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May 16, 2012

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VIA E-MAIL AND U.S. MAIL

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**Re: RECONSIDERATION OF CLEANUP AND ABATEMENT ORDER, R5-2011-0713
REBUTTAL BRIEF FOR MR. BOB G. DAVIS**

Gentlemen:

On behalf of Mr. Bob G. Davis and pursuant to Mr. David Coupe's April 17, 2012 email modified hearing procedure for the above reference matter, we are submitting Mr. Davis' Rebuttal brief.



Mr. Kenneth Landau
Mr. David Coupe
Mr. Clint Snyder
Mr. Patrick Pulupa
May 16, 2012
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If you have any questions, please contact me.

Very truly yours,

Loren J. Harlow

LJH:mrd
Enclosures

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8 BEFORE THE CALIFORNIA REGIONAL WATER QUALITY
9 CONTROL BOARD FOR THE CENTRAL VALLEY REGION

10
11 In the Matter of:

12 Reconsideration of Cleanup and Abatement Order R5-
13 2011-0173,

14 TBS Petroleum, LLC, A California Limited Company

15 Antler's Shell/Subway, 20884 Antlers Road, Lakehead,
16 Shasta County

**MR. BOB G. DAVIS'
REBUTTAL BRIEF TO TBS
MAY 10, 2012 SUBMITTAL
FOR CLEANUP AND
ABATEMENT ORDER R5-
2011-0173**

17
18 **I. INTRODUCTION**

19 A primary contention of TBS is that the CAO does not contain sufficient facts supported
20 by substantial evidence to justify naming TBS on the Order. However, TBS' assertions that it is
21 not a discharger under California Water Code (CWC) 13304(a) or that Mr. Davis caused or
22 permitted the discharge are not supported by the weight of the evidence. Mr. Davis' respectively
23 requests that the Board affirm the CAO issued by the Executive Officer.

24 **II. TBS CONTENTIONS AND MR. DAVIS RESPONSE**

25 TBS' main contentions are summarized with corresponding responses by Mr. Davis as
26 follows:

27 **Contention 1:** *TBS asserts that it is bad public policy not to name Mr. Davis on the CAO.*
28

1 TBS states that it is not good public policy and it delivers the wrong message to the
2 regulated community not to name Mr. Davis, a former operator, on the CAO. TBS indicates that
3 it could find no cases where a “polluter who has the financial ability-including access to the UST
4 Fund—to participate in a cleanup” has not been named on an order.

5 **Davis Response:** The Antler’s Shell case is unique in that litigation and resulting
6 Superior and Appellate Court decisions have affirmed TBS’ liability for cleanup. The State and
7 Regional Boards do not have authority to apportion liability; and are normally confronted with
8 parties whose liabilities have not been determined. It is, therefore, not surprising that TBS would
9 not find State Board orders addressing similar situations.

10 It is appropriate public policy for the Board to acknowledge that the respective liabilities
11 of the parties have been previously adjudicated and to exercise its discretion in the decision
12 making process. The message, if any, to the regulated community is that an owner or operator
13 must appropriately manage its property and that due diligence should be completed prior to the
14 purchase of any former or ongoing gasoline station.

15 As will be discussed later, TBS has provided no authority or basis that Mr. Davis is in fact
16 eligible for the UST fund.

17 **Contention 2:** *TBS asserts that Mr. Davis is a discharger under CWC 13304 (a).*

18 TBS asserts as its basis for concluding that Mr. Davis is a discharger results from a
19 statement included in Board’s staff Statement of Rationale. TBS also relies upon the Declaration
20 of Mr. Christopher J. Watt with LACO associates to allege that the cause of the ground water
21 pollution in the onsite well was the result of normal migration of MTBE released during
22 Mr. Davis ownership through fine grained soils over a 10 year period.

23 **Davis Response:** The statement included in the Board’s staff Statement of Rationale that
24 Mr. Davis is liable to the Board for cleanup is simply an ultimate conclusion. TBS argues that an
25 ultimate conclusion must be supported by written finding and supported by substantial evidence.
26 TBS cannot pick and choose which statement it desires to use and those it does not. Based upon
27 TBS’s own arguments, it cannot simply rely on mere conclusion as the basis for alleging
28

1 Mr. Davis's liability. Mr. Davis in his submittals has provided substantial evidence contrary to
2 the staff conclusion.

3 Mr. Watt opines that the cause of the ground water pollution in the onsite well was the
4 result of normal migration of MTBE released during Mr. Davis ownership through fine grained
5 soils over a 10 year period.¹ Mr. Watt also relies upon a case file review memo prepared by
6 Mr. Grant Stein, Board staff to confirm or substantiate his opinion. (Clean Up Team Exhibit 39.)

7 Mr. Watt's opinion and conclusions, based upon his use of a simple transport model, are
8 not supported by observed monitoring data of the onsite well and a thorough investigation of the
9 entire site. Mr. Mike Foget of SHN Engineers has evaluated all the existing data and concluded
10 that the water leak was cause of the discharge. The water leak was the driving hydraulic force to
11 mobilize the in-situ residual material that remained in the tank pit causing the contamination
12 observed in the recent site investigation and the supply well. The spike in nitrate concentrations
13 also coincides with the spike in MTBE concentrations and the presence of 1, 2 DCA in
14 groundwater, all of which occurred after the water release in the spring of 2007.² (Davis Exhibit
15 N.)

