

*City of Lompoc*

**Addendum No. 1 to the  
Santa Rita Hills Wine Center  
Final EIR  
Volume IV  
SCH No. 2008081067**

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# 1.0 INTRODUCTION

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This document is an addendum to the Final Environmental Impact Report (EIR), which evaluated the environmental impacts, mitigation, and alternatives associated with implementing the Santa Rita Hills Wine Center (SCH No. 2008081067). In July 2009, after public hearings, the City of Lompoc certified the legal adequacy of the Final EIR in accordance with the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines*, and adopted the discretionary land use approvals for the Santa Rita Hills Wine Center.

This addendum evaluates the potential phasing of the Santa Rita Hills Wine Center and includes the assessment of the first phase (hereafter referred to as the Industrial Building Conversion). As discussed below, this addendum has been prepared because the phasing and design changes reflected in the Industrial Building Conversion do not trigger the need for further environmental analysis in a subsequent or supplemental EIR under the requirements of CEQA and the *State CEQA Guidelines*.<sup>1</sup>

## 1.1 PURPOSE OF AN ADDENDUM

Under CEQA, a lead agency must prepare an addendum to a previously certified EIR if changes or additions are necessary, but none of the circumstances described in Sections 15162 or 15163 of the *State CEQA Guidelines* calling for preparation of a subsequent or supplemental EIR (see, *State CEQA Guidelines* Sections 15164(a) and 15163(a)). When an EIR has already been certified for a project, no subsequent or supplemental EIR may be required for that project, unless the lead agency determines based on substantial evidence that one or more specified circumstances has occurred (see *State CEQA Guidelines* Section 15162(a)). Only if one or more of the following circumstances arise is a subsequent or supplemental EIR required:

- (1) Substantial changes are proposed, or have occurred, in the project or its circumstances, which will require major revisions in the previously certified EIR due to the involvement of new significant environmental effects, or a substantial increase in the severity of previously identified significant effects (*State CEQA Guidelines* Section 15162(a)(1), (2)); or
- (2) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previously certified EIR was complete, shows any of the following:
  - (a) The project will have one or more significant effects not discussed in the previously certified EIR;
  - (b) Significant effects previously examined will be substantially more severe than shown in the certified EIR;

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<sup>1</sup> Refer specifically to Sections 15164 (addendum) and 15162 (subsequent EIR) of the *State CEQA Guidelines*.

- (c) Mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- (d) Mitigation measures or alternatives, which are considerably different from those analyzed in the certified EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative (*State CEQA Guidelines* Section 15162(3)(A)–(D)).

This addendum to the previously certified Final EIR for the approved Project has been prepared because the evaluation of the phasing and design changes reflected in the Industrial Building Conversion does not give rise to any of the circumstances requiring a subsequent or supplemental EIR. As shown in this addendum, the Industrial Building Conversion reflects some minor changes to the approved Project, as analyzed in the previously certified Final EIR, but none of those changes triggers the need for preparation of a subsequent or supplemental EIR. Specifically, this addendum shows that (1) no substantial changes are proposed, or have occurred, in the approved Project that will require major revisions to the previously certified Final EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects, and (2) no new information (as defined above) caused by the Industrial Building Conversion results in any new or more severe significant effects not discussed or shown in the previously certified Final EIR.

This addendum also demonstrates that there are no new or different mitigation measures or alternatives that would substantially reduce one or more significant effects of the approved Project and that are not adopted, because the Industrial Building Conversion does not identify or require adoption of any further mitigation measure or alternative beyond those provided in the certified Final EIR for the approved Project. The addendum relies on the certified Final EIR and the related administrative record, as well as additional documentation, such as engineering plans, that have been prepared to support the addendum.

## 2.0 PROJECT DESCRIPTION

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### 2.1 DESCRIPTION OF THE APPROVED PROJECT

The following is a summary of the approved Project as evaluated in the certified Final EIR.

#### **Project Location and Existing Land Uses**

**Figure 2.0-1, Regional and Site Location**, illustrates the location of the approved Project site within the City of Lompoc, and the County of Santa Barbara, California. Regional access to the site is provided by Highway 246, which links the City to Highway 101 and Highway 1 to the east. From a local perspective, the project site is located at 300 North 12<sup>th</sup> Street at the northeast corner of the intersection of North 12<sup>th</sup> Street and Highway 246. The site is bound along the eastern edge by the City limit.

The project site is approximately 9.6 acres and consists of a single parcel (assessor parcel number [APN] of 099-141-022). The project site was formerly occupied by the Grefco diatomaceous earth (DE) processing plant and was annexed into the City of Lompoc in 2005.

Existing land uses on the project site consist of a large cluster of four (4) industrial buildings and outdoor covered loading areas on the northwest corner of the project site. These four (4) buildings (known as Units A, B, C, and D) and the outdoor covered loading areas comprise a total of approximately 83,171 square feet of space. Of this total, approximately 71,000 square feet of space is dedicated to the enclosed building area, 6,171 square feet is the outdoor covered loading dock areas, and 6,000 square feet is for future production. The four (4) enclosed building areas are currently used for wine storage. The remainder of the project site consists of weathered paving adjacent to the buildings and vacant, disturbed mowed field.

Land uses that bound the project site include the proposed River Terrace mixed residential and commercial project which is approved directly to the north; the Santa Ynez River 0.1 mile to the east; vacant parcels across Highway 246 to the south, and commercial uses, including a Home Depot warehouse store and light-industrial across 12<sup>th</sup> Street to the west. **Figure 2.0-2, Aerial of Project Site** illustrates land uses around the project site.

#### **Development Characteristics**

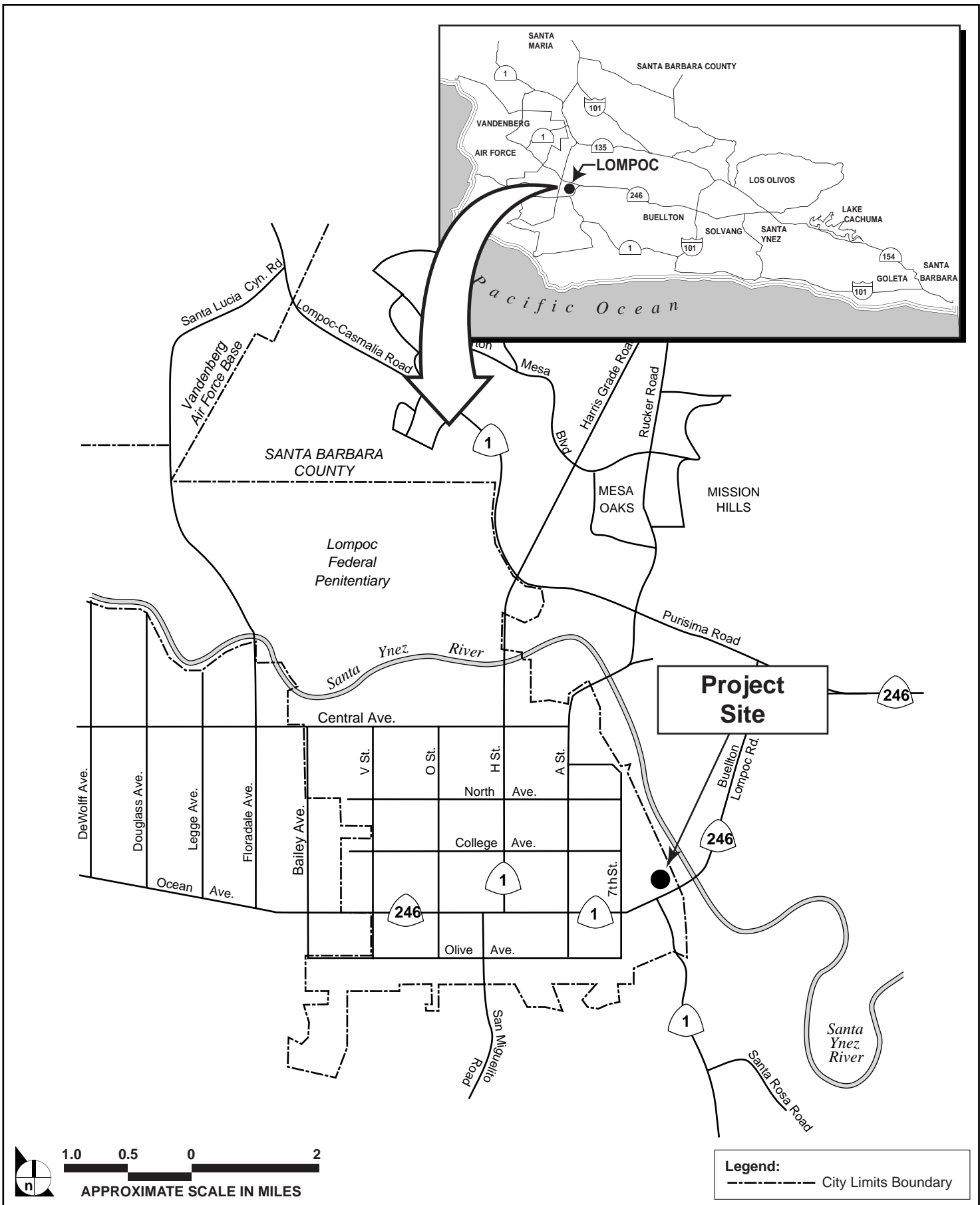
The approved Project includes the development of 68,545 square feet of indoor space consisting of a resort hotel, spa, event center, restaurant-bar, commercial-retail and office uses, conversion of 83,171 square feet of existing four industrial buildings and outdoor covered area into a wine processing and storage facility, and other associated amenities to serve the City of Lompoc and visitors to the

community. These uses are anticipated to result in the generation of approximately 50 jobs within the City of Lompoc. **Figure 2.0-3, Conceptual Site Plan**, provides a conceptual layout of the approved Project, and **Table 2.0-1, Land Use Summary**, provides the square footage of approved Project on-site land uses.

**Table 2.0-1  
Land Use Summary**

<b>Building (Occupancy)</b>	<b>1<sup>st</sup> Floor</b>	<b>2<sup>nd</sup> Floor</b>	<b>3<sup>rd</sup> Floor</b>	<b>Total</b>
<b>Resort Hotel-Spa</b>				
55-room Hotel	4,957 sf	13,416 sf	10,479 sf	28,852 sf
Spa	6,945 sf	0	0	6,945 sf
Wine Retail	2,992 sf	0	0	2,992 sf
Wine Cafe	1,258 sf	0	0	1,258 sf
Bar-Restaurant	5,757 sf	0	0	5,757 sf
Event Center	5,609 sf	0	0	5,609 sf
<b>Subtotal</b>	<b>27,518 sf</b>	<b>13,416 sf</b>	<b>10,479 sf</b>	<b>51,413 sf</b>
<b>Building A</b>				
Retail	5,674 sf	0	0	5,674 sf
Offices	181 sf	1759	0	1,940 sf
Dining & Tasting	2,049 sf	0	0	2,049 sf
<b>Subtotal</b>	<b>7,904 sf</b>	<b>1,759 sf</b>	<b>0</b>	<b>9,663 sf</b>
<b>Building B</b>				
Retail	3,562 sf	0	0	3,562 sf
Office	253 sf	3,654 sf	0	3,907 sf
<b>Subtotal</b>	<b>3,815 sf</b>	<b>3,654 sf</b>	<b>0</b>	<b>7,469 sf</b>
<b>Wine Storage and Production Facility (Existing Building Area)</b>				
Storage	71,000 sf	0	0	71,000 sf
Future Production	6,000 sf	0	0	6,000 sf
Outdoor Covered Loading Area	6,171 sf	0	0	6,171 sf
<b>Subtotal</b>	<b>83,171 sf</b>	<b>0</b>	<b>0</b>	<b>83,171 sf</b>
<b>Total Building Area</b>	<b>39,237 sf</b>	<b>18,829 sf</b>	<b>10,479 sf</b>	<b>68,545 sf</b>

*sf = square feet*



SOURCE: Impact Sciences, Inc. – June 2004

FIGURE 2.0-1

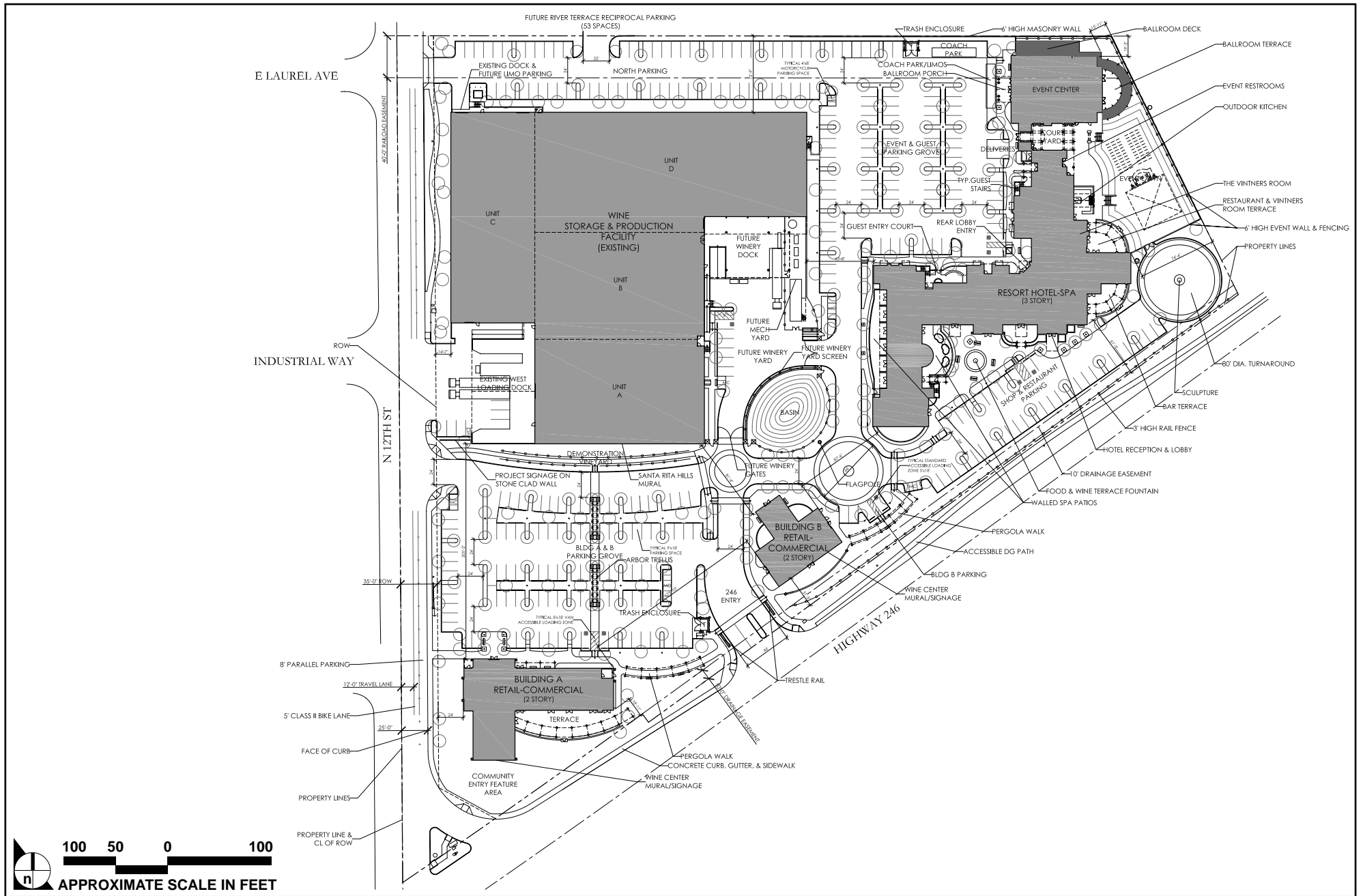
Regional and Site Location



SOURCE: Google Earth - 2008, Impact Sciences, Inc. - October 2008

FIGURE **2.0-2**

**Aerial of Project Site**



SOURCE: donald lee avery architect – December 2008

FIGURE 2.0-3

# Conceptual Site Plan

## 2.2 DESCRIPTION OF INDUSTRIAL BUILDING CONVERSION PROJECT

The following provides a description of the Industrial Building Conversion, which consists of the changes to the approved Project set forth below. As discussed in detail below, none of the changes triggers circumstances allowing preparation of a subsequent or supplemental EIR.

