189742-2 -Sample Collection Date: 06/12/13 SM3500FeB FERROUS IRON Not detected 1.0 mg/L 06/13/13 06/13/13 APPL ID: AY81826 -Client Sample ID: 189742-3 -Sample Collection Date: 08/12/13 FERROUS IRON SM3500FeB Not detected 1.0 06/13/13 mg/L 06/13/13 APPL 10: AY81827 -Client Sample ID: 189742-4 -Sample Collection Date: 06/12/13 SM3500FeB FERROUS IRON Not detected 1.0 mg/L 06/13/13 06/13/13 ..... -----------

#### Printed: 07/11/13 2:04:18 PM

Report of Water Analysis

OFLLAWALLE[®] Laboratory, Inc. Semiss and Consulants

FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129 1910 W. McKinley, Suite 110, Fresno, CA 93728

> Cemex Construction Materials LP 93626 S 13475 N Friant Rd 13588 Friant 8

Material Submitted: Water

e-mail ramon.neilson@cemex.com Location/Project Stillwell Domestic Wells Submitted by Ramon Neilson Fax (925) 426-2226 Reported Date 4/15/2013 Submitted Date 4/8/2013 Lab No. 185149 Sampler T. Cox Copy To

*Ferrous	Fe							Send Out		
Total	Fe	mg/L	0.3	0.004	0,1	3120 B		4/11/2013	11:16	
	¥	mg/L		0.3	0.5	3120 B		4/11/2013	9:20	
	Na	mg/L		0.15	1.0	3120 B		4/11/2013	9:20	
	Mg	mg/L		0.1	0.1	3120 B		4/11/2013	9:20	
	Ca							4/11/2013 4/11/2013	9:20	
	TDS	mg/L	500	10.0	10.0	2640 C				
	NO3	mg/L	45.0	0.04	20		300.0	4/9/2013	20:06	
	NO ₃ -N	mg/L	10.0	0.01	0.1		300.0	4/8/2013	20:06	
	SO4	тgл	250	0.03	0.5		300.0	4/9/2013	20:06	
	ច	mg/L	250	0.03	0.1		300.0	4/9/2013	20:06	
HCO3	as CaCO ₃ as CaCO ₃ as CaCO ₃ as CaCO ₃	тgЛ		3.00	5.00	2320 B		4/9/2013	12:11	
co	as CaCO ₃	mg/L		0.9	1.0	2320 B		4/8/2013	1211	
Ю	as CaCOs	mg/L		1.00	1.00	2320 B		4/3/2013	12:11	
Total Alkalinity	as CaCO ₃	mg/L			10.0	2320 B		4/3/2013 4/3/2013 4/3/2013	12:11	
	Hd	unit			1.0 to 14.0 10.0	4500H B		4/9/2013	12:11	
	Time	Sampled								
	Date	Sampled Sampled								
			MCL>	WDL->	RL>	SM->	EPA->	Analysis Date:	Analysis Time:	

<0.10 <0.10 <0.10

4.4

16.6 25.8 23.3

38.2 68.7 74.4 72.0

287

32.2 90.7 78.8

7.3

39.6

13.5 18.0 27.0 12.8

v v  $\nabla$   $\nabla$ 

v v VV

130

7.3 7.1 7.2

9:41

4/8/2013 4/8/2013

001 Weller

173 232 194

10:05 10:18

4/8/2013

002 Stillwell 003 Morton 004 Cairnes

4/8/2013

9:08

460 653 473

20.5 23.3

130 173 232 194

54.3 74.0 51.7

3.9

33 28 33

0.55

*See external laboratory documentation

pH analyzed outside of 15 min hold time.

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)

MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

Dissolved metals (bolded) were filtered.

QA/QC available upon request.

Approved By:

CELLANALLE Labouration I, Inc.