16 The weight of the evidence does not support TBS's assertion, that Mr. Davis is a discharger
17 under CWC 13304(a).

18 **Contention 3:** *TBS is not a discharger under CWC 13304(a).*

19 TBS asserts that it had no knowledge of MTBE in the soils when it purchased Antler's Shell
20 in 2005 and that the water line break inundating the Tank farm did not occur. Therefore, by
21 implication, it could not be a discharger since TBS had no involvement in the groundwater
22 pollution.

23 **Davis Response:** Mr. Anthony M. Ackernecht in his Declaration at paragraph 4, states:
24 "We did not know of MTBE in the soil in October 1997". However, prior court decisions clearly
25 affirm that TBS was aware of a prior leak from the former single walled underground storage

26 ¹ Declaration of Christopher J. Water ¶¶ 7 and 8.

27 ² Mr. Foget's report is included within Mr. Davis' declaration as Exhibit N; however it is
28 attached to this reply brief for ease of reference.

1 tanks.³ TBS cannot now state it had no prior knowledge of MTBE in 1997 and avoid the court
2 determination since it had that opportunity in the Superior Court case to allege it was unaware of
3 existing conditions and elected not to do so.⁴

4 Mr. Ackernecht in his Declaration at paragraph 16, states: “We never had any factual
5 evidence of any leak from a water leak”. This statement is not supported by any evidence in the
6 record. Mr. Davis in his declaration has stated that he notified TBS employees of the water leak
7 on two separate occasions and was requested by Kathy, the TBS store manager, to assist her in
8 locating and shutting off the valve.⁵ In the letter from Mr. Chuck Goff, TBS water system
9 operator, stated that a water leak flooded the tank farm for several months. (Cleanup Team
10 Exhibit 11.) Whether or not Mr. Ackernecht had personal knowledge, TBS had knowledge since
11 its employees were clearly notified and Mr. Davis assisted in shutting the valve to terminate the
12 leak. Laboratory data also confirm that a water leak occurred.

13 TBS is a discharger that caused or permitted waste is be discharged to waters of the state
14 since there is substantial evidence that TBS permitted a water leak fully aware of existing soil
15 contamination.

16 After confirmation that the onsite well contained MTBE and other pollutants in 2007,
17 TBS has failed to take corrective actions to remediate the site or contain the groundwater plume
18 while contaminants continue to spread and move on their property..

19 The State Board has stated: “We have applied to current landowners the obligation to
20 prevent an ongoing discharge caused by the movement of pollutants on their property, even if
21 they had nothing whatever to do with putting it there”.⁶

22 ³ Davis Exhibit J, *TBS Petroleum, LLC v Bob Davis et al*, C062818 at page 4. “Based upon
23 the allegations of the complaint, the contamination existed at the time the property was sold.
24 There are no allegations in the complaint that the plaintiffs were not aware of the contamination
or that the defendants failed to disclose contamination on the property.”

25 ⁴ See Davis Exhibits H & I. TBS was granted leave to amend their Superior Court complaint
26 to plead that Davis failed to disclose the condition of the property. Upon failure of TBS to amend
its complaint, the Court granted dismissal with prejudice.

27 ⁵ Davis Declaration ¶¶ 17, 18, 19 and 20.

28 ⁶ In the Matter of Wenwest, Inc. et al., WQO 92-13 at pg 5.

(Continued . . .)

1 TBS has owned Antler's Shell since 2005 and confirmation of groundwater pollution has
2 been known since 2007. TBS has failed to prevent movement of pollutant through its inaction
3 and is a discharger under CWC 13304(a).

4 **Contention 4:** *TBS states that the sole impact of the Third District Court of Appeal*
5 *Decision is that Mr. Davis does not have to indemnify TBS.*

6 TBS asserts that the MTBE contamination is condition that pre-exists TBS purchase of the
7 property and the court decisions should be limited to Davis and TBS, not third parties, including
8 the Board. TBS concludes that the TBS and Davis should be left to their own devices to sort out
9 contractual issues.

10 **Davis Response:** TBS states that the dispute between Mr. Davis and TBS is merely a
11 contract dispute. This characterization is simply incorrect and does not reflect that liability of
12 TBS has been adjudicated.

13 TBS' interpretation of the scope of the appellate decision that Mr. Davis does not have to
14 indemnify TBS is too narrow. In the case C06218, *TBS Petroleum, LLC v. Bob Davis, et al.*,⁷
15 stated at page 4: "The as is clause functions to transfer certain liabilities to the new owner. The
16 claims raised in the present complaint are precisely the type of liabilities that were sold with the
17 property⁸. A finding that the 'as-is clause does not apply would render such clauses
18 meaningless."

19 TBS is again attempting to allege that Mr. Davis remains responsible for prior conditions
20 of the property after it purchased Antler's Shell on an 'as-is' basis. The court has previously
21 rejected TBS' interpretation. (Id at 9.)
22
23
24

25 (. . . Continued)

26 ⁷ Davis Exhibit J.

27 ⁸ TBS sought indemnification from Mr. Davis for the very actions that TBS is required to
28 complete in the CAO. The Court rejected TBS's contentions and indicated it assumed those
responsibilities when it purchased Antler's Shell on an "as-is" basis.

1 Since TBS assumed liability for defects in the condition of Antler’s Shell, any claim
2 against Mr. Davis for defects from his prior ownership and during TBS’ ownership would require
3 TBS to provide indemnity to Mr. Davis including those of third parties.

4 **Contention 5:** *TBS states that it is essential to name Mr. Davis in the CAO to provide*
5 *him access to the LUST Fund.*

6 TBS states that the failure to name Mr. Davis on the order may bar both TBS and
7 Mr. Davis from access to the fund. TBS also indicates that Mr. Davis would not have financial
8 assurance to third parties and references Mr. Holm’s testimony that Mr. Davis may not have
9 access to the fund unless he is named in the order.

10 **Davis Response:** TBS fails to acknowledge or recognize that it purchased Antler’s Shell
11 on an “as-is” basis and assumed responsibility for pre-existing conditions. TBS has not provided
12 any evidence or precedent to indicate that Mr. Davis would be an eligible claimant or could
13 validly assign his claim to TBS.

14 Under both *Lake Publishing Company*, WQ 2000-6-UST and *Hollis Rodgers*, WQ 99-02-
15 UST, the State Board would not permit assignment of a claim to TBS. The assignment would not
16 be permitted because TBS has been determined to be 100% liable for the claim by judicial action
17 and agreed to provide indemnity to Mr. Davis.

18 Additionally, TBS has not addressed Mr. Davis’s eligibility under the LUST regulations
19 since TBS is liable for the cleanup.

20 The very harm that TBS complains of is from its business decision to purchase Antler’s
21 Shell on an “as-is” basis; and its failure to negotiate a settlement that would have permitted access
22 to the Fund prior to the Court assigning liability to TBS.

23 **Contention 6:** *TBS states that it should be named as secondarily liable under the CAO.*
24 TBS indicates that cleanup is proceeding well at this time; and it is within the Board’s discretion
25 to name TBS secondarily liable.

26 **Davis Response:** TBS is clearly a discharger under CWC 13304(a) since it caused or
27 permitted wastes to be discharged to waters of the state. TBS’ failure to accept responsibility has
28 exacerbated and permitted the groundwater plume of contaminants to migrate and spread.

1 Numerous State Board orders have confirmed that TBS is a discharger based upon its ownership
2 and conduct.

3 It would be inappropriate to designate TBS secondarily liable since it is a discharger and it
4 has been determined to have 100% liability for cleanup at Antler's Shell.

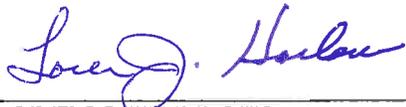
5 **III. CONCLUSION**

6 TBS has not provided any new evidence or information that was not previously
7 considered when the CAO was issued. TBS' assertions that it is not a discharger under CWC
8 13304(a) or that Mr. Davis caused or permitted the discharge are not supported by the weight of
9 the evidence.

10 Therefore, Mr. Davis requests that Board affirm the CAO issued by the Executive Officer
11 naming solely TBS as the responsible party.

12
13 DATED: May 16, 2012

14 STOEL RIVES LLP

15
16 By: 

17 LOREN J. HARLOW
18 Attorneys for BOB G. DAVIS

EXHIBIT N



CONSULTING ENGINEERS & GEOLOGISTS, INC.

350 Hartnell Ave., Ste B, Redding, CA 96002-1875 • 530-221-5424 • FAX: 530-221-0135 • reddinginfo@shn-engr.com

Reference: 508093

May 8, 2012

Ms. Pamela C. Creedon, Executive Officer
California Regional Water Quality Control Board, Central Valley Region
415 Knollcrest Drive
Redding, CA 96002

**Subject: Reconsideration of Cleanup and Abatement Order R5-2011-0713, TBS
Petroleum LLC, a California Limited Company, Antlers Shell/Subway,
20884 Antlers Road, Lakehead, Shasta County, California**

Dear Ms. Creedon:

Mr. Bob Davis, the former owner of Antlers Shell, has requested SHN Consulting Engineers & Geologists, Inc. (SHN) to evaluate the existing data and previously prepared reports to determine the cause of groundwater pollution at the Antlers Shell site. We are transmitting this letter report to provide the Regional Board with the most likely cause of groundwater pollution at Antlers Shell based upon our professional evaluation and opinions.

I have worked for SHN for the last 17 years, and I am currently the director of SHN's Environmental Services Division. I am a California Registered Professional Civil Engineer. I have independently reviewed and developed my opinion based upon the following reports, analyses, and data:

- March 2, 2009, *Report of Findings: Initial Subsurface Investigation*, prepared by LACO Associates (LACO) on behalf of TBS Petroleum (Cleanup Team's Evidence List [CT] #27)
- April 27, 2009, *Supplemental Information: Initial Subsurface Investigation*, LACO Associates (CT #30)
- Nov. 17, 2009, letter from Mr. John Aveggio, SHN to Grant Stein (CT #36).
- April 27, 2010, *Order to Submit Information Pursuant to California Water Code 13267*, Central Valley Water Board (CT #39)
- April 20, 2011, *Submittal of Additional Information*, prepared by John Aveggio, SHN (CT #50)
- December 6, 2011, "Transmittal, Cleanup and Abatement Order R5-2011-0713, Central Valley Water Board" (CT # 65)
- May 2006, US EPA "Lead Scavengers Compendium: Overview of Properties, Occurrence, and Remedial Technologies," U.S. Environmental Protection Agency (EPA 2006)
- May 21, 2010, "Recommendation for States, Tribes and EPA Regions to Investigate and Clean Up Lead Scavengers when Present at Leaking Underground Storage Tank (LUST) Sites" (EPA 2010)

Ms. Pamela C. Creedon

Reconsideration of CAO R5-2011-0713, TBS Petroleum LLC, a California Limited Company,
Antlers Shell/Subway, 20884 Antlers Road, Lakehead, Shasta County, California

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- March 30, 2000, "Transmittal of Final Draft Guidelines for Investigation and Cleanup of MTBE and Other Oxygenates," State Water Resources Control Board (SWRCB, 2000)
- Bob Davis Declaration #1 (Davis decl. #1)
- Antlers Shell lab reports, 2011 - 2012

Site History

Based upon the declaration of Mr. Bob Davis and the documents listed above, the chronological history of the Antlers Shell Site is as follows:

January 30, 1990: Bob Davis purchased Antlers Shell /Subway from Mr. Olan F. Bailey and Mrs. Beverly A. Bailey (Bob Davis Declaration [Davis decl. #1]).

October 9, 1997: Bob Davis removed single walled underground storage tanks (USTs) and associated piping (CT #65).

October 10 and 21: As directed by Shasta County Department of Environmental Health (SCDEH), soil samples were collected from the UST excavation and submitted for analysis (CT #65).

October 22, 1997: Bob Davis installed two double-walled USTs with double-walled flexible hose. New concrete aprons surrounding the tank farm and asphalt surrounding the site were also constructed (Davis decl. #1).

December 16, 1997: SCDEH issued a "no further action" letter (CT #65).

January 8, 2004: In the on-site water well sampled for volatile organic compounds (VOCs), Methyl Tertiary-Butyl Ether (MTBE) and 1,2-dichloroethane (1,2-DCA) were not detected (< 3 and < 0.5 micrograms per liter [ug/L], respectively) (CT #65).

December 20, 2004: Bob Davis entered into a real estate purchase contract for the sale of Antlers Shell to TBS Petroleum (Davis decl. #1).

Spring 2007: Water was observed coming out of the ground in the vicinity of the USTs at the joint between the concrete pad and new asphalt. The leak continued unabated for approximately three months (Davis decl. #1).

August 8, 2007: In the on-site water well sampled for VOCs, MTBE was detected at 14.9 ug/L (CT #65).

February 7, 2008: Nitrate was detected at 18.1 milligrams per liter (mg/L) (Davis decl. #1).

March 10, 2008: In the on-site water well sampled for VOCs, MTBE was detected at 9.4 ug/L and 1,2-DCA at 0.68 ug/L (Davis decl. #1).

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Conclusion

Upon our review and evaluation of the existing data (CTs #27, 30, 36, 39, 50, 65, Antlers Shell lab reports 2011-2012, and the other documents referenced), it is our professional opinion that the discharge of MTBE and associated hydrocarbons (waste) into waters of the state was caused by the flooding of the UST tank farm cavity when the waterline broke and went unrepaired for approximately three months in 2007 (Davis decl. #1).

Conceptual Site Model

The basis of our site conceptual model is that a limited amount of petroleum hydrocarbons was released into the tank pit from the single-walled tank system. In order to remain in compliance with the underground storage tank regulations, Mr. Davis upgraded his station in 1997 (Davis decl. #1). Of the six soil confirmation samples collected from the floor of the tank excavation, and the two soil stockpile samples collected during the tank removal activities in October of 1997, only MTBE was detected in two of the excavation floor samples (0.033 and 0.085 milligrams per kilogram [mg/kg]) and total xylenes were detected in one of the stockpile samples at 0.018 mg/kg. In addition, four soil samples were collected from beneath the fuel island. MTBE was detected in only one fuel island sample, at 0.030 mg/kg, and toluene was detected in three soil samples, with a maximum of 0.013 mg/kg (CT #39 and #65).

Shasta County issued a no further action letter for the site. The rationale for the no further action letter was that only residual levels of petroleum hydrocarbons were detected in the tank-removal compliance soil samples. As Cleanup and Abatement Order R5-2011-0713 states, the SCEDH records indicated no obvious odor or soil discoloration upon tank removal, or any presence of groundwater in the excavation (CT #65). These residual levels of petroleum hydrocarbons were essentially immobile (they were in the unsaturated zone and below a new and substantial asphalt and concrete cap). Figure 1 depicts site conditions prior to the water leak.

As previously stated in Mr. Aveggio's November 17, 2009, letter (CT #36) and Davis decl. #1, in 2007, under TBS ownership, a subsurface water line that traversed the tank pit broke and leaked into the tank pit for approximately three months. Apparently, TBS allowed the tank pit to become saturated, and water was observed on the ground surface. The flooding was so severe that the water that was observed percolating to the ground surface from the area around the tank pit was enough to create a sheet flow discharge that traveled to the street, as shown on Figure 2 (Davis decl. #1). It is likely that several thousand gallons of water per day were released into the subsurface and ground surface during this period of approximately three months, which means potentially over 200,000 gallons of water was discharged from the broken water line.

It is probable that this extended water leak created a driving aqueous hydraulic force to mobilize the in situ residual material that remained in the tank pit and subsequently caused the contamination observed in the groundwater and the supply well during the 2009 site investigation (LACO CT #27) (see Figure 3). The water leaking from the broken pipe originates from the supply well. The supply well draws water from beneath the site. The water-bearing zone beneath the site

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was modified by TBS's lack of action and allowing the pipe to continue to leak for such an extended amount of time. This unabated water leak, combined with the hydraulic cone of influence caused by the supply well's operation, created a recirculating system of water that distorted the long-standing equilibrium conditions that had kept the residual tank pit contamination from mobilizing or impacting any sensitive receptor. We believe that the leaked water contained petroleum hydrocarbons once the flooding had mobilized the previously stable residual contamination. We believe the addition of water to the tank pit over an extended period could provide the transport mechanism for the residual sub-surface contamination to become more widespread and subsequently allow the contamination to migrate to the "waters of the state" (groundwater table).

It is our opinion that the lack of a prompt response by TBS to repair the leak created the groundwater contamination observed at the site. We believe this is the reason that petroleum hydrocarbon constituents were never detected in the supply well prior to the water leak, but were detected approximately three months after the water leak was repaired and in every sampling event since.

A site investigation was conducted on behalf of TBS in January 2009. A report of findings was prepared by LACO presenting the results of the investigation (CT #27). Eight soil borings were installed, and both soil and groundwater samples were collected from these borings. The boring logs indicate a silty clay layer from approximately 6 to 10 feet below grade surface. Underlying the silty clay layer is silt with clay (typically a relatively low permeability soil) present from approximately 10 to 18 feet below grade surface in the vicinity of the tank pit. The floor of the tank pit is approximately 10 feet below grade surface. The boring logs also indicate that first encountered groundwater ranged from approximately 20 to 26 feet below grade surface. This data illustrates that fine-grained material is located immediately below the tank pit and extends approximately 8 feet beyond the floor of the tank pit, and groundwater was approximately 10 feet below the floor of the tank pit. The April 27, 2010 report prepared by the Regional Board (CT #27) indicates that in 1972, when the supply well was installed, the first water observed was at 50 feet below ground surface. According to existing site data, the first encountered groundwater was reported below the tank pit (CT #27 and #39).

The April 27, 2010 case file review prepared by Grant Stein (CT #39) included a simple model analysis. That model assumes that the release began in 1997, when the single-walled tanks were removed, and that MTBE would not have reached the supply well until 2007. However, the history of the use of MTBE in gasoline dates back to the mid-1980s, when leaded gasoline was being phased out. MTBE was added (typically at 2 to 5% by volume) to replace lead to enhance octane. By 1992, it was blended into gasoline at 10 to 15% by volume in the wintertime to be used as a fuel oxygenate. By 1996, it was blended in at 11% by volume statewide (SWRCB 2000). Because the residual MTBE was measured in tank pit soils, the source of the MTBE was most likely released prior to 1997 when the tanks were removed.

Another contaminant detected in the well following the water leak, but not present in the 2004 supply well analysis, is 1,2-dichloroethane (1,2-DCA) (Davis decl. #1). 1,2-DCA was used in leaded gasoline as a "lead scavenger" to prevent the buildup of lead deposits and foul internal combustion engines (EPA 2006). 1,2-DCA was used as a lead scavenger in leaded gasoline until 1986, when

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leaded gasoline was phased out (and replaced by MTBE). The EPA notes that although for the most part leaded gasolines were phased out by 1986, studies show that significant concentrations of lead scavengers persist at many former leaded-gasoline spill sites (EPA 2010). 1,2-DCA is moderately soluble in water. In addition, 1,2-DCA does not readily adsorb to soil (EPA 2006).

As part of our review of the April 20, 2011, letter (CT #50) and additional nitrate analytical data from the supply well (Antlers Shell lab data 2011-2012) we plotted nitrate concentrations over time. The nitrate data shows a spike associated with the water leak, as shown in Figure 4. We believe that the subsurface saturation associated with the water leak extended to beneath an adjacent leachfield and subsequently mobilized nitrate in a manner similar to the way the water leak mobilized MTBE. Unlike the tank farm, the leachfield is not capped by asphalt or concrete. The leachfield is subject to infiltration from precipitation and, by design, is loaded periodically by the disposal of primary treated effluent. Historically, nitrate concentrations in the supply well were below 10 mg/L for 10 years with no apparent seasonal variation. The spike in nitrate concentrations coincides with the spike in MTBE concentrations and the presence of 1,2-DCA in groundwater, all of which occurred after the water release in the spring of 2007.

Summary

Our conceptual model indicates that historically, a limited amount of petroleum hydrocarbons leaked from the former single-wall UST system and that the release to groundwater was caused by the extended water leak in the tank pit. We believe the excess water in the tank pit provided the transport mechanism that conveyed the residual hydrocarbons remaining in the vicinity of the tank pit into the groundwater. This is verified by the slug of nitrate and 1,2-DCA observed in the supply well.

The following facts reinforce this conceptual model:

1. The groundwater first encountered during drilling activities ranged from 20 to 50 feet below ground surface.
2. Soil below the tank pit is a relatively low-permeability clayey silt.
3. During the tank removal in 1997, the SCDEH did not observe any discolored soil, hydrocarbon odor, or water in the tank pit excavation or fuel island.
4. TBS bought the property "as is" in Winter 2004-2005.
5. MTBE and 1,2-DCA were not detected in the on-site water well sampled in January 8, 2004.
6. Water was observed coming out of the ground in the vicinity of the USTs at the joint between the concrete pad and the new asphalt between March 2007 and June 2007.
7. Flooding of the tank pit added a vertical hydraulic head of approximately 10 feet.
8. MTBE was not detected in the water supply well until August 2007 (8 months after TBS took ownership and 3 to 6 months after onset of the leak). The Regional Board

Ms. Pamela C. Creedon

Reconsideration of CAO R5-2011-0713, TBS Petroleum LLC, a California Limited Company,
Antlers Shell/Subway, 20884 Antlers Road, Lakehead, Shasta County, California

May 8, 2012

Page 6

May 2010 letter indicates that quarterly sampling of the on-site domestic well for VOCs began in 2004, and no VOCs were detected until August 2007.

9. The presence of MTBE, 1,2- DCA, and nitrate in the supply well during approximately the same period, and the associated increase and subsequent decrease in concentration (which represents a "time-discrete" or "slug" pollution event) were most likely caused by the water leak.

Based upon our review and evaluation of the currently available data, reports, and our independent evaluation of this material, it is my professional opinion that the discharge of waste was caused by the waterline leak and would have not have occurred absent the leak.

Please call me at 707-441-8855 if you have any questions, or if I can help you in any way.

Sincerely,

SHN Consulting Engineers & Geologists, Inc



Mike Foget, PE

California Registered Profession Civil Engineer license #54123
Environmental Services Director



MKF:jlr

c. : Bob Davis

Mr. Loren J. Harlow, Stoel Rives, LLP

PRE-FLOOD

ASPHALT/
CONCRETE
CAP

SUPPLY
WELL

TANK PIT



REGIONAL GW FLOW
DIRECTION IS TO THE SOUTH

BASED ON GEOTRACKER
REVIEW OF NEARBY SITES

SUPPLY WELL,
NON-DETECTABLE
FOR MTBE

EXPLANATION

-  GROUNDWATER LEVEL
-  GASOLINE CONSTITUENTS

CROSS SECTION VIEW LOOKING FROM EAST TO WEST



NOT TO SCALE

Pre-Flood Conditions

Bob Davis
Antlers Shell
Lakehead, California

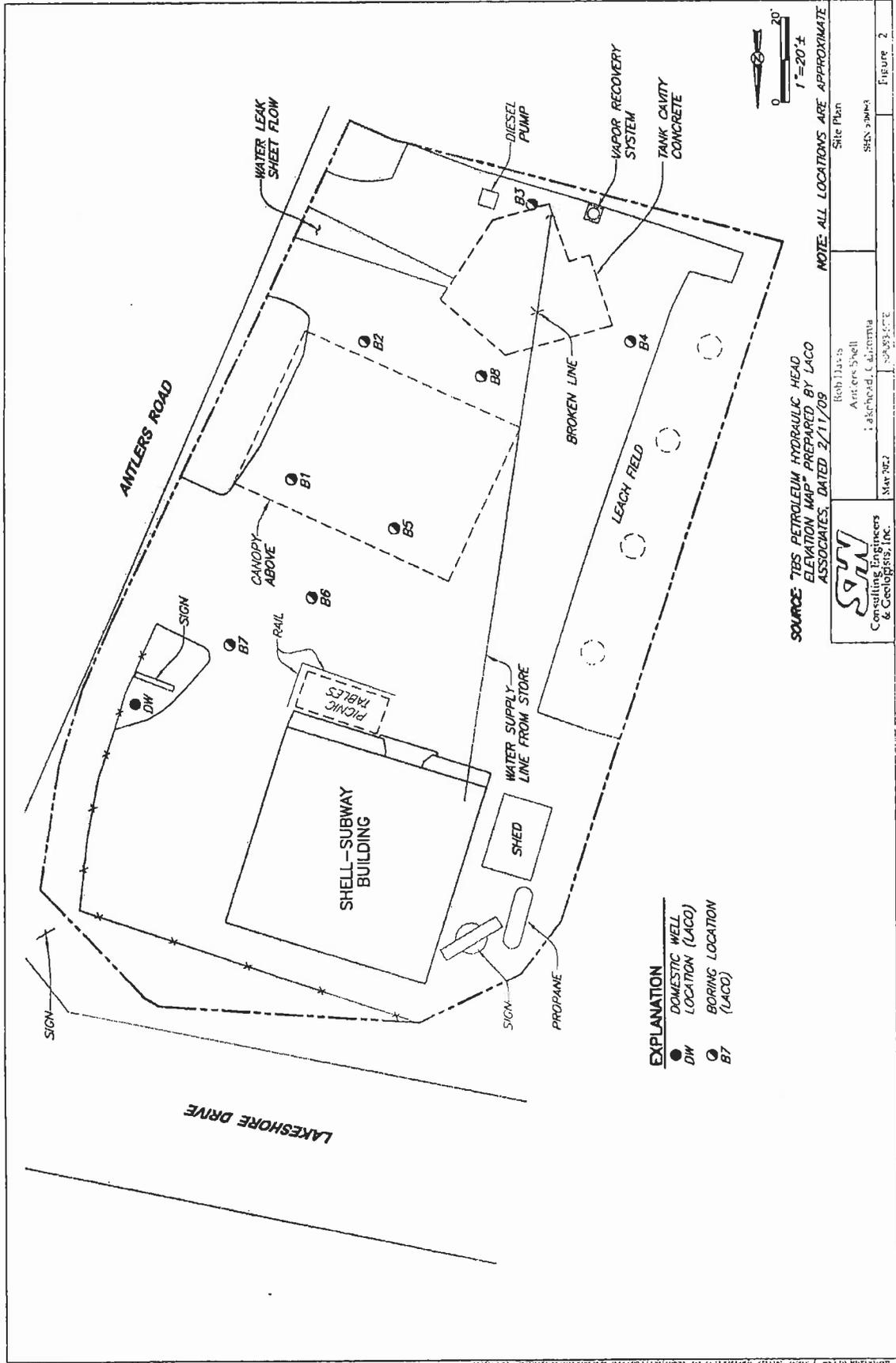
SFN 508093

May 2012

508093-SCHEM-2012

Figure 1





- EXPLANATION**
- DOMESTIC WELL LOCATION (LACO)
 - BORING LOCATION (LACO)
 - B7 (LACO)

SOURCE: TBS PETROLEUM HYDRAULIC HEAD ELEVATION MAP PREPARED BY LACO ASSOCIATES, DATED 2/11/09

NOTE: ALL LOCATIONS ARE APPROXIMATE

Site Plan
 SSN 30463
 Bob Davis
 Antlers Shell
 Antlers, Alabama
 36533-572
 Mar 702

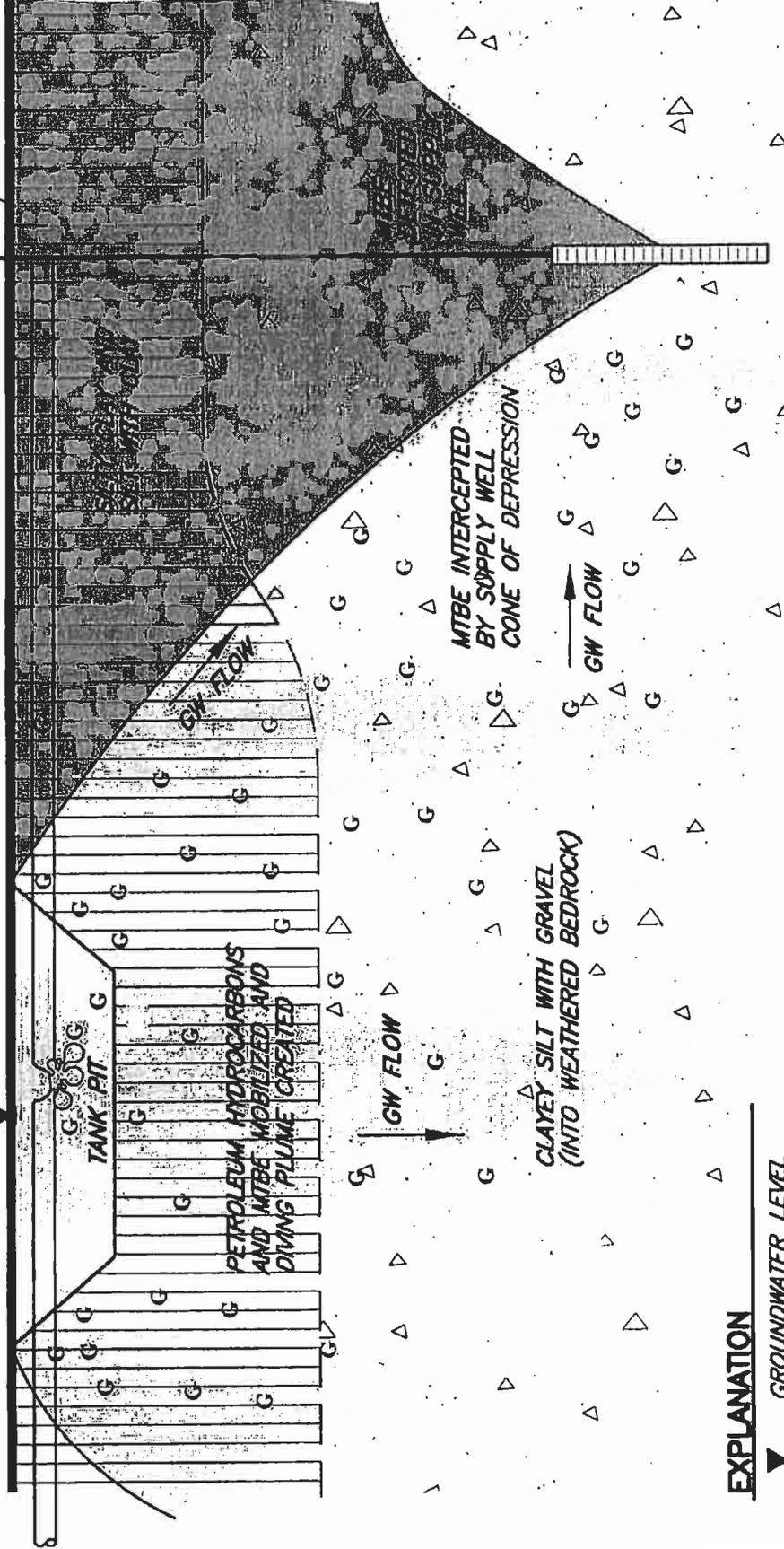


1:2006A REDDING-006 - 508093 - SAVED: 5/1/2012 10:40 AM C:NEWELL, PLOTTED: 5/1/2012 10:59 AM, CHRIS D. NEWELL

POST-FLOOD

TANK PIT FILLED AND OVERFLOWS FROM BROKEN WATER LINE WHICH CREATES A GROUNDWATER MOUND THAT THEN CHANGES THE GROUNDWATER FLOW DIRECTION

ASPHALT/ CONCRETE CAP
SUPPLY WELL



EXPLANATION

- GROUNDWATER LEVEL
- GASOLINE CONSTITUENTS

CROSS SECTION VIEW LOOKING FROM EAST TO WEST



NOT TO SCALE

Fate and Transport of MTBE
Post-Flood Conditions
SHN 508093

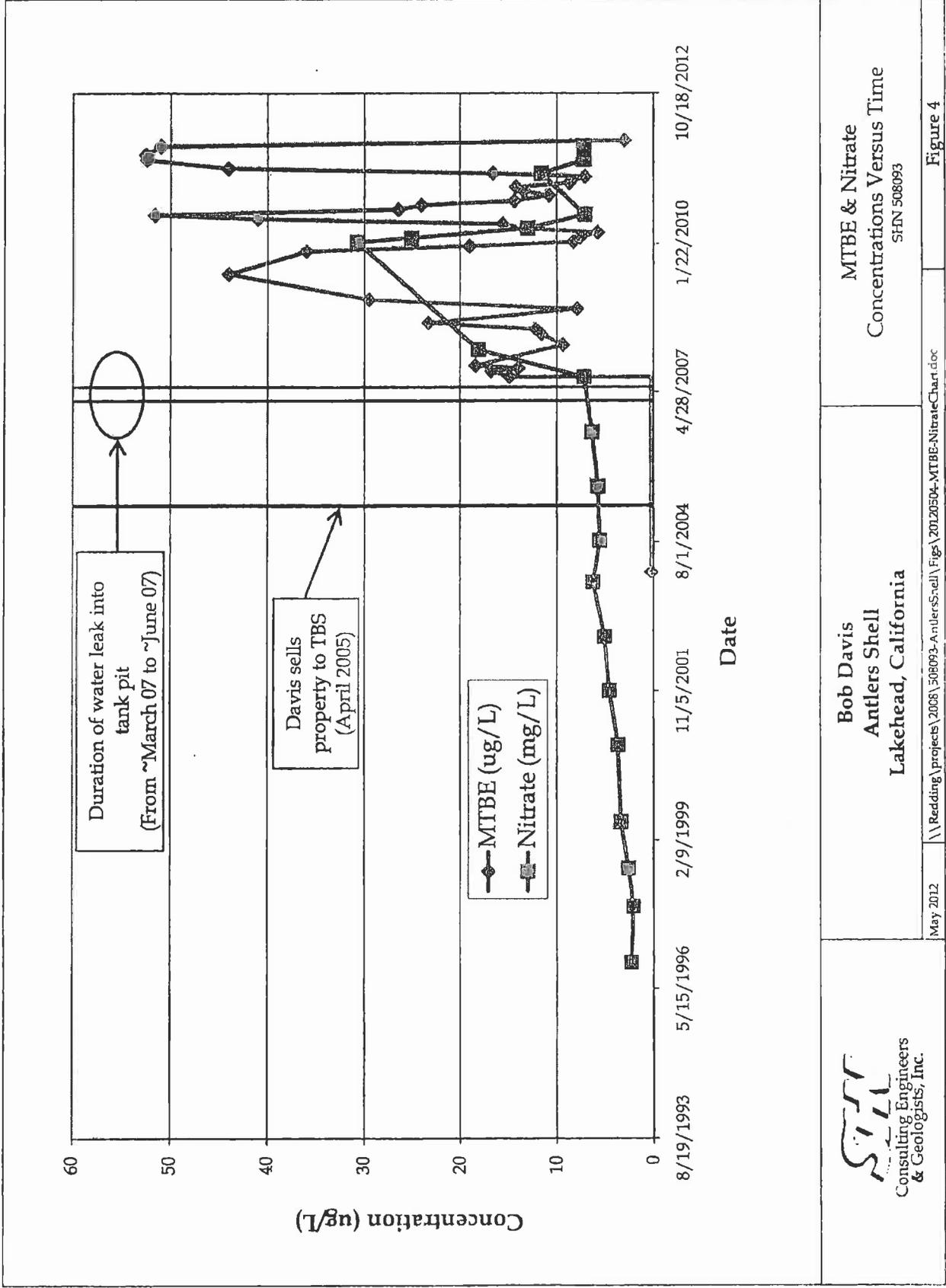
Bob Davis
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Lakehead, California

May 2012

508093-SCHEM-2012

Figure 3





MITBE & Nitrate Concentrations Versus Time
 SHN 508093

Bob Davis
 Antlers Shell
 Lakehead, California



Figure 4

May 2012
 \\Redding\projects\2008\308093-AntlersShell\Figs\20120504-MTBE-NitrateChart.doc