### Project Location and Existing Land Use

The Industrial Building Conversion is located on the same site as the approved Project and existing land uses are the same.

### Development Characteristics

The Industrial Building Conversion would involve the phasing of the approved Project. In addition, off-site improvements proposed as part of the approved Project would be phased under the Industrial Building Conversion.

This addendum examines the first phase of the approved Project, which includes the conversion of 82,560 square feet of the existing four (4) industrial buildings and outdoor covered area into a wine processing, wine tasting area, office, and storage facility. In the previous certified EIR, these four (4) buildings were identified as Units A, B, C, and D and are identified in this addendum as Buildings 1, 2, 3, and 4. Additionally, the total square footage of these four (4) building and covered loading area building was estimated to be approximately 83,171 square feet, but based on actual measurements is 82,560 square feet. **Figure 2.0-4, Industrial Building Conversion**, provides a conceptual layout of the proposed first phase, and **Table 2.0-2, Land Use Summary**, provides the square footage of on-site land uses.

Building 1 consists of approximately 16,000 square feet of building and 6,000 square feet of covered loading dock area. This building would be developed into a wine production and storage facility. There would be 7,000 square feet or less of wine production space and less than 4,000 square feet of tasting room and office area. The remaining 5,000 square feet would be used for storage purpose. The only exterior modifications to the building would be the addition of an approximately 1,200 square feet deck on the south side of the building with Americans with Disabilities Act (ADA) access at one end. This would provide access to up to four (4) man-doors opening into the tasting room area(s).

Buildings 2 and 3 consist of approximately 44,560 square feet would remain as storage buildings.

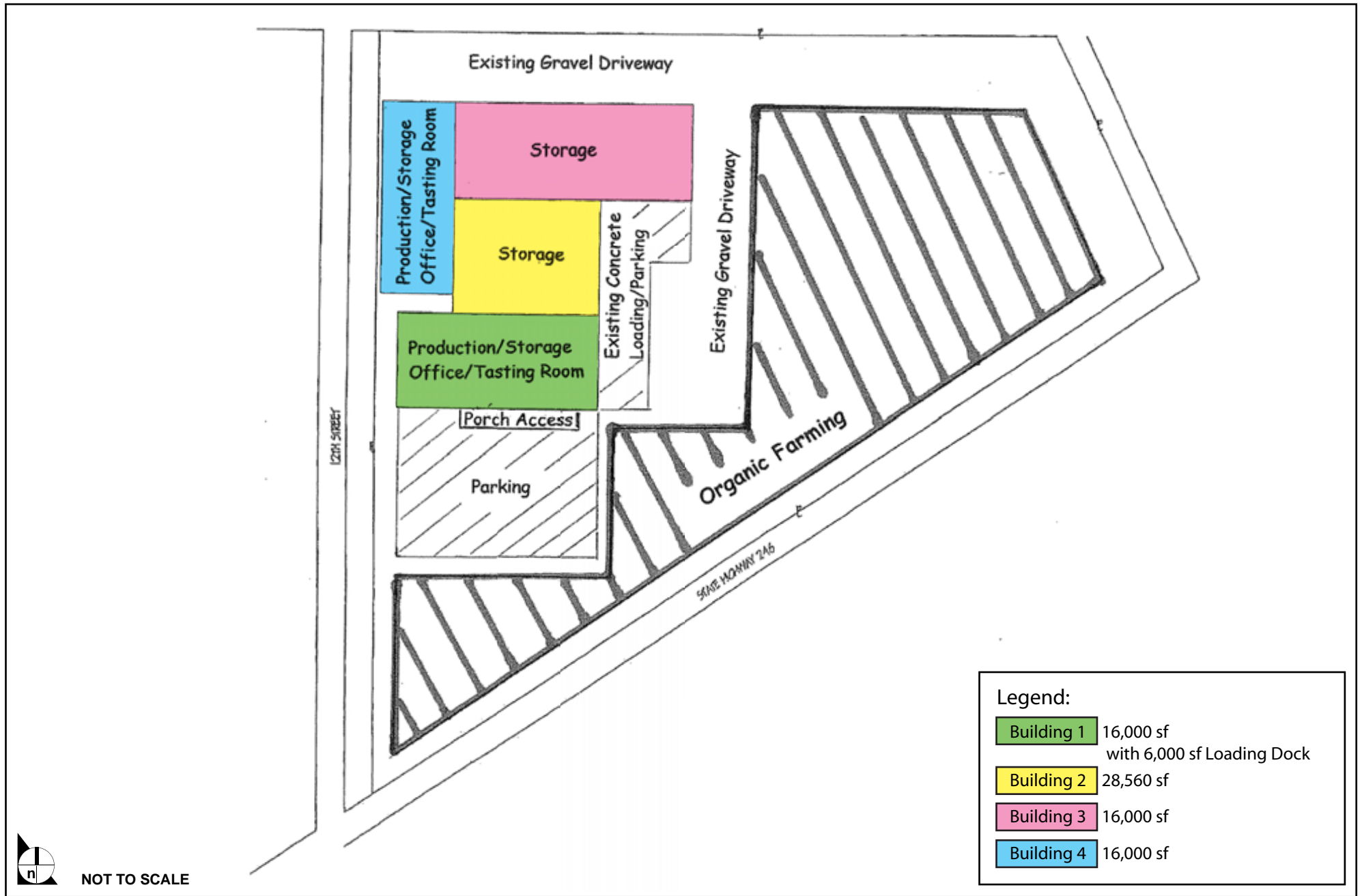
**Table 2.0-2  
Industrial Building Conversion  
Land Use Summary**

Building (Occupancy)	Square Footages
<b>Building 1 and Cover Loading Area</b>	
Wine Production	7,000 sf
Tasting Room/Office	4,000 sf
Storage	5,000 sf
Covered Loading Area	6,000 sf
<b>Subtotal</b>	<b>22,000 sf</b>
<b>Building 2 and 3</b>	
Storage	44,560 sf
<b>Subtotal</b>	<b>44,560 sf</b>
<b>Building 4</b>	
Wine Production	3,000 sf
Wine Tasting/Office	2,400 sf
Storage	10,600 sf
<b>Subtotal</b>	<b>16,000 sf</b>
<b>Total Building Area</b>	<b>82,560 sf</b>

Building 4 consists of approximately 16,000 square feet and would be used as a wine production and storage building. Approximately 3,000 square feet of wine production space would be contained within the building and less than 2,400 square feet for a wine tasting room and office space. The remaining 10,600 square feet would be used for storage. There would be a single floor trench drain flowing to a single consolidation box with a screen filter to screen solids, which connects via a 4-inch line to City Sewer. A separate application for Waste Water Permit will be submitted to the Waste Water Division.

The only exterior modifications to Building 4 would be:

- Addition of three (3) - 3 feet by 7-feet man-doors, one each on the south, west, and north sides of the building;
- Moving the existing 14-feet by 14-feet rollup door on the north side of the building to a new location further west on the north side and filling in the space where the door was removed with metal panels to match the rest of the building; and
- Installing a new 480 Volt electrical service/meter panel and transformer on the west side of the building.



NOT TO SCALE

SOURCE: City of Lonpoc – February 2012

FIGURE 2.0-4

Industrial Building Conversion

The following site improvements are proposed as part of the first phase:

- Installing of curb, gutter, and sidewalk to City standards from the loading dock area to the North Property line;
- Widening of 12<sup>th</sup> Street to include a 6-foot bike lane and a 9-foot parking lane;
- Installing an approximately 8-foot by 9-foot ADA compliant restroom;
- Installing a new 2 inch water service from 12<sup>th</sup> Street to Building 4 and move the existing water meter from the temporary location on Highway 246 to the new service location; and
- Installing a new 6-inch fire service line and backflow device from 12<sup>th</sup> Street to Building 4.

Parking for the first phase would be provided via:

- Permeable surface spaces on the land to the south of Building 1.
- Along the paved area to the east of Building 1 and 2.
- An additional ADA space to the south of Building 4.

As part of the Industrial Building Conversion, the property owners are requesting that the City allow the excess land to the south and east of the existing buildings along Highway 246 be farmed. An organic farmer has been allowed by the developer to grow vegetables and flowers to be sold at local farmers markets. It is envisioned that an organic farmer be allowed to grow vegetables and flowers to be sold at local farmers markets. Water for the farming is currently being provided via the existing water service to the property under the City's current rate structure, however, discussions are underway to see if the City can provide water for this use under a yet to be developed agricultural rate. The farming is a temporary use and would terminate when the balance of the property is developed.

It is not clear at this time what might be developed on the balance of the project site beyond the described first phase outlined in this addendum. It is likely that the balance of the site would be developed in no more than three (3) separate additional phases. A separate application and any needed environmental clearances would have to be processed for any future phase(s) and the requirements for approval of these future phase(s) would be addressed during that processing.

## 3.0 ENVIRONMENTAL ANALYSIS

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### 3.1 AESTHETICS

#### Analysis of Industrial Building Conversion

**Threshold:** Have a substantial adverse effect on a scenic vista.

**Substantially degrade the existing visual character or quality of the site and its surroundings.**

The Industrial Building Conversion would place uses in the already existing industrial buildings on site and would result in minor additions to building areas including a deck and bathroom. These minor alterations would not result in substantial changes to the height or massing of the approved Project. Since the project site is not located on or near these scenic ridgelines and the Industrial Building Conversion comply with zoning requirements for height restrictions, any potentially substantial adverse effects to the scenic vistas and ridgelines would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:** Substantially damage scenic resources, including, but not limited to, trees rock outcroppings, and historic buildings, within a state scenic highway.

The project site is not located along a state designated scenic highway. The nearest eligible state designated highway would be SR-1, which would potentially be designated up until the entrance of the City of Lompoc. However, the approved Project cannot be seen from SR-1 until motorists and/or bicyclists enter the City. Plus there are no historic buildings, rock outcrops, and landmark trees, on the approved Project site. The Industrial Building Conversion, like the approved Project, would result in less than significant impacts. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:** Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The Industrial Building Conversion, like the approved Project, would introduce sources of light or glare on site from outside light fixtures associated with the proposed buildings, as well as security and safety lighting associated with sidewalks and the parking areas. The introduction of new uses would increase the amount of light and glare as compared to the current conditions. Consequently, impacts associated with the Industrial Building Conversion would be the same as those of the approved Project and would

be potentially significant. Implementation of the mitigation measure for the approved Project would reduce impacts associated with the Industrial Building Conversion to less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

## 3.2 AIR QUALITY

### Analysis of Industrial Building Conversion

**Threshold:** Conflict with or obstruct the implementation of the applicable air quality plan.

The certified Final EIR concluded that the approved Project would not conflict with the applicable air quality plan as the population growth associated with the approved project would not exceed Santa Barbara County Association of Governments (SBCAG) forecasts. The Industrial Building Conversion would not result in a direct population increase, as the project does not contain any residential units. Although the Industrial Building Conversion would increase employment due to the development of a winery production facility, the indirect increase in population growth would only be a fraction of the growth forecasts. Therefore, the Industrial Building Conversion would also be consistent with the 2004 Clean Air Plan (CAP) emission projections. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion

**Threshold:** Violate any air quality standard or contribute substantially to an existing or projected air quality violation as a result of construction activity.

The certified Final EIR indicated that construction emissions associated with the development of the approved Project would not exceed any of the thresholds of significance recommended by the Santa Barbara County Air Pollution Control District (SBCAPCD) during project construction. The Industrial Building Conversion would convert approximately 82,560 square feet of existing industrial building space that was considered as part of the approved Project's construction emissions. Consequently, construction emissions from the Industrial Building Conversion would be less than significant, similar to the approved Project. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold: Violate any air quality standard or contribute substantially to an existing or projected air quality violation as a result of project operations.**

The certified Final EIR indicated that the net emission increase associated with the approved Project would not exceed the SBCAPCD's recommended operational emission thresholds. The Industrial Building Conversion would convert approximately 82,560 square feet of existing industrial building space that was considered as part of the approved Project's operational emissions for mobile sources, stationary sources, and wine production (assumed 10,000 cases of red wine). Consequently, operational emissions from the Industrial Building Conversion would be less than significant, similar to the approved Project. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

**Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)**

The certified Final EIR indicated that the approved Project's cumulative emissions with all other projects in the state could result in climate change impacts. To address cumulative impacts, the California Air Resources Board (CARB) recommends that projects meet the California Energy Commission (CEC) Tier II building energy use standards, which generally requires a reduction in energy usage of 30 percent beyond Title 24 building code requirements. Therefore, while the net greenhouse gas (GHG) emissions are relatively small, the approved Project was determined to be cumulatively significant because it does not comply with the CEC Tier II building energy use standards. Because the Industrial Building Conversion is considered part of the approved Project, the Industrial Building Conversion would also contribute to this relatively small GHG cumulative impact. Mitigation measures to reduce the approved Project's GHG contribution to less than significant would be applied to the Industrial Building Conversion to reduce impacts to less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold: Expose sensitive receptors to substantial pollutant concentrations.**

The winery land uses associated with the Industrial Building Conversion, like the approved Project, are not anticipated to emit individual or cumulative Toxic Air Contaminants (TACs) in appreciable quantities. Equipment or processes that emit a substantial amount of TACs are required to be permitted

by the SBCAPCD. No such equipment or processes are proposed for the project. The CARB *Air Quality and Land Use Handbook* recommends that lead agencies, where possible, avoid locating new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. The project site is not located near any freeway or urban roads with more than 100,000 vehicles per day or any rural roads with 50,000 vehicles per day. Consequently, the Industrial Building Conversion, like the approved Project, would not be subjected to increased health impacts relative to the background levels. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold: Create objectionable odors affecting a substantial number of people.**

The SBCAPCD requires that facilities that may cause odor nuisance complaints under SBCAPCD Rule 3030 (Nuisance) develop and implement an odor abatement plan (OAP). OAPs should include the following elements:

- Name and telephone number of contact person(s) at the facility responsible for logging in and responding to odor complaints;
- Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond;
- Description of potential odor sources at the facility;
- Description of potential methods for reducing odors, including minimizing idling of delivery and service trucks and buses, process changes, facility modifications and/or feasible add-on air pollution control equipment; and
- Contingency measures to curtail emissions in the event of a public nuisance complaint.

It is unlikely that a wine production facility of this size would generate emissions that would cause a nuisance. However, odor impacts are possible; therefore, the project will be considered significant with respect to odor impacts and would require mitigation in the form of an OAP. The Industrial Building Conversion, like the approved Project, would be required to prepare an OAP to reduce impact to less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

### 3.3 BIOLOGICAL RESOURCES

#### Analysis of Industrial Building Conversion

**Threshold:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Due to the disturbed, ruderal condition of the site, no special-status plant or wildlife species are present, or have the potential to occur on the project site. Birds that occur within the adjacent riparian corridor could occasionally move over or forage over the project site, however, the loss of the ruderal, non-native vegetation on the site is not expected to substantially affect a special-status species. No significant impacts to special-status biological resources would occur with development of the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means.

No jurisdictional resources occur on the project site. The project site consists of a single drainage area that sheet flows off site to the northeast. The approved Project is to include a dual detention basin system that would have the capacity to hold 1 acre-foot of water runoff developed for a 100-year storm event. The basin will be able to detain peak post-development flow for the project site. The proposed detention basin and drainage system will decrease the amount of runoff from the existing conditions by approximately 32 percent. The outlet structure will attenuate the flow from the detention basin to meet or lessen the current existing flows that would exit the northeast corner of the project site. Therefore, runoff generated by the implementation of the project site would not impact the adjacent Santa Ynez River. Impacts associated with the approved Project were considered to be less than significant.

The Industrial Building Conversion includes a portion of the approved Project that is essentially already developed with the four (4) industrial buildings and outdoor loading area. This first phase includes very small increase in impervious surfaces when compared to the entire approved Project. Flows from these increases would be very small and are not considered to be substantial. The primary runoff from the approved Project would occur with the development of the Resort Hotel-Spa, two (2) retail buildings, and parking areas associated with these uses. Consequently, impacts associated with the Industrial Building Conversion would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.**

The project site is not considered an essential component of any regional movement corridor that serves as a link between large open space areas, and development of the project site would not represent a substantial impact to regional wildlife movement. Further, few wildlife species are expected to utilize the project site for local movement due to the relatively disturbed character of the habitat. The design of the approved Project was considered to not impact the integrity of the Santa Ynez River as a wildlife movement corridor and would not create impacts to local and regional wildlife movement. No significant impacts on local or regional wildlife movement were anticipated to occur with the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.**

The cork oak trees located on the project were planted and are not an indigenous species. No permits from the City of Lompoc would be required for the removal of mature trees, as trees not presenting hazards on private property are not governed by the City's tree ordinance. Further, the project is not identified on the "Biologically Significant Areas" Map in the Resource Management Element of the Lompoc General Plan as being in an area of biological significance. No conflicts with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance were anticipated to occur with the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:**                    **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan.**

The project site is located in an urbanized area and is not included in an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other conservation plan. Thus, no conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan were anticipated to occur with approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### **3.4 HAZARDS AND HAZARDOUS MATERIAL**

#### **Analysis of Industrial Building Conversion**

**Threshold:**                    **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

The approved Project was determined to not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Additionally, the approved Project was determine to not include construction of commercial or industrial uses that would use large amounts of hazardous materials or generate hazardous wastes. The Industrial Building Conversion includes the same land uses on this location of the project site that were proposed for the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

**Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65963.5 and, as a result, would create a significant hazard to the public or the environment.**

There were three (3) areas of hazardous materials concerns identified in the certified Final EIR pertaining to the project site (1) Site Mitigation Unit (SMU)-372, (2) SMU-394, and (3) LUFT No. 50087 (former UST location).

SMU-372 excavated 3,000 cubic yards (cy) of petroleum hydrocarbon-impacted soil from the northeast corner of the project site. The excavation pit was backfilled with 3,700 cy of clean imported fill material. In 2002, the FPD case closed the site. Impacts related to this site and the conversion and development of the approved Project were considered to be less than significant. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion

SMU-394 was the former existing AST area and received case closure in 2004. Consequently, impacts associated within this site are considered to be less than significant. Impacts related to this site and the conversion and development of the approved Project were considered to be less than significant. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

LUFT No. 50087 was a former UST. Removal of the 1,000-gallon UST from the southeast portion of the project site in 1988 caused leaking and became a LUFT. Soil was impacted and excavated for the area to a depth of 34-feet. Impacted soil remained at depths ranging from 30- to 40-feet. Eight groundwater monitoring wells and two vapor extraction wells were installed in 2004. Approximately 700 cy of additional petroleum hydrocarbon-impacted soil were excavated and treated on site by land farming. A groundwater-extraction system to treat the dissolved petroleum hydrocarbons was installed in the former UST area in late 2005. The last available water quality data for the site was in 2009 indicated that the methyl tertiary-butyl ether (MTBE) was 25 micrograms per liter and dichloroethane (EDC) was at 2.6 micrograms per liter in groundwater samples. The California maximum concentration levels for drinking water is 5 micrograms per liter for MTBE and 0.5 micrograms for EDC. The site received a remedial action completion certificate from Santa Barbara County Fire Department in February 2011.

Impacts related to this site and the conversion and development of the approved Project are considered to be less than significant. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

As part of the Industrial Building Conversion, the property owners are requesting that the City allow the excess land to the south and east of the existing buildings along Highway 246 to be farmed. This area is located over former LUFT No. 50087. It is envisioned that an organic farmer be allowed to grow vegetables and flowers to be sold at local farmers markets. The grower's estimate of crop water use is 5,000 gallons per month per acre of irrigated area, equivalent to 0.18 acre-foot per acre, or 2.2 inches of applied water. This projected water use would total 0.7 acre-foot per year, which is significantly less than would be expected for a typical vegetable or cut flowers operation. Cleath-Harris Geologist (CHG) estimates that on-site applied irrigation will be up to 10 times greater than projected or 1.8-acre-feet per acre and 7 acre-feet per year at the site, based on commercial crop water use estimates developed for the Lompoc area.<sup>2</sup> This irrigation would occur west of the City of Lompoc Well No. 11 which was developed in March 2011. No MTBE was detected during the production of Well No. 11. Because there is residual MTBE mass at the LUFT site in soil at the project site, the issue of contamination due to irrigation of the project site and transport of MTBE to the groundwater affecting City Well No. 11 was assessed by the City of Lompoc (refer to **Appendix A** of this addendum for Cleath-Harris Geologist assessment). Based on the analysis performed by CHG, the proposed crop irrigation for flower and vegetables would not result in MTBE impacts to City Well No. 11. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:                    Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

Implementation of the approved Project would neither result in a reduction of the number of lanes along these roadway segments in the area nor result in the placement of an impediment to the flow of traffic such as medians. In the event of an emergency, all lanes for emergency purposes would be opened to allow for traffic flow to move in one direction and traffic would be controlled by appropriate agencies, such as the Lompoc Police Department. During the construction activities, the approved Project may include short-term, single-lane closures along these routes, which could slow down evacuation along these routes and result in a significant impact. Both the construction and operational scenario would be similar under the Industrial Building Conversion. Mitigation proposed for the approved Project would apply to the Industrial Building Conversion. Consequently, impacts associated with the Industrial

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<sup>2</sup> Cleath-Harris Geologist, *Potential MTBE Impacts to City Well from Irrigation at Former LUFT site*, January 10, 2012.

Building Conversion, like the approved Project, would be mitigated to less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.**

**For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.**

**For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.**

**Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.**

The project site is currently not designated within a wildland fire hazard area. However, there is wildland fire potential across the river to the east and across SR-246 to the south which is designated for local responsibility area as a high severity fire hazard zone.<sup>3</sup> With the implementation of the latest development codes related to fire, impacts would be less than significant.

The approved Project site is not located within an airport use plan or within two (2) miles of a public airport, public-use airport, or a private airstrip. The nearest public airport is Lompoc Airport, located approximately 2.5 miles northwest of the approved Project. Therefore, impacts would be less than significant.

There is no school within 0.25 mile of the approved Project, nor is there one proposed within that distance of the site. Therefore, there is no potential for a significant impact on the environment.

The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

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<sup>3</sup> California Department of Fire and Forestry, *Fire Hazard Severity Zones Recommended, 5-2008, Very High Zones in LRA*, 2008.

### 3.5 HYDROLOGY AND WATER QUALITY

#### Analysis of Industrial Building Conversion

**Threshold:** **Violate any water quality standards or waste discharge requirements.**

**Otherwise substantially degrade water quality.**

**Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site.**

**Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.**

**Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**

The project site consists of a single drainage area that sheet flows off site to the northeast. The approved Project is to include a dual detention basin system that would have the capacity to hold 1 acre-foot of water runoff developed for a 100-year storm event. The basin will be able to detain peak post-development flow for the project site. The proposed detention basin and drainage system will decrease the amount of runoff from the existing conditions by approximately 32 percent. The outlet structure will attenuate the flow from the detention basin to meet or lessen the current existing flows that would exit the northeast corner of the project site. Therefore, runoff generated by the implementation of the project site would not impact the adjacent Santa Ynez River or other drainage courses. Impacts associated with the approved Project were considered to be less than significant.

Storm water quality is generally affected by the length of time since the last rainfall, rainfall intensity, urban uses of the area, and quantity of transported sediment. Typical urban water quality pollutants anticipated to result due to the approved Project would result from motor vehicle operations, fertilizer/pesticide uses, human/animal littering, careless material storage and handling, and poor property management. These pollutants have the potential to degrade water quality and may result in significant impacts. The approved Project included post-construction water-quality control measures as

required in the City's Storm Water Management Program to offset the impact of the additional impervious area proposed.

The Industrial Building Conversion includes a portion of the approved Project that is essentially already developed with the four (4) industrial buildings and outdoor loading area. This first phase includes a very small increase in impervious surfaces when compared to the entire approved Project. Surface flows and water quality pollutants from these increases would be very small and are not considered to be substantial. The primary runoff from the approved Project would occur with the development of the Resort Hotel-Spa, two (2) retail buildings, and parking areas associated with these uses. The Industrial Building Conversion, like the approved Project, would be required to implement appropriate post-construction water-quality control measures as required in the City's Storm Water Management Program to offset the impact of the additional impervious areas. Consequently, impacts associated with the Industrial Building Conversion would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### 3.6 LAND USE AND PLANNING

#### Analysis of Industrial Building Conversion

**Threshold:** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental impact.

A consistency analysis comparing the approved Project with policies contained in the City's general plan was prepared in order to determine if a conflict would occur. Only the policies that are applicable to the approved Project were addressed in the analysis. Overall, the approved Project was determined to be consistent with the general plan. Because the Industrial Building Conversion is part of the approved Project, it is also considered to be consistent with the general plan. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### 3.7 NOISE

#### Analysis of Industrial Building Conversion

**Threshold:**                    **Result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

**Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

Increased vehicular trips associated with the approved Project would generate corresponding increases in roadway noise levels. The largest project related increase of 0.5 dB(A) was estimated to occur on 12<sup>th</sup> Street between Industrial Way and SR-246. Overall, however, none of the project-related noise increases at the roadway segments analyzed would result in an increase greater than 3 dB(A). Therefore, the approved Project was determined to not result in a significant impact to off-site sensitive receptors due to roadway noise increases. The approved Project's projected vehicle trip increases include those trips associated with the Industrial Building Conversion. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

The future River Terrace Residential Development located directly north of the approved Project could experience increased noise levels from both the production of wine on the project site, and the trucks delivering grapes to the loading docks for the wine production and storage facility. The loading dock facilities for the wine production and storage facility will be located in such a way that trucks entering the docking facilities will face away from the future River Terrace Residential Development. Both loading docks will be separated from the River Terrace Residential Development by Buildings 1, 2, 3 and 4, which collectively comprise a 77,000-square-foot building that will enclose the wine-producing facilities (i.e., the Industrial Building Conversion). Since the loading dock facilities will be blocked from line of sight by the wine storage and production facility, the future River Terrace Residential Development would experience noise levels from the loading docks that are below the City's standard exterior noise limit of 60 dB(A) CNEL for residential units. As part of the certified EIR, the City of Lompoc required mitigation that the applicant of the approved Project shall include signage at the load docking areas of the wine production and storage facility that will require any trucks delivering goods to the project site to shut off their engines while docking. This will promote a decrease in noise produced by the loading dock facilities associated with the wine production and storage facility on the approved Project site. This

mitigation measure would be implemented as part of the Industrial Conversion. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:**                    **Result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.**

**Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Noise and vibration experienced by sensitive receptors around the project site during construction would be temporary in occurrence, and construction would be limited by the construction hour limits. With implementation of mitigation measures contained within the certified EIR, impacts regarding the approved Project creating noise during construction were determined to be less than significant. Implementation of these mitigation measures for the Industrial Building Conversion would also reduce impact to less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:**                    **For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.**

**For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.**

The approved Project site is not located within an airport use plan or within two (2) miles of a public airport, public-use airport, or a private airstrip. The nearest public airport is Lompoc Airport, located approximately 2.5 miles northwest of the approved Project. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### **3.8 TRAFFIC AND CIRCULATION**

#### **Analysis of Industrial Building Conversion**

**Threshold:**                    **The City of Lompoc has adopted a circulation policy within the General Plan that states that the city would attempt to achieve and maintain level of service C as a system performance standard for traffic volumes on the roadway system**

and as a basic design guideline for roadways in the city. Any project that cannot meet the performance standard is considered to have a significant impact. The performance standard for state highways in the CMP system outside of the City of Lompoc is the upper limit of LOS D.

**Threshold:** Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

**Threshold:** Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

The approved Project was projected to result in approximately 2,447 daily trips. During the morning peak hour, approximately 145 trip-ends would be generated (87 inbound and 58 outbound). During the evening peak hour, approximately 177 trip-ends would be generated (86 inbound and 91 outbound). All study area intersections were determined to operate at LOS C or better under existing-without-project conditions during the AM and PM peak hours. With the addition of approved Project trips (existing with project conditions), all study area intersections are expected to continue to operate at LOS C or better during the AM and PM peak hours. Consequently, impacts to City of Lompoc and CMP intersections were determined to be less than significant for the approved Project.

The Industrial Building Conversion was projected to result in approximately 42 of the 2,447 daily trips associated with the approved Project. During the morning peak hour, the Industrial Building Conversion would result in approximately six (6) of the 145 trip-ends five (5) inbound and one (1) outbound). During the evening peak hour, the Industrial Building Conversion would result in approximately five (5) of 177 trip-ends (one (1) inbound and four (4) outbound). The approved Project's projected vehicle trip increases include those trips associated the Industrial Building Conversion. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:**                    **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

**Threshold:**                    **Result in inadequate emergency access.**

Under the Industrial Building Conversion, the two driveway access points, the lane configurations at the access points, and widening of 12<sup>th</sup> Street to include a 6-foot bike lane and a 9-foot parking lane would remain the same as the approved Project. The overall access points and lane configuration remain as analyzed in the certified Final EIR. Therefore, there would be no change relating to transportation and circulation impacts associated with the Industrial Building Conversion. Consequently, impacts associated with the Industrial Building Conversion would be the same as those of the approved Project, and would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:**                    **Result in inadequate parking capacity.**

Parking for the Industrial Building Conversion would be provided via permeable surface spaces on the land to the south of Building 1; along the paved area to the east of Building 1 and 2; and an additional ADA space to the west of Building 4. As per the approved Project, the Planning Commission will make the justification for any reductions in parking that may be requested for the Industrial Building Conversion due to the amount of tour coaches anticipated, the future joint use of hotel guests/spa usage, and the seasonal and off-hour mixed use of proposed uses. Consequently, impacts would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:**                    **Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

The Industrial Building Conversion does not include any change related to alternative transportation. Consequently, impacts associated with the Industrial Building Conversion would be the same as those of the approved Project, and would be less than significant. No new or substantially greater alternative transportation impacts would occur with implementation of the Industrial Building Conversion.

## 4.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

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The environmental effects of the approved Project listed below were found not to create significant impacts, and the same conclusions apply to the Industrial Building Conversion because the Industrial Building Conversion is located on the same site as, and involves only a minor change to, the approved Project. Consequently, impacts associated with the Industrial Building Conversion would be the same as those of the approved Project and would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion pertaining to the following issue areas.

### 4.1 AGRICULTURE

**Threshold:** Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

The approved Project is located on land designated as Urban and Built-Up land according to the 2006 Farmland Mapping and Monitoring Program of the California Resources Agency.<sup>4</sup> This land designation is occupied by structures with a building density of at least one (1) unit to 1.5 acres, or approximately six (6) structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures. Therefore, there would be no impact to the conversion of Prime Farmland, Unique Farmland, or Farmland to non-agricultural use. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** Conflict with existing zoning for agricultural use, or a Williamson Act contract.

There are no Williamson Act contracts in place for the project site. The project is currently zoned Business Park (BP) and has not been used for agriculture-related operations in nearly 50 years. Further, to be established as an agricultural preserve under the Williamson Act, a parcel of land must consist of no less

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<sup>4</sup> Department of Conservation, Farmland Mapping and Monitoring Program. *Santa Barbara County Important Farmland 2008*.

than 100 acres. The project site is 9.6 acres in size. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** **Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.**

Existing land uses on the project site consist of a large cluster of four (4) industrial buildings and outdoor covered loading areas on the northwest corner of the project site. The most recent use of the project site was for a diatomaceous earth processing plant and currently consists of four structural buildings. The project site is surrounded by developed land uses, none of which are currently used in agriculture-based operations. Development of the project site would not result in the conversion of farmland to non-agricultural uses. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

## 4.2 CULTURAL RESOURCES

**Threshold:** **Cause a substantial adverse change in the significance of an archaeological resource, as defined in Section 15064.5 of the State CEQA Guidelines.**

The approved Project is identified on the "Archaeological Sensitivity Zones" Map in the *Lompoc General Plan* Resources Management Element in a relatively low-sensitivity zone. A Phase I archeological study<sup>5</sup> was conducted at the request of the City of Lompoc (City) and is available in Appendix 7.0 of the previously certified Final EIR. The archaeological study included

- Review of archaeological archives at the Central Coast Information Center (CCIC), housed at the University of California, Santa Barbara;
- A sacred lands file check by the Native American Heritage Commission (NAHC); Native American consultation; and
- Archaeological survey of the project site.

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<sup>5</sup> Conejo Archeological Consultants. *Phase I Cultural Resource Investigation for Santa Rita Hills Wine Center*. 2008.

A review of the CCIC (a repository for archaeological and ethnographic collections) archaeological site records identified three prehistoric sites and one historic archaeological site within a 0.5-mile radius of the project site; none of which are located within or adjacent to the approved Project. No archaeological resources were observed during the Phase I study field survey of the project site.<sup>6</sup> The ground surface throughout the project site was subject to previous ground disturbances associated with its former use as a diatomaceous earth processing plant. Extensive ground disturbances have occurred within the soil remediation locations on the subject property. Based on the study's findings,<sup>7</sup> no further archaeological investigation is warranted. However, in the event that archaeological resources are exposed during project construction, all earth-disturbing work within 50 feet of the find must be temporarily suspended until a City qualified archaeologist has evaluated the nature and significance of the find. The City of Lompoc shall be notified of any such find. A Chumash representative should be contacted to monitor any archaeological fieldwork associated with Native American materials. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:                    Disturb any human remains, including those interred outside of formal cemeteries.**

As part of the Phase I study, the NAHC was contacted and did not identify any sacred lands within the project area. However, there is the possibility that human remains might be uncovered during the construction and excavation of the approved Project, which would cause a potential significant impact. In the instance human remains are discovered then the remains will be subject to State Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the Santa Barbara County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

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<sup>6</sup> Conejo Archeological Consultants. *Phase I Cultural Resource Investigation for Santa Rita Hills Wine Center*. 2008.

<sup>7</sup> Ibid.

**Threshold:** Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the *State CEQA Guidelines*.

The “Urban Design Features” map contained in the Urban Design Element of the City’s general plan does not identify the approved Project site as containing any landmarks or historical structures. The former use of the project site was a diatomaceous earth processing plant. Since there is no identified historical landmark or structure, there would be no impact to any historical resources. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Paleontological resources are typically found in sedimentary rock, metamorphic rock, and isolated rock outcrops in hilly areas. The project site has already been heavily disturbed by its former use as a diatomaceous earth processing plant and the excessive soil remediation. Because there are no isolated outcrops located within the project boundary, and as a result of the site’s previous disturbance, the potential for paleontological resources to occur on the project site is considered low.

However, there is a possibility that undetected paleontological artifacts could be present within the project boundaries. In this instance, if paleontological artifacts are unearthed or exposed during construction, all ground disturbing work within 50-feet of the location shall stop immediately and the City shall be notified. The artifacts and site shall be evaluated by an experienced paleontologist. An appropriate plan for the evaluation of the artifacts from the site shall be prepared and its implementation overseen by an experienced paleontologist. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### 4.3 GEOLOGY AND SOILS

**Threshold:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving

- rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology *Special Publication 42*);
- strong seismic ground shaking;
- seismic-related ground failure, including liquefaction; or
- landslides.

A soils engineering report was prepared in support of the approved Project for the purpose of analyzing potential geology and soil impacts on the 9.6-acre project site, including an analysis of potential seismic related impacts.<sup>8</sup> The scope of work for the soils engineering report included a general site reconnaissance, subsurface exploration, laboratory testing of selected soil samples, geotechnical evaluation of the data collected, and preparation of the report. The following discussion summarizes the findings, conclusions, and recommended measures from the report for the project site as it relates to potential geologic impacts.

The project site is located in the lower end of the Santa Ynez river valley within the western end of the Transverse Ranges geomorphic region of California. The San Andreas Fault system forms the northern boundary of the region. The region is subdivided into individual mountain ranges with intervening valleys. The site is on the northeast corner of 12<sup>th</sup> Street and Highway 246 (East Ocean Avenue) in the southeasterly sector of the City of Lompoc. Twelfth Street will provide access to the site and the northwestern portion of the site was previously developed with a large industrial building with associated surface and subsurface improvements, all of which are planned to remain. The undeveloped portion of the site is covered with a sparse to moderate growth of weeds with sporadic brush along the southerly and easterly property boundaries. The site is relatively flat with drainage by sheet flow.

The soil profile observed in the borings generally consisted of layered sand, silt, and clay soils. The sands were in a moist to wet condition with a loose to dense consistency; the silts and clays were moist and medium stiff to hard. Groundwater was located in the northeastern portion of the project site, at a depth of 37.5-feet.

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<sup>8</sup> Earth Systems Pacific, *Soils Engineering Report Santa Rita Hills Wine Center*, July 2008.

The geotechnical reports<sup>9</sup> identified the San Andreas fault zone as the largest active fault zone within a 100-mile radius of the project site. The San Andreas fault is recognized as a major transform fault of regional dimension that forms an active boundary between the Pacific and North American tectonic plates. There are additional faults within the region that could also generate earthquakes and strong shaking on the project site. The project site is not currently located within an Alquist-Priolo Earthquake Fault Zone and would, therefore, have a less than significant impact from surface rupture. The studies identified the fact that earthquakes with a magnitude of 7.8 on the Richter scale are possible in the area. Therefore, the potential exists for significant impacts to result from an earthquake in the area. However, the use of seismic design parameters in the Uniform Building Code, as well as adherence to the most current state, County, and City standards for earthquake-resistant construction, would reduce impacts related to seismic ground failure. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:**                    **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**

Liquefaction is the loss of soil strength during a significant seismic event. It occurs primarily in saturated, loose, fine to medium-grained sands and in very soft to medium stiff silts. There does not appear to be a potential for liquefaction if the groundwater remains at its current depth of 37.5-feet below the existing ground surface. If ground water would rise above the depth of 37.5-feet in the future, there could be a slight potential for liquefaction. It is the opinion of the report (see Appendix 7.0) that the site is suitable for the project provided the recommendations are implemented in the design and construction of the approved Project.<sup>10</sup> Impacts from lateral spreading, on- or off-site landslide, and liquefaction would require the implementation of the recommendations, as described in the soils engineering report in order to reduce the impact. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

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<sup>9</sup> This information was gathered from geotechnical studies from adjacent EIRs.

<sup>10</sup> Earth Systems Pacific, *Soils Engineering Report Santa Rita Hills Wine Center*, (2008).

**Threshold: Result in substantial soil erosion or the loss of topsoil.**

Limited earthwork and grading activities would occur on the project site. Given that, the site is flat and has been previously disturbed as a result of its former use as a diatomaceous earth processing plant and excessive soil remediation, and as described in the Earth Systems Pacific report, the surface soils are highly erodible. During the construction and grading of the project site, the implementation of a Storm Water Pollution Prevention Plan (SWPPP) and best management practices (BMPs) would minimize erosion of topsoil from the construction and operation of the approved Project. Erosion of topsoil could occur as a result of high winds. However, implementation of mitigation measures used to control construction air quality emissions would ensure the control of topsoil erosion due to wind. Examples of standard measures used to control construction emissions include, but are not limited to, watering unpaved road surfaces and materials transported off site; suspending all excavating and grading operations when wind speeds exceed 20 miles per hour; and minimizing the area disturbed by clearing, grading, earth moving, or excavation activities. Mitigation measures used to reduce erosion are identified in **Section 4.2, Air Quality**, and **Section 4.5, Hydrology and Water Quality** of the certified Final EIR. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.**

The soil types found within the approved Project site are the Panoche-Metz-Stutzville association. This association is nearly level to moderately sloping, somewhat excessively drained to somewhat poorly drained loamy sands to silty clay loams on flood plains and alluvial fans.<sup>11</sup> The soils engineering study conducted for the project site determined that the surface soils located on the project site are generally classified within a “low” expansion soil category.<sup>12</sup> The soils on site have variable in situ moistures and densities which can result in differential settlement. Preliminary design specifics are recommended in the soils engineering report in order to mitigate potential geotechnical impacts that could adversely impact the proposed construction and long-term use of the structures on the project site. Further, the structures on the project site are required to comply with design and building specifications as identified in the

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<sup>11</sup> US Department of Agriculture, Soil Conservation Service, “Northern Santa Barbara Area, California, Geology Soil Map.” 1971.

<sup>12</sup> Earth Systems Pacific, *Soils Engineering Report Santa Rita Hills Wine Center*, (2008).

California Building Code. With the implementation of all the mitigation measures recommended for the project in the soils engineering report, all potential geotechnical impacts will be reduced. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.**

The project site would not require the use of septic tanks, as the site would be connected to the City's sewer system. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

#### 4.4 HYDROLOGY AND WATER QUALITY

**Threshold: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).**

The project site is located over the Lompoc Groundwater Basin. The project would not add or withdraw water from any aquifer in the area, as the project would be connected to the City water distribution system. No grading activities are proposed that would penetrate the groundwater basin. Therefore, the approved Project would not result in any impact to the quantity or quality of local groundwater. Additionally, the project would not be expected to deplete groundwater supplies or interfere with groundwater recharge in a way that would cause local wells to drop to a level where they could not support existing or planned uses. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved

Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.**

**Place within a 100-year flood hazard area structures which would impede or redirect flood flow.**

The approved project involves the development of a resort hotel-spa, two (2) commercial-retail buildings, and the existing wine production and storage facility on the project site. No housing units would be located in a flood plain area under project implementation. Additionally, review of the National Flood Insurance Map for the City of Lompoc shows the project site is not located within a 100-year flood plain. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.**

Review of regional water supply information indicates that there are two (2) upgradient reservoirs on the Santa Ynez River with the potential of flooding the site. The Gibraltar Dam is located about eight (8) miles north of Santa Barbara on the Santa Ynez River. The dam is a concrete arch dam originally built from 1913 to 1922 with an original capacity of 14,500 acre-feet and raised to its current elevation in 1949. As a result of studies prepared by the State Division of Safety of Dams, the City of Santa Barbara completed a reinforcement project to strengthen the dam in 1990 and 1991. The dam is designed to withstand the maximum credible earthquake on the Santa Ynez fault.

Located to the west and downstream of the Gibraltar Dam is the Bradbury Dam. The Bradbury Dam is located about 28 river miles upstream from the City of Lompoc. The Bradbury Dam is an earth-filled dam on the Santa Ynez River and is operated by the United States Bureau of Reclamation (USBR). In 1994 the USBR re-evaluated the risk of dam failure at the Bradbury Dam and concluded that the Bradbury Dam could be damaged during a severe seismic event. The most likely cause for rapid dam failure would be liquefaction resulting from an earthquake of magnitude 6.0 or greater within 12 miles of the dam. If the

Bradbury Dam were to have a sudden release of water due to liquefaction-induced failure, approximately 90 percent of the City of Lompoc could be inundated within three (3) hours. Inundation depths would vary from 1-foot to 15-feet within the City.

A plan for seismic safety modifications to Bradbury Dam was developed by USBR in 1994. Temporary restrictions were imposed at Cachuma Reservoir, limiting the lake's level to 17-feet below capacity to reduce the damage potential in the event of an earthquake-induced failure. In the spring of 1995, a dewatering system was installed to create enough unsaturated alluvium under the downstream portion of the dam's embankment to prevent slope failure in the event of a significant earthquake. The dewatering project was completed in January 1996. Storage restrictions were also removed in January 1996. Additional strengthening measures were scheduled to begin in the fall of 1996. Status measures included improvements to the rock and gravel foundation, the concrete spillway retaining walls, modifications of spillway gates, and placement of a berm over the downstream side of the dam.

In 1995, the City of Lompoc Fire Department developed an emergency notification/evacuation plan to provide early warning in the event of failure of the Bradbury Dam. The City has a reverse 911 system to notify the community of emergency situations. The City's Safety Element, contained in its general plan contains policies and measures intended to mitigate potential hazards associated with dam failures. As noted in the EIR prepared for the general plan, these policies and measures would reduce the impacts. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Expose people or structures to inundation by seiche, tsunami, or mudflow.**

The approved Project will not create a threat of inundation by seiche, tsunami, or mudflow. The site is located approximately 10-miles from the ocean, which would make the impact of a tsunami unlikely. The site is also not located near a water body, or significant slope, thus making mudflows and seiches unlikely. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

## 4.5 MINERAL RESOURCES

**Threshold:**                    **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.**

**Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.**

The Mineral Resources Map in the *Lompoc General Plan* Resource Management Element does not identify the project area as being a locally important mineral resource site. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

## 4.6 POPULATION AND HOUSING

**Threshold:**                    **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads and other infrastructure).**

The project does not involve the construction of residential units within the City. The approved Project is anticipated to result in the generation of approximately 50 jobs within the City with the possibility of some live/work space. The employment numbers for the City are 17,900. The anticipated generation of approximately 50 jobs within the City will increase the total employment base in the City by less than 0.5 percent. Therefore, the approved Project would not indirectly induce population growth. The approved Project's projected generation of jobs includes those jobs associated the Industrial Building Conversion. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with implementation of the Industrial Building Conversion.

**Threshold:** Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The approved Project site would not require the removal of existing housing or require the construction of replacement housing. Thus, no impacts would occur as they relate to the criteria identified above. No new or substantially greater impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

#### 4.7 PUBLIC SERVICES

**Threshold:** Create substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire Protection?
- Police Protection?
- Schools?
- Parks?

#### Fire

The City of Lompoc Fire Department (LFD) provides fire services in the project area. The department as a whole has 26 personnel with one (1) fire chief, three (3) battalion chiefs, six (6) captains, six (6) engineers, nine (9) firefighters, and one (1) administrative secretary. The fire station that would provide first response to the site is Fire Station No. 1, located at 115 South G Street and approximately 1.4 miles to the west of the site. This station is equipped with one (1) fire truck, which is operated by one (1) firefighter, one (1) engineer, and one (1) captain. The typical goal for fire flow for the LFD is two (2) hours at 2,000 gallons per minute (gpm). The goal for the response time is five (5) minutes or less for 90 percent of the

calls. As Station No. 1 is approximately 1.4 miles from the site, response time would be less than five (5) minutes.

In addition, as part of the review process, LFD will review final project plans and make recommendations for fire protection services and fire flow rates. Depending on the outcome of the review, improvements to the water system (e.g., additional hydrants) may be required, at the cost of the applicant, to provide the required fire flow for the project. In addition, the Santa Rita Hills Wine Center would be required to comply with all applicable state and local codes and ordinances. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### **Police**

The City of Lompoc Police Department (LPD) provides police services in the project area. The LPD operates one station, located at 107 Civic Center Plaza, approximately one (1) mile west of the project site. The department has its own jail and dispatch center. It handles emergency telephone calls (i.e., 911), non-emergency telephone calls, and dispatches police, fire, and ambulance service. The department is staffed with 51 full-time sworn officers, 23 full-time non-sworn officers, and 16 permanent/part-time employees. The goal the LPD strives to maintain for emergency response time and non-emergency response time is three (3) and five (5) minutes, respectively. As the station is approximately 1 mile from the site, response time for emergency call would be within the 3- to 5-minute goal. The approved Project would currently be adequate for police services, but would burden the existing workload of the officers. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### **Schools**

There is no residential component to the approved Project. As a result, the project would not directly generate students that would impact schools within the City. Additionally, the development of the approved Project would not cause an indirect increase in population (see **Population and Housing**)—thus generating additional students—because the approved Project consists of a hotel resort, spa, and commercial and office buildings. Impacts associated with the approved Project were considered to be less

than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

### **Parks**

The approved Project would include the development of 68,545 square feet of indoor space consisting of a resort hotel, spa, event center, restaurant-bar, commercial-retail and office uses, the conversion of 82,560 square feet of existing industrial buildings and outdoor loading area to a wine-processing and storage facility, and other associated amenities to serve the City and visitors to the community. No new residential units that would require additional parks are proposed as part of the project. Furthermore, the project would not lead to a substantial increase in local population (see **Population and Housing**) or the corresponding rise in the use of or demand for recreational facilities. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

## **4.8 RECREATION**

**Threshold:** **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

**Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.**

The approved Project would include the development of a resort hotel, spa, event center, restaurant-bar, commercial-retail and office uses, conversion of existing industrial buildings and outdoor loading area to a wine-processing and storage facility, and other associated amenities to serve the City and visitors to the community. No new residential units are proposed as part of the project, and the project would not lead to a substantial increase in local population (see **Population and Housing**) or the corresponding rise in the use of or demand for recreational facilities. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the

approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

#### 4.9 UTILITIES AND SERVICE SYSTEMS

**Threshold:** Increase or exceed wastewater treatment requirements of the Central Coast Region of the Regional Water Quality Control Board.

**Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

**Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

The City of Lompoc owns and operates the Lompoc Regional Wastewater Reclamation Plant (WWRP), which provides wastewater treatment to the site and surrounding area. The WWRP has a capacity of five (5) million gallons per day (mgd) and currently services approximately 2.5 to 3.0 mgd of wastewater. The current 5.5 mgd capacity of the WWRP is sufficient to meet the anticipated flows from the proposed development. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold:** Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The analysis pertaining to storm water facilities and impacts on the project site and surrounding area is discussed in detail in **Section 4.5, Hydrology and Water Quality**, of the certified Final EIR.

**Threshold:** Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

The City of Lompoc provides water resources to City residents through the extraction of groundwater from the western portion, also known as the Lompoc Plain, of the Santa Ynez River Valley Groundwater

Basin.<sup>13</sup> The City's projected water use is anticipated to be 6,745 afy in 2015. The City of Lompoc Public Utilities Director confirmed that the City of Lompoc has adequate water supplies to serve the approved Project. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

The land uses proposed to be located on the project site need to be connected to the City water distribution system. An existing 10-inch water line on Ocean Avenue and an existing 10-inch line on 12<sup>th</sup> Street would serve the project site. Lateral lines extending from the proposed building would connect to these lines. No new water mains would be required to serve the approved Project. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

**Threshold: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.**

**Comply with federal, state, and local statutes and regulations related to solid waste.**

The City of Lompoc provides garbage and recycling collection services in the City and owns and operates the Lompoc Sanitary Landfill. Recyclable material is collected by the City and transported to the Health Sanitation Service material recovery facility in Santa Maria. Waste is disposed of at the City of Lompoc Sanitary Landfill. The landfill has a remaining capacity of 2,146,779 cubic yards (cy) and a permitted peak throughput of 400 tons per day. Presently, the landfill operates at an average of 153-tons per day. The landfill is anticipated to have sufficient capacity to accommodate solid waste from the City through the year 2047.

The approved Project is not expected to generate a substantial increase in the amount of solid waste generated. As described above in **Population and Housing**, the approved Project would increase the residents in the City by less than 0.5 percent. As the project site is currently served by the Lompoc Sanitary Landfill, and the existing landfill has sufficient capacity through 2047, the approved Project

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<sup>13</sup> California's Groundwater Update 2003, Central Coast Hydrologic Region, Santa Ynez River Valley Groundwater Basin.

#### *4.0 Effects Found Not to be Significant*

would not result in any change to service related to solid waste services. Impacts associated with the approved Project were considered to be less than significant. The Industrial Building Conversion is located on the same site as the approved Project. Consequently, impacts associated with the Industrial Building Conversion, like the approved Project, would be less than significant. No new or substantially greater impacts would occur with the implementation of the Industrial Building Conversion.

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**APPENDIX A**

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**Cleath-Harris Geologists, Inc. – Potential MTBE Impacts to City Well 11  
from Irrigation at Former LUFT site, Assessment**



January 10, 2012

Mr. Eric Erland  
Water Resource Engineer  
City of Lompoc  
Utilities Department, Water Division  
601 East North Avenue  
Lompoc, CA 93438

**Subject: Potential MTBE Impacts to City Well 11 from Irrigation at Former LUFT site.**

Dear Mr. Erland:

Cleath-Harris Geologists (CHG) has completed an evaluation of the potential impacts to the City of Lompoc (City) Well 11 from crop irrigation on an adjacent property that includes a former Leaking Underground Fuel Tank (LUFT) site. This report summarizes the results of the evaluation.

## **Background**

In March 2009, an impacts assessment was conducted to evaluate potential methyl tertiary-butyl ether (MTBE) contamination in the main zone aquifer beneath the Lompoc Plain resulting from a former Grefco underground storage tank fuel leak on the adjacent property. The 2009 assessment concluded that there would be no significant impact to a future City Well 11 from residual MTBE contamination in groundwater overlying the bedrock shelf to the southwest (CHG, 2009). The assessment included development of a numerical groundwater model with solute transport. City Well 11 was constructed in March 2011, and no MTBE was detected during production testing (CHG 2011).

Corrective action at the former LUFT site met the requirements of the California Health and Safety Code, and closure was granted in February, 2011. The property owner now plans to irrigate the site for growing organic flowers and vegetables. This evaluation addresses concerns that agricultural irrigation over the former LUFT site may increase MTBE concentrations in groundwater and potentially impact Well 11.

## **Agricultural Water Use**

Irrigation for growing flowers and vegetables would take place over approximately four acres of vacant land west of Well 11, a portion of which overlies the former LUFT site (Figure 1). The



grower's estimate of crop water use is 5,000 gallons per month per acre of irrigated area, equivalent to 0.18 acre-feet per acre, or 2.2 inches applied water. This projected water use would total 0.7 acre-feet per year, which is significantly less than would be expected for a typical vegetable or cut flowers operation. CHG estimates that on-site applied irrigation will be up to ten times greater than projected, or 1.8 acre-feet per acre and 7 acre-feet per year at the site, based on commercial crop water use estimates developed for the Lompoc area (Santa Barbara County Water Resources Report, July 2000).

### **LUFT Site Information**

The subject property, formerly owned by Grefco, was part of a processing facility for locally mined diatomite. In 1988, a 550-gallon gasoline tank was removed from a location adjacent to the main warehouse building, and a 1,000-gallon gasoline tank was removed from the former maintenance shop area. Soil contamination from leaking fuel was reported. Remedial excavation was performed in 1991, with approximately 50 cubic yards of soil removed from the warehouse tank location and another 650 cubic yards removed from the maintenance shop location. The remedial excavation did not remove all of the contaminated soil from the maintenance shop tank area, and a subsequent investigation reported groundwater contamination.

Groundwater monitoring records are available beginning in January 2002 (Hayden Environmental, 2008). Petroleum hydrocarbon compounds detected in groundwater have included total petroleum hydrocarbons (TPH) in carbon range C<sub>4</sub>-C<sub>12</sub>, benzene, toluene, ethylbenzene, and total xylenes (BTEX), 1,2-dichloroethane (EDC), tertiary-butyl alcohol (TBA), diisopropyl ether (DIPE), and MTBE.

A second phase of remedial excavation took place in July and August 2005, when approximately 700 cubic yards of soil and underlying weathered bedrock was excavated to 42 feet depth. The excavated material was treated on-site and the pit was backfilled with engineered fill consisting of native and imported materials, including an oxygen release compound placed at the pit bottom, where some residual contamination remained. Eight monitoring wells (MW-1 through MW-8) were destroyed and two hydraulically upgradient wells (MW-9 and MW-10) installed prior to the excavation operations. Additional monitoring wells MW-11 through MW-19 were installed in two subsequent phases.

A groundwater pump-and-treat system consisting of three extraction wells with holding tanks and activated carbon treatment was operated between February and August 2007. In the summer of 2008, approximately 3,900 pounds of hydrogen peroxide were injected into the former extraction wells to stimulate in-situ chemical oxidation.

The last available water quality results for the site are from the First Quarter 2009 report (Hayden Environmental, 2009a). MTBE was last reported at 25 micrograms per liter (µg/l) and EDC at 2.6



µg/l in groundwater samples collected March 6, 2009 from MW-11. The California maximum contaminant level (MCL) in drinking water is 5 µg/l for MTBE and 0.5 µg/l for EDC.

The eleven monitoring wells and three remediation wells associated with the LUFT site were destroyed between November 8 and 12, 2010. The wells were either drilled out (pulled) or pressure-grouted in place (Hayden Environmental, 2010). The site received a remedial action completion certification from the Santa Barbara County Fire Department in February, 2011.

### **Hydrogeologic Setting**

The project area is underlain by an alluvial aquifer resting on lower permeability bedrock of the Tertiary-age Sisquoc Formation. The contact between the alluvium and the underlying bedrock forms a buried alluvial channel approximately 160 feet deep where the older sedimentary formation has been eroded by the ancestral Santa Ynez River. This alluvial channel contains the main zone of the upper aquifer, which is the principal water supply aquifer to the City. The former LUFT site is immediately west of the channel and overlies a bedrock shelf that is approximately 40 feet below natural grade, or 120 feet higher in elevation than the invert of the alluvial-filled channel. Hydrogeologic cross-sections in the attached Site Closure Request Addendum illustrate the extent and depth of alluvial deposits beneath the former LUFT site (Figures 3, 4, and 5 in Hayden Environmental, 2009b; attached).

The thickness of saturation on the bedrock shelf has varied from dry during critical drought periods to a few feet thick (depth to water typically 37 to 40 feet below ground surface). Movement of water on the bedrock shelf has historically been characterized as flowing to the north-northwest, with hydraulic gradients typically between 0.002 and 0.007 ft/ft. Over the last 20 years, releases from Lake Cachuma have typically maintained water levels above the shelf elevation (CHG, 2009).

### **Potential for Increase in Residual MTBE Mobilization to Groundwater**

Residual dissolved-phase MTBE mass in groundwater was last reported at 0.000138 pounds (0.6 grams) and residual MTBE adsorbed to soils was last reported at 0.004 pounds (1.8 grams) in April 2009. Vadose zone soils impacted by MTBE were excavated for treatment. Confirmation sidewall soil samples collected from the perimeter of the excavation were non-detected for MTBE (Hayden Environmental, 2009b; attached).

The total estimated residual MTBE mass at the LUFT site presented in the attached Site Closure Request Addendum was 2.4 grams, all of which was either dissolved in groundwater or adsorbed to soils below the groundwater table. Irrigation over the former LUFT site is not expected to mobilize any significant additional MTBE mass into groundwater from the vadose zone.



Flowers and vegetable farming would result in minimal irrigation return flows to groundwater, based on the grower-estimated crop water use of 2.2 inches applied water per year. By comparison, the average annual rainfall at Lompoc City Hall is over 15 inches. The small fraction of irrigation return flow would be much less than the average percolation of precipitation, and no significant groundwater mounding or changes to the hydraulic gradient beneath the site would be expected due to the irrigation project. If crop irrigation is closer to commercial agricultural practices, the amount of irrigation return flow could result in localized groundwater mounding on the bedrock shelf and changes to the hydraulic gradient beneath the site. Applied irrigation would not, however, significantly increase the residual MTBE mass in groundwater.

### **Potential impacts to City Well 11**

Prior impacts assessment used two independent methodologies, numerical mass transport modeling and mass balance calculations, to evaluate potential MTBE impacts to Well 11. The model scenarios assumed significantly greater MTBE mass loading than estimated for post-remediation conditions, and did not result in detectable MTBE concentrations at Well 11. Mass balance calculations indicated MTBE mass flux off the bedrock shelf into the buried alluvial channel would need to be at least an order of magnitude greater than post-remediation conditions to equal the mass flux required across the borehole wall for an MTBE detection at Well 11 (CHG, 2009).

Subsequent LUFT site information, as discussed above, supports the conclusions of the 2009 MTBE impacts assessment. The estimate of post-remediation residual MTBE mass in groundwater and soils beneath the former LUFT site of 2.4 grams is not sufficient to impact Well 11, regardless of whether or not irrigation over the area takes place. The proposed crop irrigation for organic flowers and vegetables will not result in MTBE impacts to City Well 11, based on the available information.

Sincerely,

Cleath-Harris Geologists, Inc.

Spencer J. Harris, HG 633



## REFERENCES

Cleath-Harris Geologists, 2009. Lompoc Well 11 MTBE Impacts Assessment, March 2009.

Cleath-Harris Geologists, 2011. Report on the Construction and testing of Well 11, City of Lompoc, Santa Barbara County, May 6, 2011

County of Santa Barbara, 2000. Santa Barbara County Water Resources Report, July 2000.

Hayden Environmental, Inc, 2008. Former Grefco Minerals Facility, 333 Highway 246, Lompoc, California, FPD LUFT Site #50087, *Third Quarter 2008 - Groundwater Remediation and Monitoring Report*, October 30, 2008.

Hayden Environmental, Inc, 2009a. Former Grefco Minerals Facility, 333 Highway 246, Lompoc, California, FPD LUFT Site #50087, *First Quarter 2009 - Post-Remediation Groundwater Monitoring Report and Site Closure Request*, April 14, 2009.

Hayden Environmental, Inc, 2009b. Former Grefco Minerals Facility, 333 Highway 246, Lompoc, California, FPD LUFT Site #50087, *Site Closure Request Addendum*, June 22, 2009.

Hayden Environmental, Inc, 2010. Former Grefco Minerals Facility, 333 Highway 246, Lompoc, California, FPD LUFT Site #50087, *Well Abandonment Report*, November 18, 2010.



**ATTACHMENT**

Hayden Environmental - Site Closure Request Addendum, June 22, 2009

# HAYDEN ENVIRONMENTAL, INC.

Environmental Services • Hydrogeology • Assessment/Remediation

Mr. E. Steven Nailor  
Santa Barbara County Fire Prevention Division  
LUFT Program  
195 West Highway 246, #102  
Buellton, California 93427

Project No. 0408-01  
June 22, 2009

Subject: Former Grefco Minerals Facility  
333 Highway 246  
Lompoc, California  
FPD LUFT Site #50087  
**SITE CLOSURE REQUEST ADDENDUM**

Dear Mr. Nailor:

Hayden Environmental, Inc. (HEI) is pleased to present the following *Site Closure Request Addendum* on behalf of Mr. Mark Hudgens for the Former Grefco Minerals Facility (FPD LUFT Site #50087) located at 333 Highway 246 in Lompoc, California. This report presents supplemental data to the Site Closure Request dated April 14, 2009. This report presents the following:

- Cross section and plan view maps showing post remediation soil and groundwater analytical data; and
- Soil and groundwater mass calculations for the chemicals of concern.

The scope of work was conducted in accordance with Santa Barbara County Fire Prevention Division (FPD) Leaking Underground Fuel Tank (LUFT) Program requirements outlined in a letter dated June 11, 2009.

## **1.0 PROJECT DESCRIPTION**

### **1.1 Site Setting**

The subject site is located on a multi-acre, industrial-zoned area in the southeastern portion of the City of Lompoc and situated at the northeastern corner of the North 12 Street and Highway 246 intersection (see Figure 1). The site contains several contiguous buildings formerly utilized during operation of a minerals processing plant. The site elevation is approximately 130 feet above mean sea level. The site topography is generally flat lying with a gently slope to the southeast.

### **1.2 Site Background**

The following briefly outlines and describes corrective action site activities:

- A 1,000-gallon capacity underground storage tank (UST) used to store gasoline was reportedly removed from the southeastern portion of the site in 1988. Several site investigations revealed that soil and groundwater had been impacted by petroleum hydrocarbons as a result of the leaky UST. Apparently 650 cubic yards of soil contamination was excavated from the former UST area to a depth of approximately 34 feet. Subsequent investigations showed that soil contamination remained at depths between 30 and 40 feet beneath the former UST/remedial excavation area.
- In July and August 2005, approximately 700 cubic yards of petroleum hydrocarbon-impacted soil was excavated and treated on-site by landfarming. Soil and weathered bedrock was excavated to a depth of approximately 42 feet. Oxygen release compound (ORC) was placed at the bottom the remedial excavation prior to backfilling. The excavation was backfilled to grade with engineered fill consisting of clean overburden soil, the remediated soil, and clean imported soil.
- In December 2005, HEI installed four groundwater monitoring wells (MW-11 through MW-14) to a depth of approximately 45 feet to assess the groundwater conditions in and around the remedial excavation area.
- During the first quarter 2007, HEI installed three groundwater extraction wells (EW-1, EW-2, EW-3) and a pump-and-treat (P&T) groundwater system in the former UST area to treat dissolved petroleum hydrocarbons.
- Between February and August 2007, HEI operated, maintained, and monitored the groundwater pump-and-treat system. Due to lack of appreciable amounts of groundwater for extraction, the system was shutdown and dismantled.
- In June 2008, five additional groundwater monitoring wells (MW-12 through MW-19) were installed to a depth of approximately 45 feet to delineate the up-gradient and down-gradient extents of the dissolved plume, and evaluate the groundwater quality during in-situ-chemical oxidation treatment.
- In July 2008, performed in-situ chemical oxidation (ISCO) using Fenton's reagent by injecting approximately 14,395 gallons of hydrogen peroxide into the subsurface via three treatment wells (EW-1, EW-2, EW-3).

Figure 2 shows the site layout and locations of the former UST, remedial excavation, and groundwater monitoring and extraction wells.

## **2.0 SITE CONDITIONS**

The site is underlain by alluvium consisting of unconsolidated silty and sandy clay, silt, and silty sand to a depth of approximately 30 feet. An approximately 7- to 10-foot thick gravelly sand layer is present to depths between 32 and 40 feet. Weathered siltstone/claystone of the Sisquoc Formation underlies the alluvium and apparently acts as an impermeable layer. Groundwater is apparently perched above the Sisquoc Formation and lies at the base of the gravelly sand layer. Groundwater monitoring data

shows that the groundwater flow direction is variable beneath the site, ranging from the northwest to the southeast. Due to the close proximity of the Santa Ynez River, the gradient apparently is dependant upon the amount of water (or lack of) flowing in the river.

A production well formerly used by the previous property owner is located on the subject property approximately 190 feet northeast of the former UST area. The production well is currently not operational. The well was completed to a depth of approximately 160 feet and perforated between depths of approximately 140 and 160 feet within an unconfined aquifer characterized by sand and gravel. The unconfined aquifer is inferred to be part of a buried stream channel of the Santa Ynez River. Monitoring well MW-19, recently installed approximately 85 feet northeast of the former UST, did not encounter claystone/siltstone bedrock that characterizes the underlying UST area at a depth of approximately 37 to 40 feet. This well is inferred to be located within the buried stream channel.

### **3.0 CONTAMINANT DISTRIBUTION AND MASS**

The following sections briefly describe and summarize the contaminant distribution and the estimated mass for the chemicals of concern (COC) present in the soil and groundwater beneath the site. Figure 3 shows the concentration and distribution of COC in the soil and groundwater in plan view. Figures 4 and 5 show the general lithology and contaminant COC in cross sectional view.

#### **3.1 Impacted Soil**

During remedial soil excavation three bottom soil samples (BT-1, BT-2, BT-3) were collected at depths between 41 and 42 feet within hard claystone and siltstone of the Sisquoc Formation and seven sidewall samples (SW-1 through SW-7) were collected at depths between 34 and 38 feet within the basal alluvium deposits characterized by unconsolidated sand and gravel. The samples were chemically analyzed for petroleum hydrocarbon constituents. Upon completion of remedial excavation activities, nine groundwater monitoring wells and three remediation wells were installed within and around the remedial excavation area; however, no additional soil samples were collected for chemical analysis.

Soil analytical data showed that trace levels of benzene, ethylbenzene, total xylenes, methyl tert butyl ether (MTBE), and total petroleum hydrocarbons (TPH) as gasoline (C<sub>4</sub>-C<sub>12</sub>) were present in the three bottom samples. The highest concentrations of benzene (0.057 parts per million (ppm)), MTBE (0.051 ppm) and TPH (2.0 ppm) were detected in sample BT-1. Petroleum hydrocarbons were not detected in the sidewall samples. Table 1 presents a summary of the chemical analytical results.

An estimation of the contaminant mass were calculated for the COC based on the analytical data. The area of impacted soil is estimated at approximately 950 square feet, which coincides with the former excavation bottom. Based on an impacted soil thickness of 1 foot, the volume of impacted soil is estimated at approximately 35 cubic feet. Therefore, the estimated contaminant mass for the COC are as follows:

Benzene	$3.0 \times 10^{-6}$ pounds;
Total BTEX	$3.2 \times 10^{-5}$ pounds;
MTBE	$4.0 \times 10^{-6}$ pounds; and
TPH(C <sub>4</sub> -C <sub>12</sub> )	$1.5 \times 10^{-4}$ pounds.

Adsorbed mass estimates should be increased by factor of 1000 - see Table 2 comments

Table 2 provides a summary of the adsorbed contaminant mass calculations.

### 3.2 Impacted Groundwater

Groundwater monitoring data collected during the first quarter of 2009 shows that groundwater lies at depths between approximately 37 and 40 feet. Groundwater flows to the west-northwest at a gradient estimated to range between approximately 0.0031 (NW) and 0.034 (west). Chemical analysis shows that analyte concentrations exceed State and County regulatory action levels in well MW-11. Elevated analytes include dissolved benzene (3.0 parts per billion (ppb)), EDC (2.6 ppb) and MTBE (25 ppb). Trace levels of MTBE were also detected in wells MW-12 through MW-15 and MW-18 at concentrations between 0.56 ppb and 2.6 ppb.

The dissolved plume is constrained in each direction and is inferred to encompass an approximately 950 square foot area. The basal alluvial deposits constitute the perched aquifer, which is estimated at approximately 3 feet thick during the quarter. Therefore, the estimated contaminant mass for the COC are as follows:

Benzene	$1.6 \times 10^{-4}$ pounds;
Total BTEX	$6.7 \times 10^{-4}$ pounds;
EDC	$1.4 \times 10^{-4}$ pounds; and
MTBE	$1.3 \times 10^{-3}$ pounds.

The volume of impacted groundwater is estimated at approximately 6,395 gallons. Table 3 provides a summary of the dissolved contaminant volume and mass calculations.

### 4.0 CONCLUSIONS

An evaluation of the distribution and mass of petroleum hydrocarbons impacting soil and groundwater beneath the former UST area of the site demonstrates that relatively small quantities of the COC remain in the subsurface and, in our opinion, do not pose a threat to human health and the environment. Therefore, we request that FPD LUFT and the Central Coast Regional Water Quality Control Board grant site closure.

### 5.0 CLOSURE

This report has been prepared for Mr. Mark Hudgens as an evaluation of data collected during corrective action activities performed at the subject site. In performing our professional services, we have applied current geologic and scientific judgement and used a level of effort consistent with the standard of practice measured on the date of this report and in the locale of the project site for similar type studies.

The analyses and interpretations in this report have been developed based on the review of existing information pertaining to the site. It should be recognized that subsurface contamination could vary laterally and with depth below a given site. While sample locations are considered representative of specific test locations, HEI does not warrant that the results contained herein are representative of the entire site.

We trust that this report satisfies your current needs. If you have any questions or comments regarding this report, please contact the undersigned at your convenience.

Sincerely,  
**Hayden Environmental, Inc.**

Kurt K. Hayden  
Registered Geologist #5535  
Certified Engineering Geologist #1820

Attachments: References  
                  Tables 1 - 3  
                  Figures 1 - 5

Copies:        1 – Addressee  
                  1 - Mr. Mark Hudgens

## REFERENCES

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- Golden Software, Inc., 2000, "SURFER for Windows, User's Guide, Version 7.02"
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- , 2009, "First Quarter 2009 – Post-Remediation Groundwater Monitoring Report and Site Closure Request," Former Grefco Minerals Site, 333 Highway 246, Lompoc, California, FPD LUFT #50087, April 14.
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- Santa Barbara County, 2007, "Leaking Underground Fuel Tank & Site Mitigation Unit Manual," Santa Barbara County Fire Department, Fire Prevention Division, January.
- State Water Resources Control Board, 1989, "Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure", California Leaking Underground Fuel Tank Task Force, October.

## **TABLES**

**TABLE 1**  
**CONFIRMATION SOIL ANALYTICAL RESULTS**

Sample Location/ Number	Sample Depth (feet below grade)	EPA Test Method 8260										Test Method GC/MS Combin.
		Benzene	Toluene	Ethyl- benzene	Total Xylenes	EDC	TAME	TBA	DIPE	ETBE	MTBE	TPH (C <sub>4</sub> - C <sub>12</sub> )
<b>Bottom</b>												
BT-1	41	0.057	nd	0.2	0.043	nd	nd	nd	nd	nd	0.051	2.0
BT-2	42	0.005	nd	nd	nd	nd	nd	nd	nd	nd	0.012	nd
BT-3	42	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.021	0.08
<b>Sidewall</b>												
SW-1	37	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-2	36	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-3	34	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-4	35	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-5	34	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-6	38	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SW-7	35	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PQLs		0.005						0.025	0.005			0.05
FPD LUFT	RCLs	0.1	15	30	175	0.005	NL	0.12 <sup>(a)</sup>	NL	NL	0.05 <sup>(a)</sup>	100 <sup>(b)</sup>

Results presented in mg/kg (parts per million).

Collected on July 26 and 29, 2005.

See Footnotes at end of Table 2 for explanation of abbreviations.

**TABLE 2**  
**ADSORBED PLUME DATA WORKSHEET**

Boring	Depth (feet)	Analytical (ppm)						
		Benzene	Toluene	Ethylbenz	Xylenes	BTEX	MTBE	TPH
<b>BT-1</b>	41	0.057	nd	0.2	0.043	0.3	0.051	2.000
<b>BT-2</b>	42	0.005	nd	nd	nd	0.005	nd	nd
<b>BT-3</b>	42	nd	nd	nd	nd	0.0	0.021	0.800
<i>Avg Concentration(C):</i>		0.03				0.305	0.04	1.40
<i>Avg Thickness(T):</i>		1.0				1.0	1.0	1.0
<i>Plume Area (A):</i>		950				950	950	950
<i>Soil Bulk Density(D):</i>		106				106	106	106
<b>Contaminant Mass (pounds):</b>		<b>0.000003</b>				<b>0.000032</b>	<b>0.000004</b>	<b>0.000148</b>
<b>Contaminant Volume (ounces):</b>		<b>0.000053</b>				<b>0.00052</b>	<b>0.00006</b>	<b>0.0024</b>

**Formulas**

1. Contaminant Mass (pounds):  $(C \times T \times A \times D) / 1 \times 10^6$
2. Contaminant Volume (ounces):  $(\text{Mass}) \times (16)$

C=Average Contaminant Concentration (mg/Kg)

T=Contaminant Thickness (ft)

A=Contaminat Area (ft2)

D= Soil Bulk Density (lbs/ft3)

Contaminant mass estimates based on listed formula should be increased by a factor of 1000; MTBE contaminant mass is 0.004 pounds. The calculation error is corrected for discussion in CHG report text.

**TABLE 3**  
**DISSOLVED PLUME DATA WORKSHEET**  
**Q1-09**

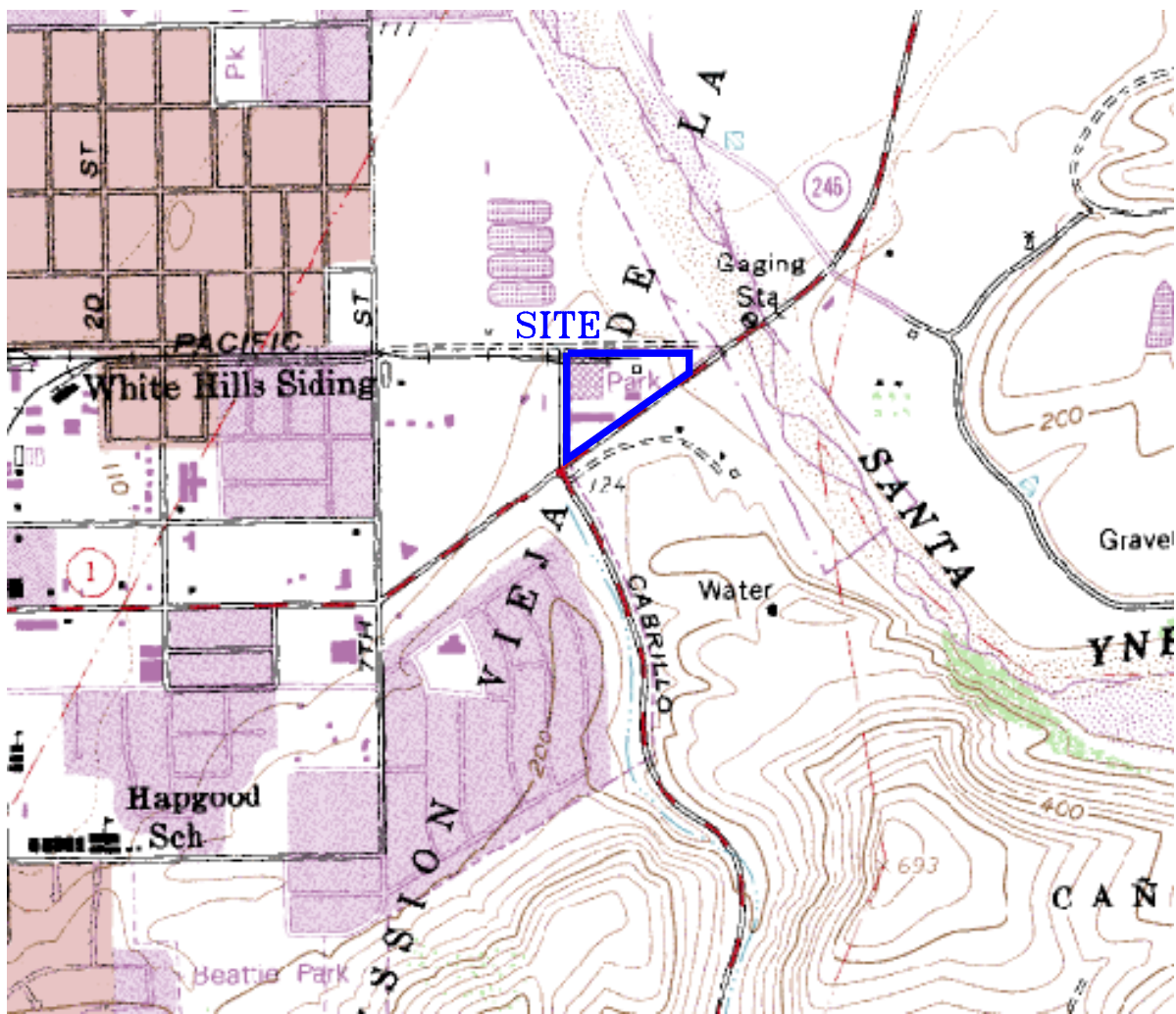
Well	Analytical (ppb)						
	Benzene	Toluene	Ethylbenz	Xylenes	Total BTEX	EDC	MTBE
MW-9	nd	nd	nd	nd	0.0	nd	nd
MW-10	nd	nd	nd	nd	0.0	nd	nd
MW-11	<b>3.0</b>	8.1	1.5	1.8	12.6	<b>2.6</b>	<b>25</b>
MW-12	nd	nd	nd	nd	0.0	nd	0.66
MW-13	nd	nd	nd	nd	0.0	nd	2.4
MW-14	nd	nd	nd	nd	0.0	nd	0.56
MW-15	nd	nd	nd	nd	0.0	nd	2.6
MW-16	nd	nd	nd	nd	0.0	nd	nd
MW-17	nd	nd	0.51	nd	0.51	nd	nd
MW-18	nd	nd	nd	nd	0.0	nd	2.0
MW-19	nd	nd	nd	nd	0.0	nd	nd
Avg. Concentration (C):	3.0				12.6	2.6	25
Plume Thickness (T):	3				3	3	3
Plume Area (A):	950				950	950	950
Soil Porosity (P):	0.3				0.3	0.3	0.3
<b>Contaminant Mass (pounds):</b>	<b>0.00016</b>				<b>0.000670</b>	<b>0.000138</b>	<b>0.00133</b>
<b>Contaminant Volume (ounces):</b>	<b>0.0026</b>				<b>0.0107</b>	<b>0.0022</b>	<b>0.021</b>

**Volume of Impacted Groundwater (gallons): 6,395**

**Formulas**

1. Mass (pounds):  $(A \times T \times C \times P) \times (7.48) \times (3.78) \times (2.2) / 1 \times 10^9$
2. Volume (ounces):  $(\text{Mass}) \times (16)$
3. Volume of Impacted Groundwater (gallons):  $(A \times T \times P) \times 7.48$

## **FIGURES**

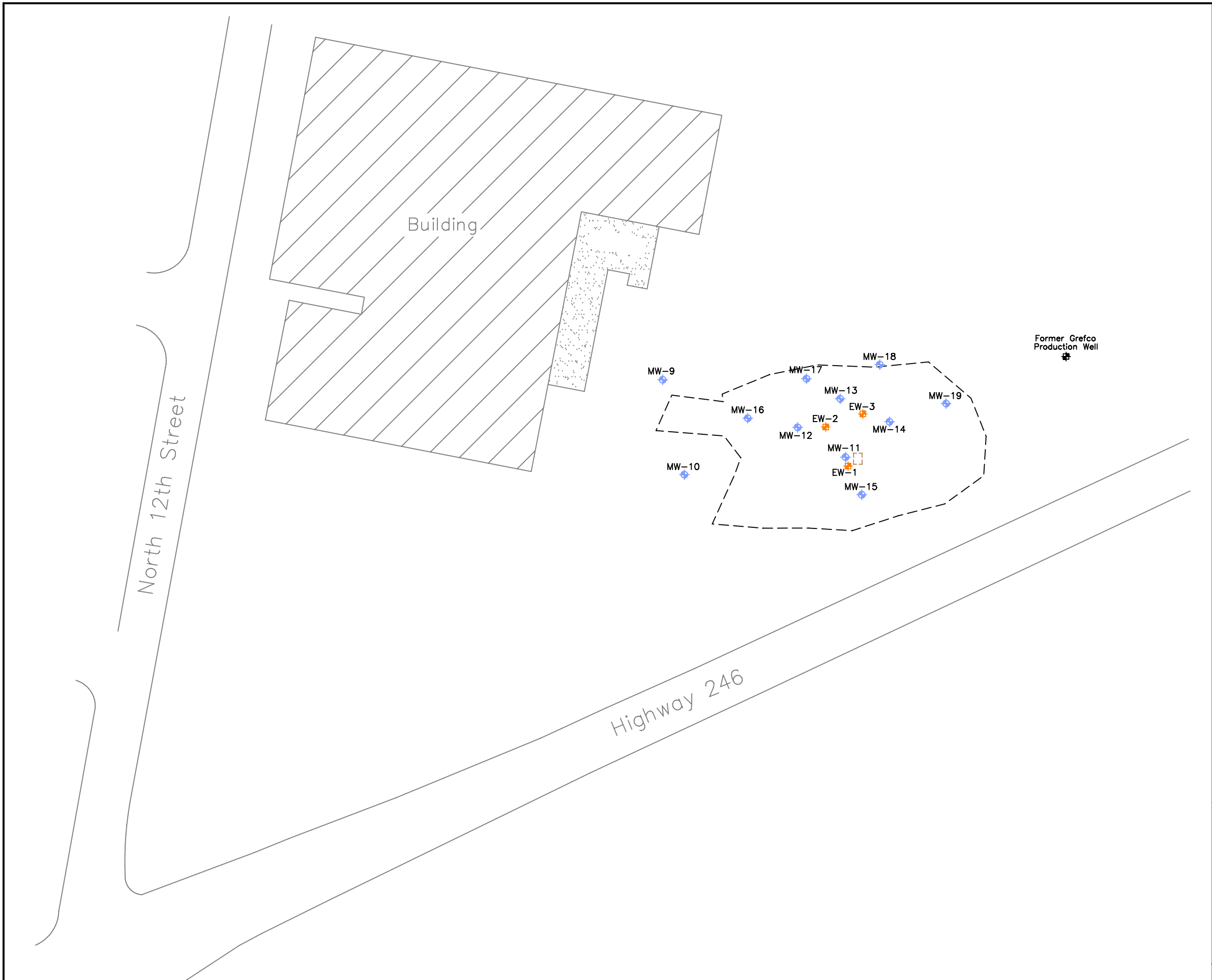


Hayden  
Environmental  
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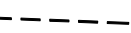
FORMER GREFCO FACILITY  
333 West Highway 246  
Lompoc, California  
PROJECT NO. 0408-01

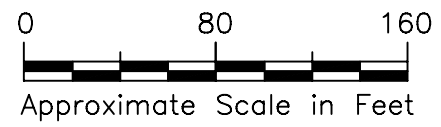
# VICINITY MAP

# FIGURE 1



Explanation

-  Remediation Well
-  Existing Monitoring Well
-  Former UST Location
-  Former Limits of Remedial Excavation

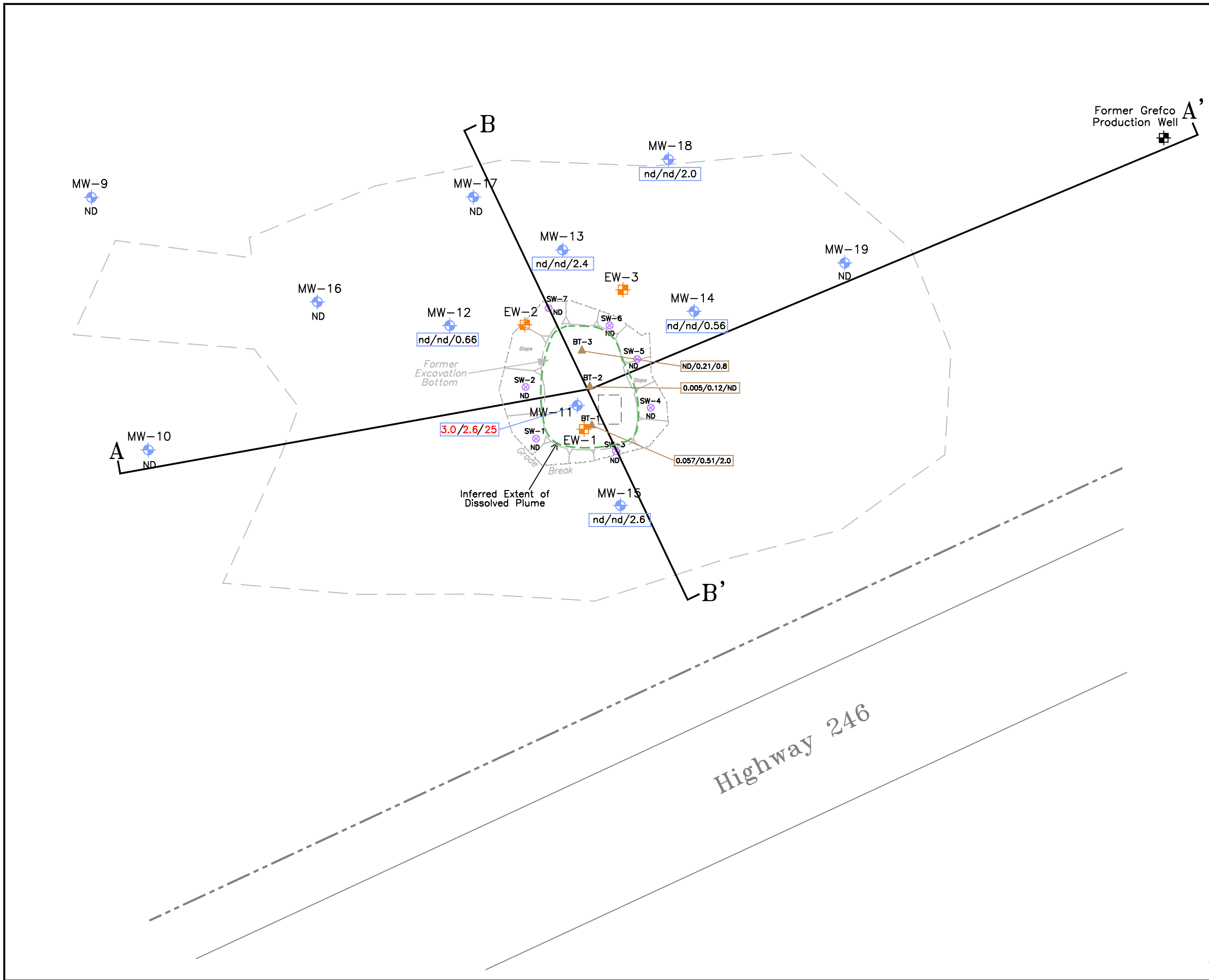


Hayden  
Environmental  
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SITE PLAN

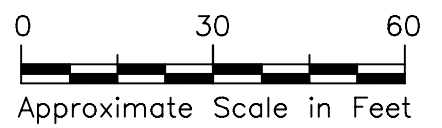
FORMER GREFCO FACILITY  
333 W. Highway 246  
Lompoc, California  
PROJECT NO. 0408-01

FIGURE 2



**Explanation**

- Groundwater Monitoring Well
- Remediation Well
- Confirmation Bottom Soil Sample
- Confirmation Sidewall Soil Sample
- 0.6/nd/1.2 Adsorbed Benzene/MTBE/TPH Concentrations (ppm)
- 0.6/nd/1.2 Dissolved Benzene/EDC/MTBE Concentration (ppb)
- ND Not Detected
- Concentrations in **Red** exceed the regulatory action level
- Former UST Location
- Former Limits of Remedial Excavation
- Property Line
- Cross Sectional Line

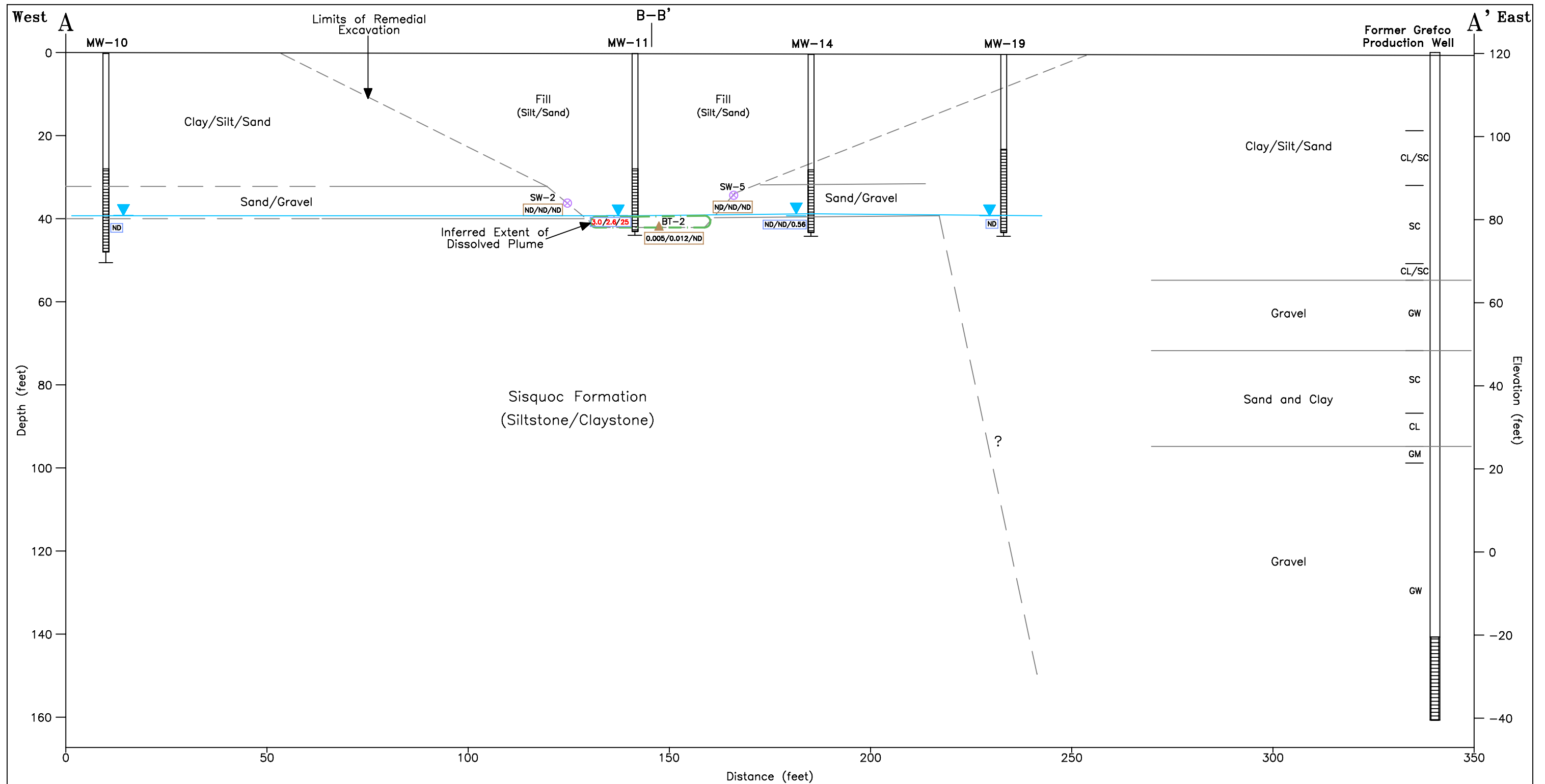


Hayden Environmental Incorporated

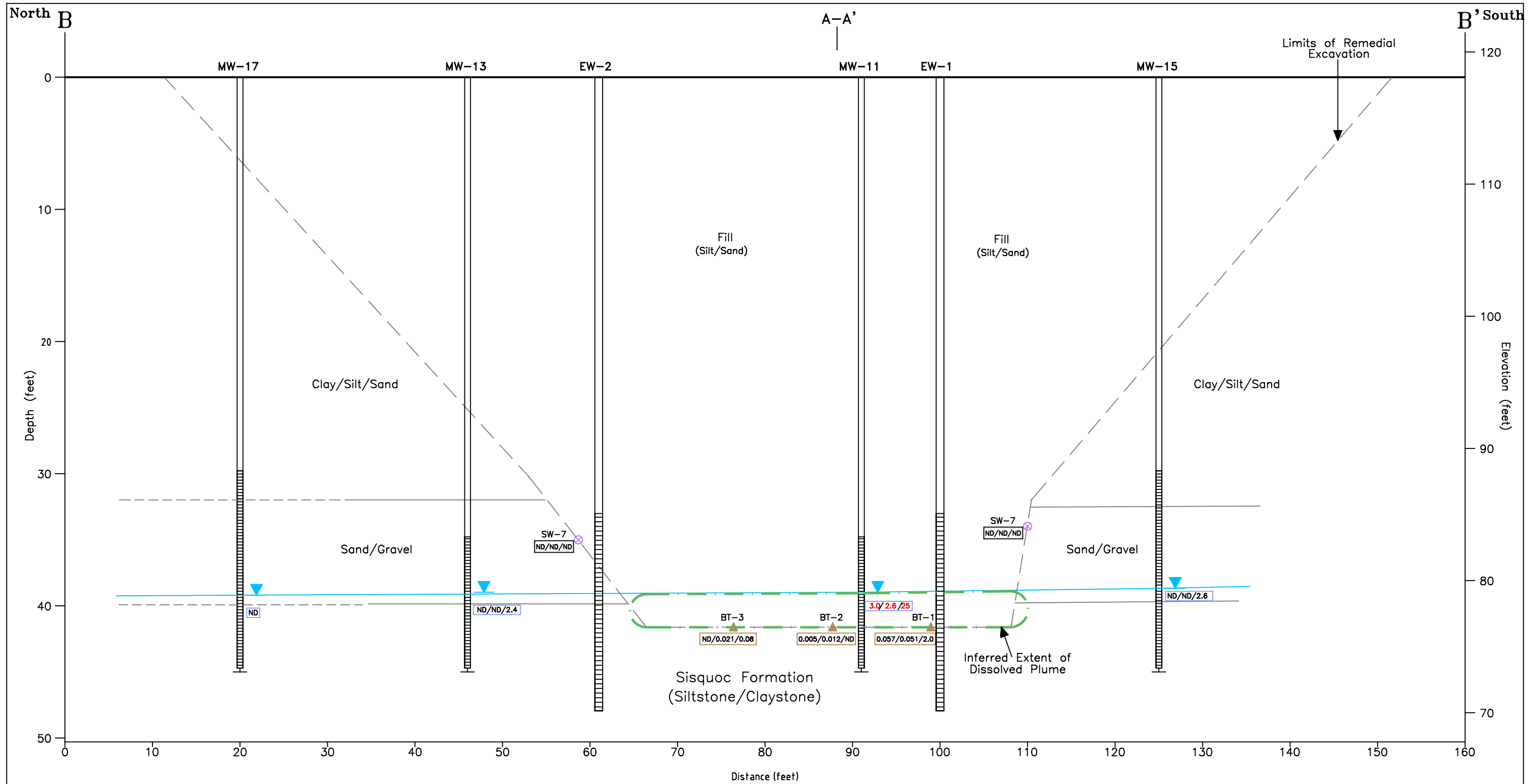
# CONTAMINANT PLUME MAP

FORMER GREFCO FACILITY  
333 W. Highway 246  
Lompoc, California  
PROJECT NO. 0408-01

FIGURE 3



FORMER GREFCO FACILITY 333 West Highway 246 Lompoc, California Project No. 0408-01 FPD LUFT Site #50087	<b>FIGURE 4</b>  <b>Geologic Cross Section</b> <b>Section A-A'</b>	<table border="0"> <tr><td>CL</td><td>CLAY/Silty CLAY</td></tr> <tr><td>SC</td><td>Clayey SAND</td></tr> <tr><td>SP</td><td>Poorly-Graded SAND</td></tr> <tr><td>SW</td><td>Well-Graded SAND</td></tr> <tr><td>GC/GM</td><td>Clayey/Silty GRAVEL with Sand</td></tr> <tr><td>GP/GW</td><td>Poorly/Well-Graded GRAVEL with Sand</td></tr> </table>	CL	CLAY/Silty CLAY	SC	Clayey SAND	SP	Poorly-Graded SAND	SW	Well-Graded SAND	GC/GM	Clayey/Silty GRAVEL with Sand	GP/GW	Poorly/Well-Graded GRAVEL with Sand	<b>LEGEND</b> <table border="0"> <tr><td>▲</td><td>Confirmation Bottom Soil Sample</td></tr> <tr><td>⊗</td><td>Confirmation Sidewall Soil Sample</td></tr> <tr><td>□</td><td>Well Screen Interval</td></tr> <tr><td>▼</td><td>Groundwater Level (March, 2009)</td></tr> </table>	▲	Confirmation Bottom Soil Sample	⊗	Confirmation Sidewall Soil Sample	□	Well Screen Interval	▼	Groundwater Level (March, 2009)	<table border="0"> <tr> <td><b>0.26/0.024/2.0</b></td> <td>Soil Analytical Results (Benzene/MTBE/TPH) in parts per million (ppm)</td> </tr> <tr> <td><b>0.26/0.024/2.0</b></td> <td>Groundwater Analytical Results (Benzene/EDC/MTBE) in parts per billion (ppb)</td> </tr> <tr> <td></td> <td>Concentrations in <b>Red</b> exceed the regulatory action level</td> </tr> <tr> <td>ND</td> <td>Not Detected</td> </tr> </table>	<b>0.26/0.024/2.0</b>	Soil Analytical Results (Benzene/MTBE/TPH) in parts per million (ppm)	<b>0.26/0.024/2.0</b>	Groundwater Analytical Results (Benzene/EDC/MTBE) in parts per billion (ppb)		Concentrations in <b>Red</b> exceed the regulatory action level	ND	Not Detected
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FORMER GREFCO FACILITY 333 West Highway 246 Lompoc, California Project No. 0408-01 FPD LUFT Site #50087	<h2>FIGURE 5</h2> <h3>Geologic Cross Section Section B-B'</h3>	<table border="0"> <tr><td>CL</td><td>CLAY/Silty CLAY</td></tr> <tr><td>SC</td><td>Clayey SAND</td></tr> <tr><td>SP</td><td>Poorly-Graded SAND</td></tr> <tr><td>SW</td><td>Well-Graded SAND</td></tr> <tr><td>GC/GM</td><td>Clayey/Silty GRAVEL with Sand</td></tr> <tr><td>GP/GW</td><td>Poorly/Well-Graded GRAVEL with Sand</td></tr> </table>	CL	CLAY/Silty CLAY	SC	Clayey SAND	SP	Poorly-Graded SAND	SW	Well-Graded SAND	GC/GM	Clayey/Silty GRAVEL with Sand	GP/GW	Poorly/Well-Graded GRAVEL with Sand	<h3>LEGEND</h3> <ul style="list-style-type: none"> <li>▲ Confirmation Bottom Soil Sample</li> <li>⊗ Confirmation Sidewall Soil Sample</li> <li>▤ Well Screen Interval</li> <li>▼ Groundwater Level (March, 2009)</li> </ul>	<table border="0"> <tr> <td style="border: 1px solid black; padding: 2px;">0.26/0.024/2.0</td> <td>Soil Analytical Results (Benzene/MTBE/TPH) in parts per million (ppm)</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">0.26/0.024/2.0</td> <td>Groundwater Analytical Results (Benzene/EDC/MTBE) in parts per billion (ppb)</td> </tr> <tr> <td colspan="2">Concentrations in <b>Red</b> exceed the regulatory action level</td> </tr> <tr> <td>ND</td> <td>Not Detected</td> </tr> </table>	0.26/0.024/2.0	Soil Analytical Results (Benzene/MTBE/TPH) in parts per million (ppm)	0.26/0.024/2.0	Groundwater Analytical Results (Benzene/EDC/MTBE) in parts per billion (ppb)	Concentrations in <b>Red</b> exceed the regulatory action level		ND	Not Detected
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