Report of Water Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

> Cernex Construction Materials LP 13475 N Friant Rd Friant CA 93626 13588 08

Material Submitted: Water

Lab No. 185149 Sampler T. Cox Submitted Date 4/8/2013 Submitted by Ramon Nellson Reported Date 4/15/2013 Location/Project Stillwell Domestic Wells Copy To Fax (925) 426-2226 Fax (925) 426-2226 e-mail ramon.neilson@cernex.com

*Ferrous Fe							Send Out		
Total Fe	mg/L	0.3	0.004	0.1	3120 B		4/11/2013	11:16	
×	mg/L		0.3	0.5	3120 B		4/11/2013	9:20	
Na	mg/L		0.15	1.0	3120 B				
Mg	mg/L		0.1	0.1	3120 B			9:20	
c	mg/L		0.1	0.1	3120 B		4/11/2013 4/11/2013	8:20	
TDS	mg/L	500	10.0	10.0	2540 C		4/11/2013	8:00	
NO3	mg/L	45.0	0.04	2.0		300.0	4/9/2013	20:06	
NO ₃ -N	mg/L	10.0	0.01	0.1		300.0	4/8/2013	20:06	
SO4	mg/L	250	0.03	0.5		300.0	4/9/2013	20:05	
ច							4/9/2013	20:06	
Total Akalinity OH CO ₃ HCO ₃ as caco ₃ as caco ₃ as cacO ₃	mg/L		3.00	5,00	2320 B		4/8/2013	12.11	
co ₃ as caco ₃	тg/L		0.9	1.0	2320 B		4/8/2013	12:11	
CaCO ₅	mg/L		1.00	1.00	2320 B		4/9/2013	12:11	
Total Alkalinity as CaCO ₃	mg/L			10.0	2320 B		4/9/2013	12:11	
핌	nnit			1.0 to 14.0	4500H B		4/8/2013	12:11	
Time	Sampled								
Date	Sampled								
		MCL>	MDL>	RL→	SM	EPA>	Analysis Date:	Analysis Time:	

				Formus Fo							Send Out					•	
						6.000	¥	1	8			2	0		2.	<u></u>	
				Total	- c mg/L	0.3	0.004		3120 B		8/19/2013	13:32	<0.10	0.94		1.51	
				د	r mg/L		0.3	0.5	3120 B		6/19/2013	10:41	3.9	6.5	2.0		
28 233-6129		pring		ł	mg/L		0.15	1.0	3120 B		6/19/2013	10:41	34	25 6	8	81 s (Trite 22	
sno, CA 937 1896 - (559) 3		tter Monito	E	ź	76m		0.1	0.1	3120 B		6/19/2013 6/19/2013 6/19/2013	10:41	13.8	27.2	2	23.6 kegulation	
e 110, Fre 300) 228-9		oundwa	mex.col	ξ	mg/L		0.1	0.1	3120 B		6/19/2013	10:41	55.9	49.8	1.04	80.8 itoring F	
inley, Suit	Deltech	oject- Gl	son@ce	9 <b>0</b> F	2 Jug	500	10.0	10.0	2540 C		6/19/2013	2.51	497	570	210	870 and Mon	
1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129	189742 Don Light/ Deltech 6/12/2013 Ramon Neilson	6/24/2013 Stillwell Project- Groundwater Monitoring foors 406.2226	e-mail ramon.nellson@cemex.com	9	mg/L	45.0	0.04	2.0		300.0	6/13/2013	10:21	13.3	44.2	2.00	75.0 er Quality a	
		Keported Uate Location/Project Copy To	e-mail	2	mg/L	10.0	0.01	0.1		300.0	6/13/2013	17:04	3.0	10.0	4.0	16.9 mestic Wat	
	Subm	Locati		ç	mg/L	250	0,03	0.5		300.0	6/13/2013	17:04	57.0	72.5	0.00	61.8 omia Do Wastew	
Analysis					mg/L	83.3	0.01	20.0		300.0	6/13/2013 6	17:04				20.6 o the Califi Limit Arter and	
					ני קר	250	0.03	0.1		300.0	6/13/2013 6	17:04	25.5	18.8	0.02		
Report of Water				HCOS	as uacuo, as uacuo, as uacuo. mg/L mg/L mg/L		3.00	5.00	2320 B		6/18/2013	9:10	175	202	3	7.6 245 <1 245 7 *See external laboratory documentation pH analyzed outside of 15 min hold time. MCL = Maximum Contaminant Level acc MDL = Method Detection Limit; RL = R SM = Standard Methods for the Examinat Dissolved metals (bolded) were filtered. QA/QC available upon request.	
orto				ő	- Tom		0.9	1.0	2320 B		\$18/2013	9:10	⊽	7	7	<1 atory do e of 15 is contamir contamir thods fo poon requ poon requ	
Rep				Total	mg/L	0			2320 B		6/18/2013 6/18/2013	9:10	175	202	3	245 nal labo ed outsic ximum C thod De dard Me metals () ailable u	
	٩.			CAR N				1.0 to 14.0	4500H B		6/18/2013	9:10	7.5	8.0	1.1	7.6 245 <1 24; *See external laboratory docume pH analyzed outside of 15 min h MCL = Maximum Contaminant L MDL = Method Detection Limit; SM = Standard Methods for the Dissolved metals (bolded) were Dissolved metals (bolded) were	
ALLE' regulation	faterials L	93626	Nater		Sampled			42.035					10:50	11:27	00:11	jarta	
DELLAWALLE [®] Laboratory, Inte. Chemists and Consultants	E	5	Material Submitted: Water	į	Sampled 3								6/12/2013	6/12/2013	0/12/2013	6/12/2013	
	Cernex Constructio 13475 N Friant Rd	глалт 13588 08	Material			MCL->	MDL>	RL	SM->	EPA	Analysis Date:	Analysis Time:	MW-1	MW-2	C-ANIN	+ MM	
											A	A		005			

Approved By:

Page 1 of 2

CELLANALLE Lefthorettary, line. Cemex Construction Materials LP

13475 N Friant Rd Friant CA

93626

Friant 13588 08

Report of Water Analysis

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9898 - (559) 233-6129

Lab No. 189742 Sampler Don Light/ Deltech Submitted Date 6/12/2013 Submitted by Ramon Neilson Reported Date 6/24/2013 Location/Project Stillwell Project- Groundwater Monitoring Copy To Fax (925) 426-2226 Famail ramon.neilson@cemex.com

Material Submitted: Water

1	*Ferrous Fe							Send Out	
Total	Fe	mg/L	0.3	0.004	0.1	3120 B		6/19/2013	13:32
1	¥	mg/L		0.3	0.5	3120 B		6/19/2013	10:41
	Na	mg/L		0.15	1.0	3120 B		6/18/2013	10:41
	Mg	тg/L		0.1	0.1	3120 B		6/19/2013	
	Ca	mg/L		0.1	0.1	3120 B		6/19/2013	10:41
	TDS	mg/L	500	10.0	10.0	2540 C		6/19/2013 6/19/2013	2:51
	NO3	шgЛ	45.0	0.04	2.0		300.0	6/13/2013	
	NO ₃ -N	mg/L	10.0	0.01	0.1		300.0	6/13/2013	17:04
	SO4	mg/L	250	0.03	0.5		300.0	6/13/2013	17:04
	SO4-S	mg/L	83.3	0.01	0.07		300.0	6/13/2013	17:04
	ច	mg/L	250	0.03	0.1		300.0	6/13/2013	17:04
Total Alkalinity CO ₃ HCO ₃	as CaCO ₃	лgл		3.00	5.00	2320 B		6/18/2013	9:10
ço	as CaCO ₅	mg/L		0.9	1.0	2320 B		6/18/2013	8:10
Total Alkalinity	as CaCO ₃	mg/L			10.0	2320 B		6/18/2013	9:10
	H	unit			1.0 to 14.0 10.0	4500H B		6/18/2013 6/18/2013 6/18/2013 6/18/2013	9:10
	Time	Sampled							
	Date	Sampled							
			MCL->	MDL>	<u>R</u> L_	SM>	EPA>	Analysis Date:	Analysis Time:

Wetlab Results ARF: 73142	CEMEX #13588/( Proj: Stillwel Domestic	191 191	lavalle Labora 0 W. McKinie sno, CA 9372	ey Ava. #110	
APPL Inc. 908 North Temperance Avenue					
Clovis, CA 93611		Atin	: Elisa Sanch	NGZ .	
Method Analyte	Result	PQL	Unito	Prep Date	Analysis Date
APPL ID: AV95133 -Cilent Sample il	D: 201932-1	-Sample Collection	Date: 04/14/14	Project: Still W	/ell DW
SM3500FeB FERROUS IRON	Not detected	1.0	mg/L	04/15/14	04/15/14
APPL ID: AV95134 -Client Sample H	D: 201932-2	-Sample Collection	Date: 04/14/14	Project: Still W	
SM3500FeB FERROUS IRON	Not detected	1.0	mg/L	04/15/14	04/15/14
APPL ID: AY95135 -Client Sample II	): 201932-3	-Sample Collection I	Date: 04/14/14	Project: Still W	all fiw
SM3500FeB FERROUS IRON	Not detected	1.0	mg/L	04/15/14	04/15/14
APPL ID: AY95130 -Client Sample I	D: 201932-4	-Sample Collection I	Data: 04/14/14	Project: Still W	al OW
SM3500FeB FERROUS IRON	Not detected	1.0	mo/L	04/15/14	04/15/14

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CONSIST CONVERSE

Cemex Construction Materials LP

13475 N Friant Rd

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Material Submitted: Water

**Report of Water Analysis** 

1910 W. McKinley, Suite 110, Fresno, CA 93728 FAX (559) 268-8174 - (800) 228-9896 - (559) 233-8129 Lab No. 201932 Sampler PFP/JP Submitted Date 4/14/2014 Requested by Pete Locastro Reported Date 4/28/2014 Location/Project Stillwell Domestic Wells Copy To Fax (925) 426-226 Fax (925) 426-226

*Ferrous Fe Send Out 4/30/2014 3120 B Total 0.004 Ъ mg/L 13:52 0.3 50 4/17/2014 3120 B 61.6 1/Bu 0.3 0.5 ¥ 4/17/2014 3120 B 0.15 Na 1/Bu 1.0 84.6 4/17/2014 3120 B BW **Ugh** 0.1 9:49 0.1 4/17/2014 3120 B ů л<mark>в</mark>г 9:49 5 0.1 4/25/2014 2540 C TDS 10.0 10.0 l and 500 000 4/15/2014 300.0 ş 17:53 45.0 0.04 1ge 2.0 NO₃-N 4/15/2014 300.0 17:53 10.0 Ъ 0.01 0 4/15/2014 300.0 S04 17:53 **Tight** 250 0.03 0.5 4/15/2014 300.0 0.03 17:53 лĝи 250 σ 0.1 as CaCO₃ as CaCO₃ as CaCO₃ as CaCO₃ HCO3 4/15/2014 2320 B mg/L 5.00 12:01 3.00 4/15/2014 ပ္ပိ 2320 B mg/L 12:01 1.0 0.9 4/15/2014 4/15/2014 2320 B mg/L 1.00 공 1.00 12:01 Akalinity 4500H B 2320 B Total T/6m 10.0 12:01 1.0 to 14.0 4/15/2014 12:01 펍 unit Sampled Sampled Time Date RL-J Analysis Date: WDL-> SM-> EPA-> MCL_V Analysis Time:

<0.10 0.49 0.15 1.62 22 4.0 1.8 4.0 **40 55 33** 28 24.1 23.8 21.2 16.2 72.9 66.8 80.6 39.4 520 547 363 30.4 85.0 105 19.2 24.0 23.7 6.9 41.0 64.2 60.2 53.2 11.9 13.6 17.2 16.2 190 176 211 128  $\nabla$   $\nabla$ v v  $\nabla$   $\nabla$ v v 211 176 190 128 7.5 7.6 7.3 10:00 10:30 11:10 9:30 4/14/14 4/14/14 4/14/14 4/14/14 Stillwell 004 Caimes Morton Weller 003 00 002

*See external laboratory documentation

pH analyzed outside of 15 min hold time.

n ariaryzeu outside of 15 min riold unle.

MCL = Maximum Contaminant Level according to the California Domestic Water Quality and Monitoring Regulations (Title 22)

MDL = Method Detection Limit; RL = Reporting Limit

SM = Standard Methods for the Examination of Water and Wastewater, 19th ed., 1995

Dissolved metals (bolded) were filtered.

QA/QC available upon request.

Bear On Friday Approved By: