Mandela Parkway Hotel Project

CEQA Analysis

November 2017

Lead Agency:
City of Oakland
Planning and Building Department
250 Frank H. Ogawa Plaza
Suite 2114
Oakland, CA 94612

Prepared By:
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1944 Embarcadero
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Attachments

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Figures

I. Project Characteristics

1. Project Title:	Mandela Parkway Hotel Project
2. Lead Agency Name and Address:	City of Oakland Bureau of Planning 250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
3. Contact Person and Phone Number:	Mike Rivera, Planner II 510.238.6417 mrivera@oaklandnet.com
4. Project Location:	0 Mandela Parkway (to the west and across the street from 3650 Mandela Parkway) Oakland, CA Assessor's Parcel No. 007-061701405
5. Project Sponsor's Name and Address:	Tulsee Nathu and Payal Nathu c/o Architectural Dimensions Attn: Joanne Park / James Heilbronner 300 Frank H. Ogawa Plaza, Suite 375 Oakland, CA 94612 510.463.8300
6. Existing General Plan Designations:	Regional Commercial (Retail/Commercial – West Oakland Specific Plan)
7. Existing Zoning:	Regional Commercial (CR-1) Height Limit: 90 feet
8. Requested Permits:	Major Conditional Use Permit for non-residential projects involving more than 25,000 square feet of floor area in the CR-1 Zone Minor Conditional Use Permits for Transient Habitation and to allow Tandem Parking for Non-residential Activities Regular Design Review for new construction Minor Variance for reduction of front yard setback Tree Protection Permit to remove one street tree Other City Permits including local and State agencies

II. Executive Summary

The proposed Mandela Parkway Hotel Project (Project) would be developed on a vacant 1-acre parcel bounded by Mandela Parkway and overhead ramps associated with approaches to the Bay Bridge in West Oakland (Assessor's Parcel Number 007-0617-014-05; **Figure 1**).

The Project proposes a 220-room, 6-story hotel development over two levels of underground parking. The Project would have a total floor area of approximately 142,813 square feet for commercial (hotel) use. Parking would include 166 vehicle spaces and approximately 22 bicycle spaces.

This California Environmental Quality Act (CEQA) Analysis evaluates the proposed Project. Specifically, the Project is considered an urban infill development project, and is in the class of projects that is exempt from CEQA review under CEQA Guidelines Section 15332 (Class 32 exemption). In addition to the Class 32 exemption, this analysis uses CEQA streamlining and/or tiering provisions under CEQA Guidelines Section 15164 and Section 15183 to tier from the program-level analysis completed in the City of Oakland (City) General Plan Land Use and Transportation Element (LUTE) and its Environmental Impact Report (EIR),[1,2] the West Oakland Redevelopment Plan (Redevelopment Plan) and its EIR,[3,4] and the West Oakland Specific Plan (WOSP) and its EIR[5,6]—collectively referred to herein as the Program EIRs—which analyzed environmental impacts associated with adoption and implementation of the General Plan, Redevelopment Plan, and the WOSP.

The Project would be required to implement the City Standard Conditions of Approval (SCAs) included as **Attachment A** to avoid or reduce potential impacts.

Based on the information and conclusions set forth on the following pages, this CEQA Analysis consists of a Class 32 CEQA Exemption and findings of consistency with Sections 15183 and 15164. In addition, the analyses provided in the WOSP EIR, LUTE EIR, and Redevelopment Plan EIR previously analyzed the potential environmental effects associated with this Project and none of the criteria under Sections 15162 or 15163 are present. No additional environmental documentation or analysis is required.

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[1] City of Oakland, 1998. General Plan, Land Use and Transportation Element.

[2] City of Oakland, 1998. Oakland General Plan Land Use and Transportation Element EIR.

[3] City of Oakland, 2003. West Oakland Redevelopment Plan.

[4] City of Oakland, 2003. West Oakland Redevelopment Plan EIR.

[5] City of Oakland, 2014. West Oakland Specific Plan.

[6] City of Oakland, 2014. West Oakland Specific Plan EIR.

Figure 1. Project Vicinity

Source: Architectural Dimensions

III. Background

The following describes the Program EIRs that constitute the previous CEQA documents considered in this CEQA Analysis. Each of the following documents is hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, California, 94612, and on the City of Oakland Planning and Building Department website at http://www2.oaklandnet.com/Government/o/PBN/OurServices/Application/DOWD009157.

Applicable Previous CEQA Documents and Program EIRs

Land Use and Transportation Element EIR

The City certified the EIR for its General Plan LUTE in 1998. The LUTE identifies policies to guide land use changes in the City and sets forth an action program to implement the land use policy through development controls and other strategies. The 1998 LUTE EIR is designated a Program EIR under CEQA Guidelines Sections 15168, 15183, and 15183.3. As such, subsequent activities under the LUTE are subject to requirements under each of the aforementioned CEQA Sections.

Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other Program EIRs prepared after the 1998 LUTE EIR, either as mitigation measures or newer City SCAs, the latter of which are described below.

Environmental Effects Summary – 1998 LUTE EIR
The 1998 LUTE EIR (including its Initial Study Checklist) determined that development consistent with the LUTE would result in impacts that would be reduced to a less than significant level with the implementation of mitigation measures: aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including PM_{10}] and emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant); and transportation/circulation (intersection operations Downtown).

Less than significant impacts were identified for the following topics in the LUTE EIR and Initial Study: aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise downtown and citywide, multifamily near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, parks services); and transportation/circulation (transit demand). No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental topics in the LUTE EIR: air quality (regional emissions, roadway emissions Downtown); noise (construction noise and vibration in Downtown); public services (fire safety); transportation/circulation (roadway segment operations); wind hazards, and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City’s approvals.

West Oakland Redevelopment Plan EIR

The City certified the EIR for the West Oakland Redevelopment Plan (Redevelopment Plan) in 2003. The Redevelopment Plan identifies policies in conformance with the General Plan to eliminate blight and blighting influences and revitalize the community in terms of its housing resources, its employment opportunities, the economic well-being of its residents, and the condition of its public infrastructure, services, programs, and facilities. The Redevelopment Plan presents a basic framework and a process within which specific redevelopment projects, programs and other activities will be established and implemented over time and identifies three Subareas targeted for redevelopment and revitalization; the Project site is within the Clawson/McClymonds/Bunch Subarea. The 2003 Redevelopment Plan EIR is designated a Program EIR under CEQA Guidelines Sections 15168, 15180, 15183, and 15183.3. As such, subsequent activities under the Redevelopment Plan are subject to requirements under each of the aforementioned CEQA Sections.

Applicable mitigation measures identified in the 2003 Redevelopment Plan EIR are largely the same as those identified in the other Program EIRs prepared after the 2003 Redevelopment Plan EIR, either as mitigation measures or newer City SCAs, the latter of which are described below.

Environmental Effects Summary – 2003 Redevelopment Plan EIR

The 2003 Redevelopment Plan EIR (including its Initial Study Checklist) determined that development consistent with the Redevelopment Plan would result in impacts that would be reduced to a less than significant level with the implementation of mitigation measures: air quality (construction emissions); cultural resources; hazards and hazardous materials; noise; and public infrastructure.

The 2003 Redevelopment Plan EIR (including its Initial Study Checklist) concluded that implementation of the Redevelopment Plan would either have no impact, or would have a less than significant impact on the following major environmental topics and/or subsets of major topics: aesthetics; agricultural resources; air quality (odors); biological resources; geology and soils; hazards and hazardous materials (safety hazards due to air traffic, interference with an adopted emergency response plan, and exposure to wildland fires); hydrology and water quality (flooding, seiche, tsunami or mudflows); land use; mineral resources; noise (exposure to aircraft noise); population and housing; public services; recreation; transportation; and utilities and services.

Significant unavoidable impacts were identified for the following environmental topics in the Redevelopment Plan EIR: air quality (compatibility of population growth with air quality, cumulative NO_x and PM_{10} emissions) and noise (cumulative traffic noise). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

West Oakland Specific Plan

The City certified the EIR for the WOSP in 2014. The WOSP identifies policies to guide future development in West Oakland by providing a comprehensive and multi-faceted strategy for development and redevelopment of vacant and/or underutilized commercial and industrial properties in strategic areas (Opportunity Areas) of West Oakland. The WOSP designates the Project site as part of Mandela/West Grand Opportunity Area. The WOSP establishes a land use and development framework, identifies needed transportation and infrastructure improvements, and recommends implementation strategies needed to develop these areas. Subsequent activities under the WOSP are subject to environmental requirements pursuant to the WOSP EIR. The effects of future growth and development within West Oakland were fully considered in the cumulative growth projections factored into the WOSP EIR analysis.

Environmental Effects Summary

The 2014 WOSP EIR (including its Initial Study Checklist) determined that development consistent with the WOSP would result in impacts that would be reduced to a less than significant level with the implementation of mitigation measures and/or SCAs: aesthetics (light and glare), air quality (construction dust), biological resources (special status species, movement and breeding, local policy conflicts), cultural resources, geology (seismic shaking, erosion, unstable/expansive soil), hazards and hazardous materials, hydrology and water quality (construction water quality and runoff), noise (construction and operational, vibration), and transportation/circulation (construction period).

Less than significant impacts were identified for the following resources in the WOSP EIR and Initial Study: aesthetics (scenic resources, shadow, lighting, wind), air quality (clean air plan consistency, carbon dioxide concentrations), biological resources (wetlands, riparian, habitat conservation plan conflicts, cumulative impacts), greenhouse gas (GHG) emissions (except as noted below), land use, geology (earthquake/fault rupture, landslides), hydrology and water quality (waste discharge, groundwater, floods, dam failure, seiche/tsunami), noise (traffic, airport noise), population and housing, public services, transportation/circulation (congestion management program, travel times, safety), utilities and service systems, and mineral resources (loss). No impacts were identified for agricultural or forestry resources.

Significant unavoidable impacts were identified for the following environmental resources in the WOSP EIR: air quality (odors, construction and operational criteria pollutant emissions, operational and exposure to toxic air emissions), GHG emissions (new stationary sources of GHG emissions, individual development projects), and transportation/circulation (existing plus project, cumulative plus project).

Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Standard Conditions of Approval

The City established its Standard Conditions of Approval and Uniformly Applied Development Standards in 2008, and they have since been amended and revised several times.[7] The City's SCAs are incorporated into new and changed projects as conditions of approval regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Oakland Protected Trees Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, California Building Code and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. The SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—e.g., **SCA-AIR-1**, **SCA-AIR-2**. The SCA title is also provided—e.g., **SCA-AIR-1: Construction-Related Air Pollution (Dust and Equipment Emissions)**.

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[7] A revised set of SCAs was published by the City of Oakland on April 11, 2017.

Consistent with the requirements of CEQA, a determination of whether the Project would have a significant impact has occurred prior to the approval of the Project and, where applicable, SCAs have been identified that will mitigate them. In some instances, exactly how the SCAs identified will be achieved awaits completion of future studies, an approach that is legally permissible where SCAs are known to be feasible for the impact identified, where subsequent compliance with identified federal, state, or local regulations or requirements apply, where specific performance criteria is specified and required, and where the proposed project commits to developing measures that comply with the requirements and criteria identified.

IV. Purpose and Summary of this CEQA Document

The purpose of this document is to evaluate the CEQA compliance of the Project as proposed. Applicable CEQA sections are described below, each of which, separately and independently, provides a basis for CEQA compliance.

1. **Class 32 Categorical Exemption.** Public Resources Code Section 21084 and State CEQA Guidelines Section 15332, Class 32 Categorical Exemptions, apply to infill development projects that meet the following conditions:

    - Are consistent with applicable general plan policies and zoning designations
    - Occur within a project site smaller than five acres and are substantially surrounded by urban uses
    - Have no value as habitat for endangered, rare or threatened species
    - Would not result in any significant effects relating to traffic, noise, air quality, or water quality
    - Are located on a site that can be adequately served by all required utilities and public services

2. **Community Plan Exemption.** Public Resources Code Section 21083.3 and State CEQA Guidelines Section 15183 allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Section 15183(c) specifies that "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…, then an EIR need not be prepared for the project solely on the basis of that impact."

    The analysis in the Program EIRs—the LUTE EIR, Redevelopment Plan EIR, and the WOSP EIR—is applicable to the Project and provides the basis for use of the Community Plan Exemption.

3. **Addendum.** Public Resources Code Section 21166 and CEQA Guidelines Section 15164 state that an addendum to a certified EIR is allowed when minor changes or additions are necessary and none of the conditions for preparation of a subsequent EIR or negative declaration, per Section 15162, are satisfied. The analysis in the 2014 WOSP EIR directly applies to the Project, providing the basis for use of an Addendum.

4. **Program EIRs.** CEQA Guidelines Section 15168 (Program EIR) provide that the LUTE EIR, Redevelopment Plan EIR, and the WOSP EIR can be used as Program EIRs in support of streamlining and/or tiering provisions under CEQA. Section 15168 defines the Program EIR as one prepared on a series of actions that can be characterized as one large project and are related geographically and by other shared characteristics. Section 15168 also states that "subsequent activities in the program EIR must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR and no new environmental document would be required.

5. **Qualified Infill Exemption.** Public Resources Code Section 21094.5 and State CEQA Guidelines Section 15183.3 allow streamlining for certain qualified infill projects by limiting the topics that are subject to review at the project level, provided the effects of infill development have been addressed in a planning level decision, or by uniformly applying development policies or standards. Infill projects are eligible if they are:

   - located in an urban area on a site that either has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site's perimeter;
   - able to satisfy the performance standards provided in State CEQA Guidelines Appendix M; and
   - consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy. No additional environmental review is required if the infill project would not cause any new specific effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.

   The analysis in the Program EIRs—the LUTE EIR, Redevelopment Plan EIR, and the WOSP EIR—is applicable to the Project and provides the basis for use of the Qualified Infill Exemption.

This CEQA Analysis for the Project provided herein evaluates the specific environmental effects of the Project as proposed and whether such impacts were adequately covered by the Program EIRs to allow the above-listed provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in the General Plan, Redevelopment Plan, and WOSP. The Project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the WOSP as well as applicable SCAs; therefore, the mitigation measures and SCAs are herein assumed to be included as part of the Project. See Attachment A for the full text of applicable SCAs included in this CEQA Analysis. (Note that this is not an exhaustive list of all SCAs that may be required by the City for the Project.)

Mandela Parkway Hotel Project CEQA Compliance

The Project satisfies each of the foregoing CEQA provisions, as summarized below.

- **Class 32 Exemption**: The analysis conducted, as described in this document, provides substantial evidence that the Project qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would not result in any new significant effects on the environment. In addition, none of the exceptions to CEQA categorical exemptions (CEQA Guidelines Section 15300.2) are applicable to the Project.
- **Community Plan Exemption**: Based on the analysis conducted in this document, and pursuant to CEQA Guidelines Section 15183, the Project on a separate and independent basis qualifies for the exemption for projects consistent with a community plan, general plan, or zoning. This CEQA document considers the analysis in the analysis in the 1998 LUTE EIR, 2003 Redevelopment Plan EIR, and 2014 WOSP EIR for the Project. As described within this CEQA Analysis, the Project is permitted in the zoning district where the Project site is located and consistent with the bulk, density, and land use standards envisioned in the General Plan. The CEQA Analysis (and attachments) provided herein concludes that the Project would not result in significant impacts that (1) would be peculiar to the Project or Project site; (2) were not identified as significant project-level, cumulative, or off-site effects in the Program EIRs; or (3) were previously identified as significant but later determined as having a more severe adverse impact than that discussed

in the Program EIRs. Findings regarding the Project's consistency with the General Plan are included as **Attachment B**.

- **Addendum**: The analysis conducted in this document demonstrates that, pursuant to CEQA Guidelines Section 15162 through 15164, preparation of an addendum to the WOSP EIR is allowed for the Project. Therefore, this CEQA Analysis is considered to be an addendum. The level of development currently proposed for the site is within the broader development assumptions analyzed in the WOSP EIR. The Project is consistent with the land uses identified for the area in the WOSP and analyzed in the 2014 WOSP EIR. The analysis in the WOSP EIR and in this CEQA Analysis demonstrates that the Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162. Therefore, the Project meets the requirements for preparation of an addendum, as described in **Attachment C** to this document.
- **Program EIRs and Redevelopment Projects:** The Project is consistent with the land uses identified for the area and analyzed in the WOSP EIR, Redevelopment Plan EIR, and LUTE EIR (Program EIRs). The analysis in the Program EIRs and in this CEQA Analysis demonstrates that the Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Sections 15162 and 15180.
- **Qualified Infill Exemption**: The analysis conducted indicates that the Project is eligible for a qualified infill exemption and is generally consistent with the required performance standards provided in CEQA Guidelines Appendix M, as evaluated in **Attachment D**. This CEQA Analysis supports that the Project would not cause any new specific effects or more significant effects than previously identified in applicable planning level EIRs, and uniformly applicable development policies or standards (i.e., SCAs) would substantially mitigate the effects of the Project. The Project is proposed for development on a previously developed site in West Oakland and is surrounded by urban uses. Further, the Project is consistent with the land use, density, building intensity, and applicable policies for the site.

Examination of the analysis, findings, and conclusions of the Program EIRs, as summarized in the CEQA analysis below, indicates that the prior CEQA document adequately analyzed and covered the potential environmental impacts associated with the Project. The Project would not result in a new, peculiar, significant environmental impact or a substantial increase in the severity of a significant environmental impact than determined in previous Program EIRs. The Class 32 exemption as well as the streamlining and/or tiering provisions of CEQA apply to the Project. Therefore, no further review or analysis, under CEQA, is required.

SCAs identified in the WOSP EIR that would apply to the Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Analysis. Because the SCAs are mandatory City requirements, the impact analysis for the Project assumes that they will be imposed and implemented, which the Project sponsor has agreed to do or ensure as part of the Project. If this CEQA Analysis or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the Project is not affected. Most of the SCAs that are identified for the Project were also identified in the 2014 WOSP EIR; the 1998 LUTE EIR and 2003 Redevelopment Plan EIR were developed prior to the City's application of SCAs.

V. Project Description

This section describes the proposed Mandela Parkway Hotel Project evaluated in this CEQA Analysis and includes a description of the Project site, existing site conditions, the proposed development, and the required project approvals.

Project Location

As shown in Figure 1, the approximately 1-acre site in West Oakland is bounded by Mandela Parkway, commercial and retail development, Beach Street, and elevated highway ramps (Interstates 580 and 880) associated with approaches to the Bay Bridge. The Project site consists of one parcel at Mandela Parkway (Assessor Parcel Number 007-0617-014-05). Regional access is provided by I-80, I-580, I-880, and I-980. Alameda–Contra Costa Transit (AC Transit) bus routes C, F, J, and 26 are all within 0.25 mile of the Project site, and the 72R Rapid Bus Line along San Pablo Avenue is 0.5 mile from the site.

Existing Conditions and Surrounding Land Uses

The Project site is a fenced vacant lot with no direct public access. The parcel has been previously disturbed and is currently covered by ruderal species. Existing land uses in the vicinity include retail and commercial development (including a hotel on the east side of Mandela Parkway), light industrial/utility facilities, residential, railways, and elevated freeways.

General Plan and Zoning Designations

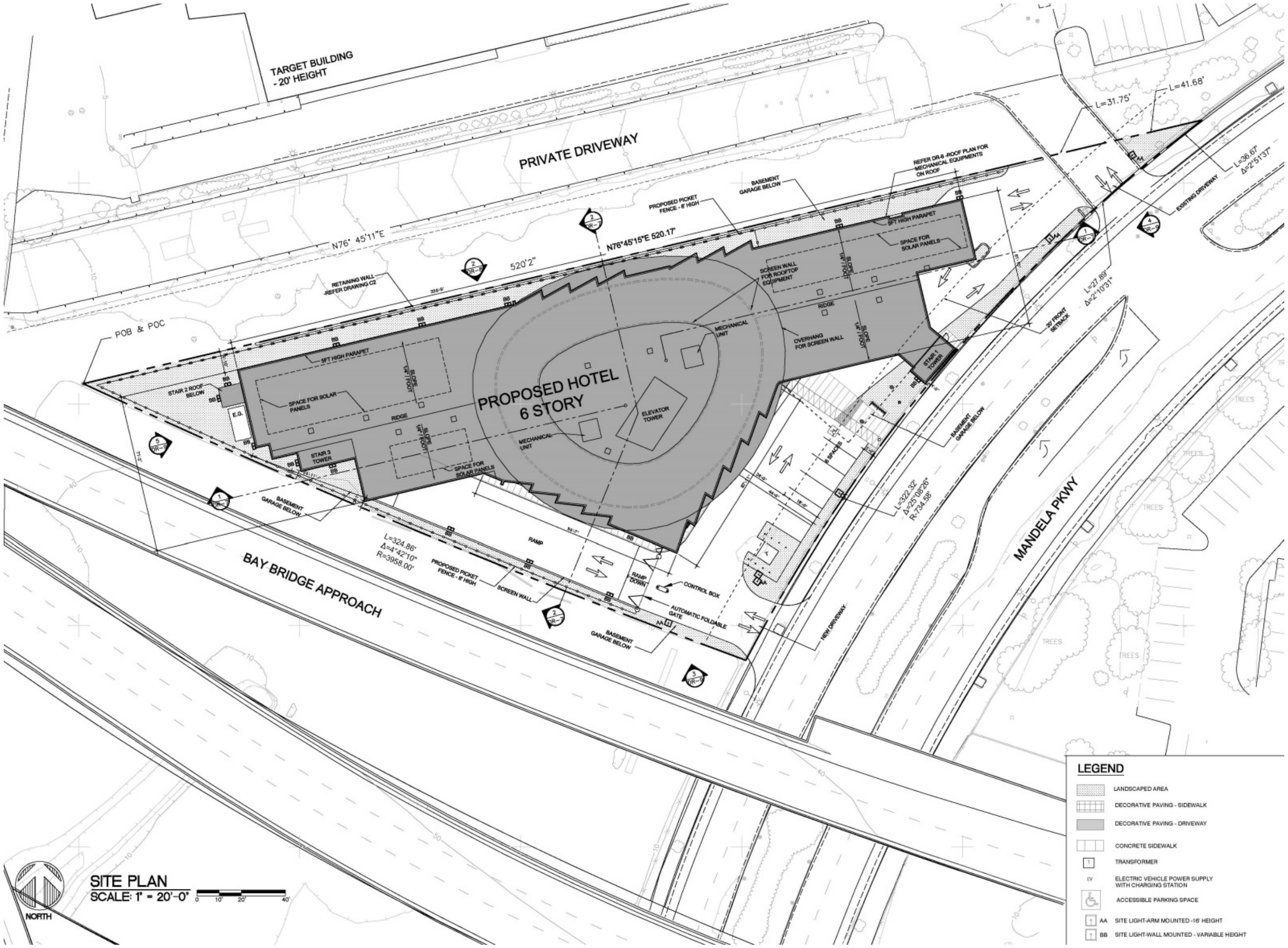
The Oakland General Plan designates the Project site and vicinity as Regional Commercial (Retail/Commercial). The intent of the Regional Commercial classification is to maintain, support, and create areas of the City that serve as region-drawing centers of activity. The Regional Commercial classification includes a mix of commercial, office, entertainment, arts, recreation, sports, and visitor-serving activities, as well as residential, mixed use development, and other uses of similar character or supportive of regional drawing power.

The Project site is zoned as Regional Commercial (CR-1), which is also intended to maintain, support, and create areas of the City that serve as region-drawing centers of activities. Transient habitation activities (e.g., hotel) are permitted in this zone with a Conditional Use Permit. The building height limit in this zone is 90 feet with a maximum of eight stories (not including underground construction), and the maximum nonresidential floor area ratio (FAR) is 4.0.

The WOSP designates the site as part of Mandela/West Grand Opportunity Area, which is intended to retain and expand existing commercial and compatible urban manufacturing, construction, and light industrial businesses that have well-paid blue collar and green collar jobs, while attracting new industries such as the life sciences, information technology, and clean-tech businesses. The proposed hotel use for the Project site is consistent with the land uses identified for the area in the WOSP and analyzed in the 2014 WOSP EIR.

Proposed Project

The Project sponsor is proposing development of a 220-room, 6-story hotel on an approximately 1-acre site at Mandela Parkway (**Figure 2**). The hotel would be constructed over two levels of underground parking and would provide surface parking for hotel patrons.



LEGEND	
▨	LANDSCAPED AREA
▦	DECORATIVE PAVING - SIDEWALK
■	DECORATIVE PAVING - DRIVEWAY
▭	CONCRETE SIDEWALK
T	TRANSFORMER
EV	ELECTRIC VEHICLE POWER SUPPLY WITH CHARGING STATION
♿	ACCESSIBLE PARKING SPACE
AA	SITE LIGHT-ARM MOUNTED -16' HEIGHT
BB	SITE LIGHT-WALL MOUNTED - VARIABLE HEIGHT

Figure 2. Project Site Plan

Source: Architectural Dimensions

The hotel building would consist of five floors of wood-frame construction over one floor of concrete podium. The first floor of the proposed hotel would be at grade level and would include the main lobby and registration, elevator access to the parking garage and guest rooms, a fitness center, indoor pool, guest laundry, meeting facilities, and breakfast areas in addition to space for hotel operations and mechanical equipment (**Figure 3a**). Floors 2 – 6 would have repetitive floor plans, providing 44 guest rooms per 24,988-square-foot floor, with elevator access to the lobby and space for hotel operations and mechanical equipment (**Figure 3b**). The Project would have a total floor area of 142,813 square feet and the Project FAR would be 3.07. Table 1 summarizes the coverage for the 46,445-square foot site.

Table 1. Site Area Summary

Description	Area	Percent Cover
Building Footprint	17,873 square feet	38%
Surface Parking	942 square feet	2%
Landscape	8,517 square feet	18%
Hardscape	19,086 square feet	41%
Total	46,445 square feet	100.0%

Along Mandela Parkway, the ground floor would provide the main entrance and lobby, a porte-cochere, limited surface parking, off-street commercial loading, underground parking garage vehicle ingress/egress, and stairwell and elevator access. The total ground-level floor area would be 17,873 square feet.

Vehicular access for the site would be provided through two driveways on Mandela Parkway: an existing full access driveway on the north end of the Project site that would be shared with an existing Target Store and an East Bay Municipal Utility District facility, and a right-in/right-out only driveway on the south end of the Project site.

The existing wire fencing would be replaced with an 8-foot tall picket fence along the southwestern and southeastern edges of the site. Screening landscaping (5 feet x 3.5 feet) and other pertaining decorative low-height fences and/or walls would be installed around the site perimeter consistent with Planning Code per Chapters 17.124 and 17.136.

The Project would create approximately 40,040 square feet of new impervious area and is subject to Provision C.3 of the City's municipal regional stormwater permit. As such, the Project proposes the use of Bay-Friendly landscaping, the provision of stormwater biotreatment areas, and minimizing surface parking, among other site-design and source control measures.

To minimize surface parking area, the Project would construct an underground parking garage, which would have a total area of 56,951 square feet and would accommodate 160 vehicle parking spaces (**Figures 3c – 3d**). Parking would be provided via an automated parking system with full-time parking attendants. The Project would provide 6 surface parking spaces, for a total of 166 vehicle parking spaces. Eleven long-term and 11 short-term bicycle parking spaces would also be provided on-site. Vehicles would access the site from an existing driveway and a new driveway along Mandela Parkway.

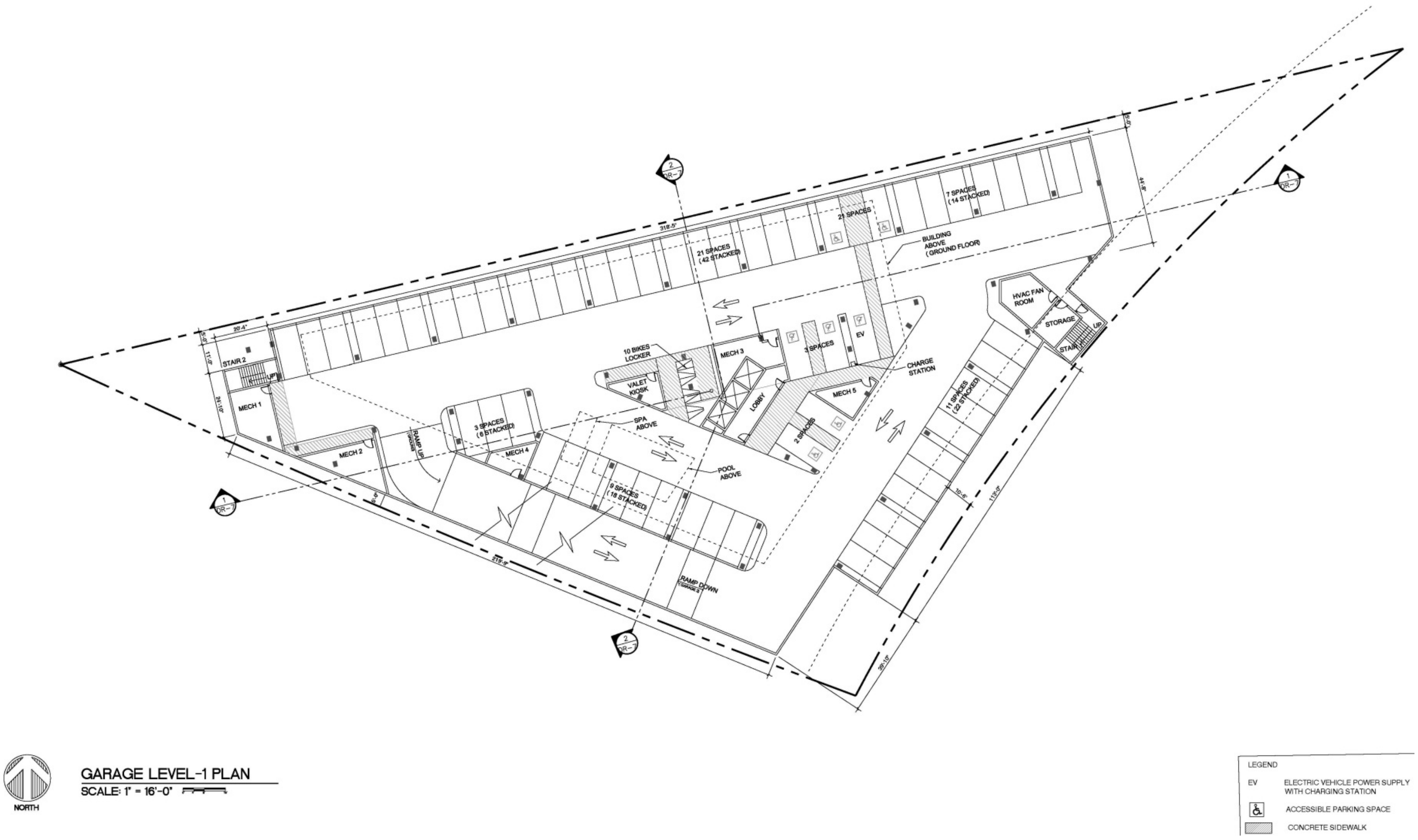


Figure 3c. Garage – Level 1

Source: Architectural Dimensions

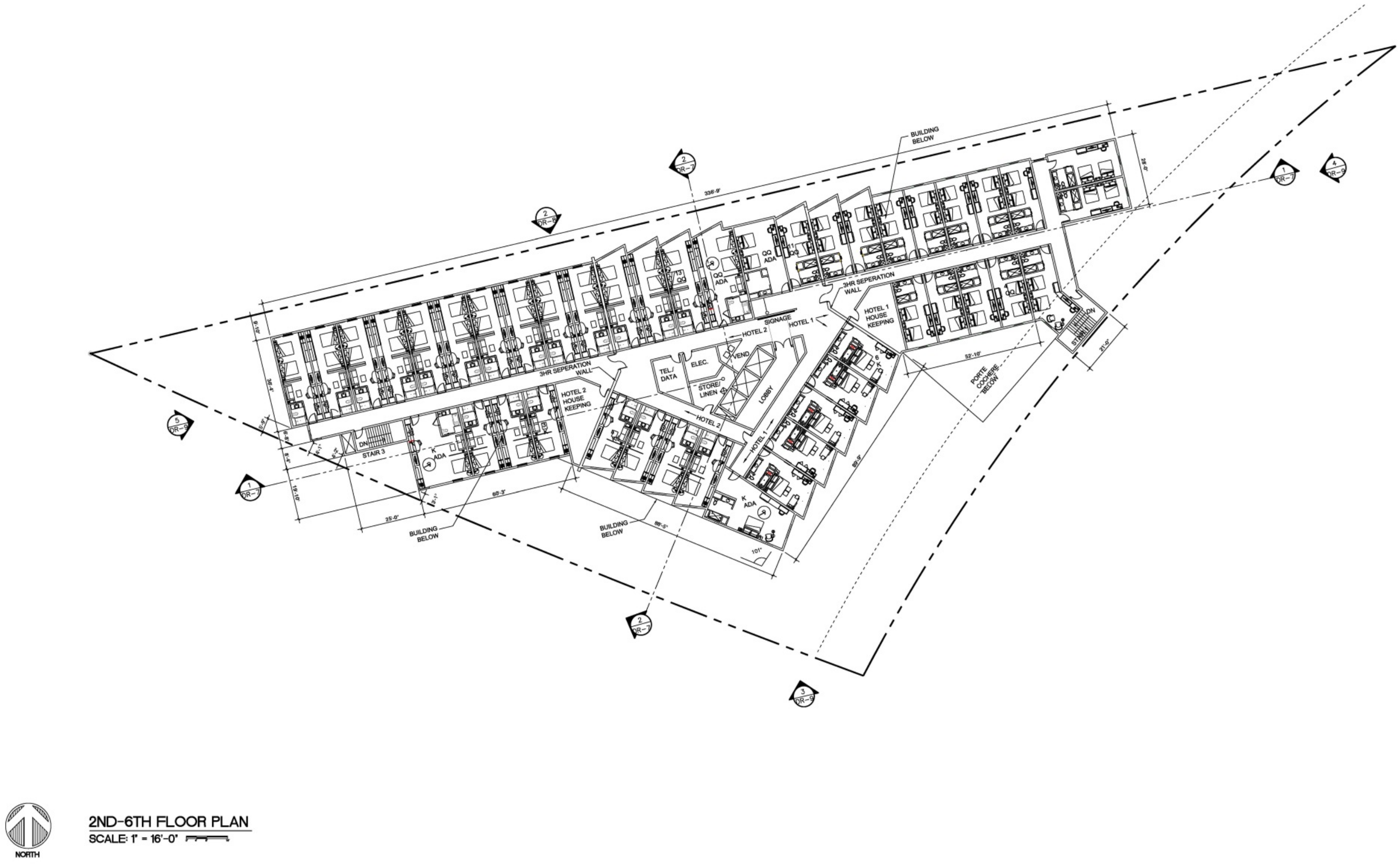


Figure 3b. Site Plan – Levels 2 – 6

Source: Architectural Dimensions

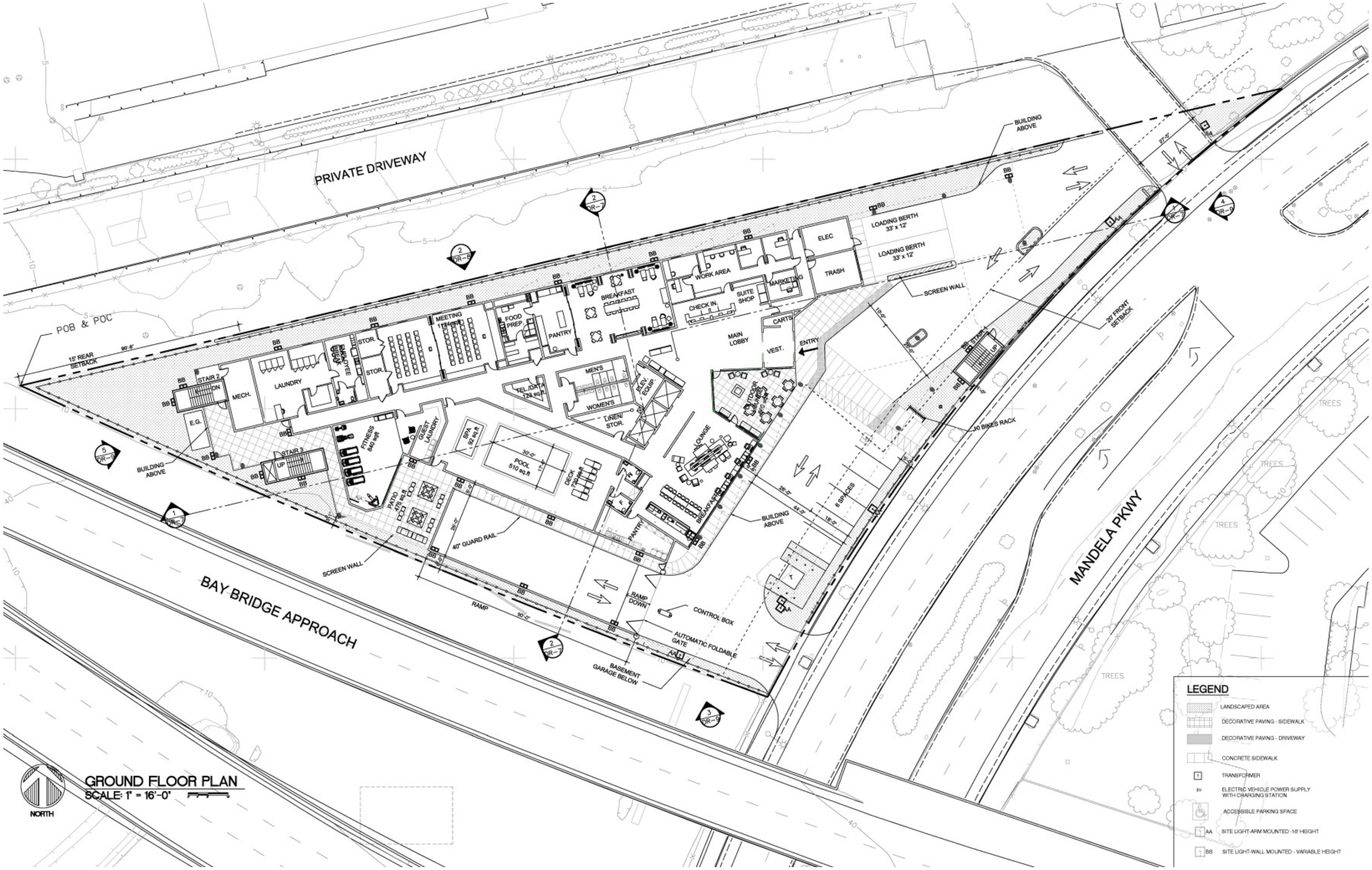


Figure 3a. Site Plan – Ground Floor

Source: Architectural Dimensions

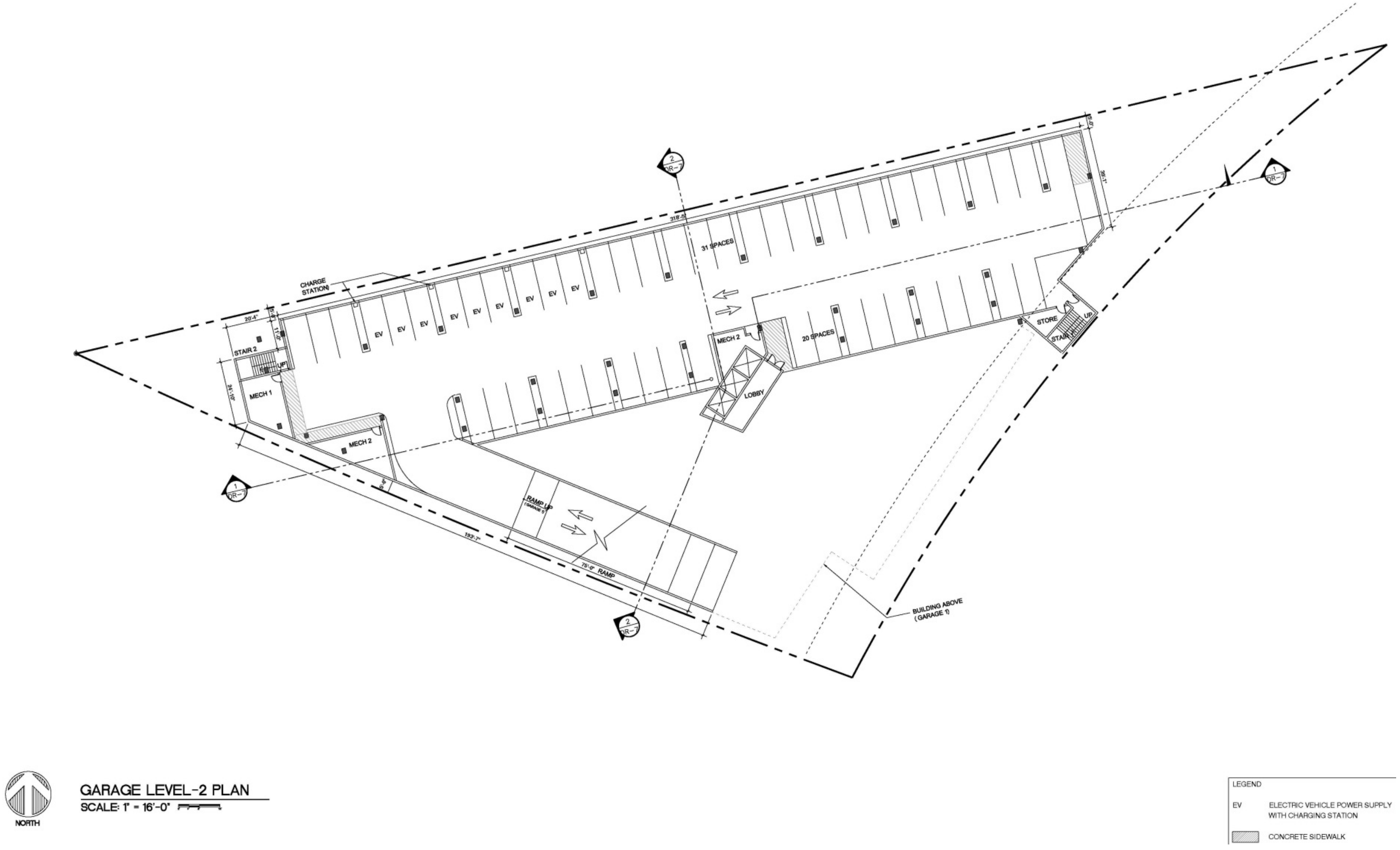


Figure 3d. Garage – Level 2

Source: Architectural Dimensions

The Project includes other associated improvements such as hardscape, storm drain, and utility connections. On-site utilities would include gas, electricity, domestic water, wastewater, and storm drainage. All on-site utilities would be designed in accordance with applicable codes and current engineering practices. The Project would also incorporate green building features such as rooftop solar (**Figure 3e**) and energy-efficient lighting, and would be GreenPoint rated in compliance with the City's Green Building Ordinance.

The Project would at least require discretionary approvals for a Conditional Use Permit, Regular Design Review and Variance pursuant to Oakland Planning Code Sections 17.37.030 (for transient habitation commercial activities [e.g., a hotel]) and 17.37.020 (for new building or facility construction) in the CR-1 Zone District, as well as a Minor Variance for reduction of the front yard setback.

Project Construction

The Project is currently in the design phase of development and no details are as-yet available regarding the construction schedule and phasing or site grading. For the purpose of this analysis, however, the following is assumed. On-site construction work is expected to span approximately 17 months. The first month would consist of site preparation. Grading and excavation for the underground garage would span approximately 3 months. The remainder of the construction period would consist of building construction.

Grading work would include surface preparation, utility connections, and excavations for underground parking, the foundation, footings, and utility services.

Construction would require excavation to approximately 30 feet below grade for foundation construction, generating approximately 32,500 cubic yards of material to be disposed of offsite. Depth to groundwater is approximately 8 feet below ground surface and dewatering is anticipated to be required during construction.

Typical equipment used during construction would include an excavator, backhoe, trencher, tower crane, man hoist, forklift, gradall, and paving equipment. Staging would occur as much as possible within the Project site. Street frontages and parking lanes are restricted, but will need to be used at times for deliveries and removals of materials and equipment subject to City review and approvals.

Project Approvals

The Project requires the following discretionary actions/approvals, including without limitation:

Actions by the City of Oakland

- Conditional Use Permits for transient habitation-commercial activities and to allow tandem parking for non-residential activities
- Regular Design Review permits for new building construction
- Minor Variance for reduction of front yard setback
- Encroachment permits or other required permits for new construction, obstruction. or alterations within Mandela Parkway (road)
- Grading permits and building permits

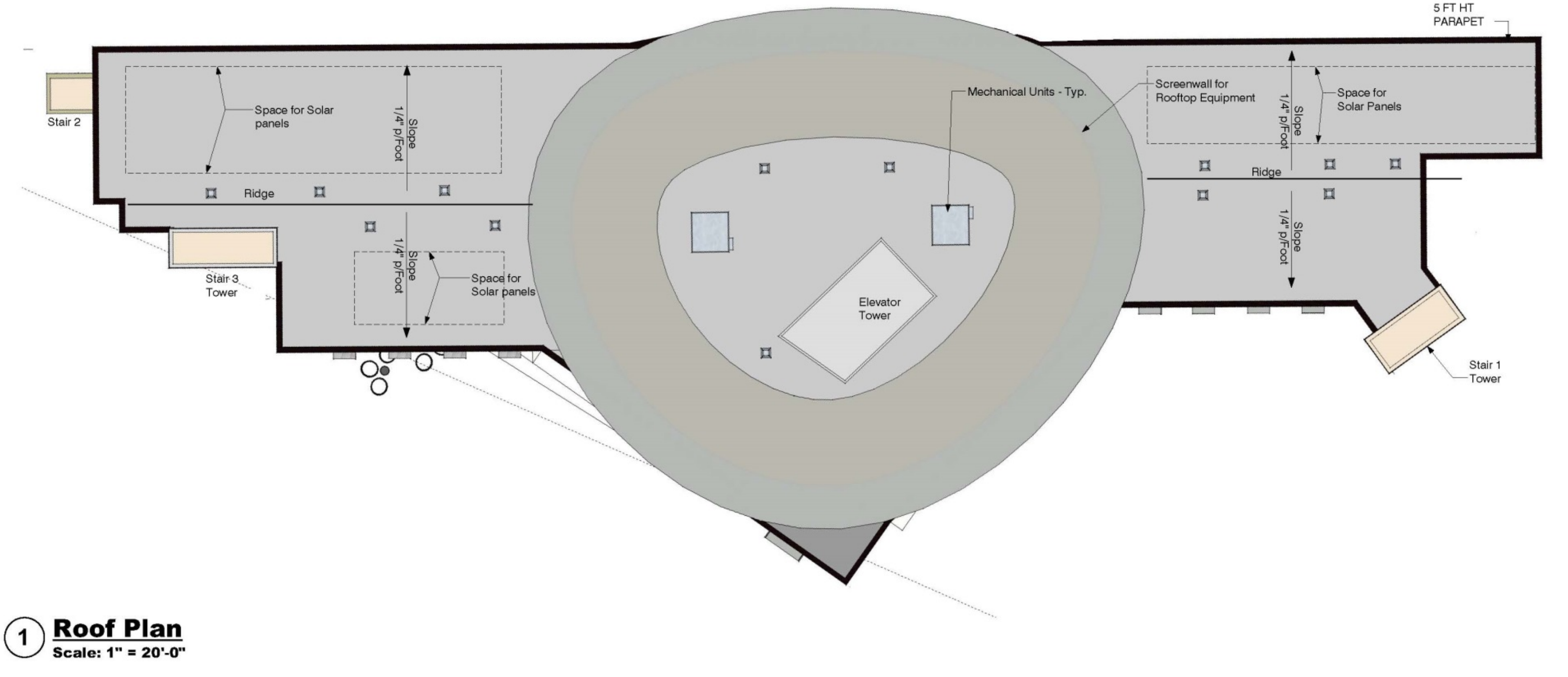


Figure 3e. Roof Plan

Source: Architectural Dimensions

Actions by Other Agencies

A number of other public agencies' approval and authorization will or may be required to implement the Project. These agencies and their approvals include:

- Bay Area Air Quality Management District (BAAQMD) – Issuance of permits for installation and operation of the emergency generator.
- East Bay Municipal Utilities District – Approval of new service requests and water meter installation.
- Regional Water Quality Control Board (RWQCB) – Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water Permit, and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations, and conditions for all previous contamination at the site have been met.
- State of California Department of Transportation (Caltrans) – Project-related construction and encroachment within Caltrans property or structures and/or within Mandela Parkway (road).

VI. Summary of CEQA Findings

An evaluation of the proposed Project is provided in the CEQA Analysis below. This evaluation concludes that the Project qualifies for an exemption from additional environmental review and the Project is consistent with the development density and land use characteristics established by existing zoning and General Plan policies for which an EIR was certified (i.e., the Program EIRs). As such, the Project would be required to comply with the applicable City of Oakland SCAs (see Attachment A for a complete list of SCAs referred to and required by this CEQA Analysis). With implementation of the applicable SCAs, the Project would not result in a substantial increase in the severity of significant impacts that were previously identified in the General Plan or any new significant impacts that were not previously identified in the Previous EIRs.

In accordance with Public Resources Code Sections 21083.3, 21094.5, and 21166 and State CEQA Guidelines Sections 15162, 15164, 15168, 15183, 15883.3, and 15332, and as set forth in the CEQA Analysis below, the Project qualifies for an exemption and CEQA tiering/streamlining because the following findings can be made:

- **Class 32 Exemption:** The Project is of a class of urban infill projects which have been determined by the State Secretary for Resources not to have a significant effect on the environment and which are therefore exempt from the provisions of CEQA. The Project does not have a reasonable probability of having a significant effect on the environment due to unusual circumstances that would pose an exception to this determination. The Project is consistent with Criterion 15332 (a), (b), (c), (d), and (e), and no exceptions per CEQA Guidelines Section 15300.2 apply to the Project that have not been previously identified and mitigated under the City of Oakland General Plan and its supporting EIRs. In accordance with CEQA Guidelines Section 15332, the Project is exempt from further environmental review.
- **Community Plan Exemption:** The following analysis demonstrates that the Project is consistent with the development density established by existing zoning and General Plan policies for which an EIR was certified (i.e., the Program EIRs). The Project is consistent with the WOSP and will not result in significant impacts that were not previously identified as significant project-level, cumulative, or offsite effects in the WOSP EIR.
- **Addendum**: The analysis conducted indicates that an addendum to the 2014 WOSP EIR applies. The conclusions reached in the WOSP EIR remain valid, and no supplemental environmental review is required for the Project. The Project would not cause new significant impacts that were not previously identified in the WOSP EIR or result in a substantial increase in the severity of previously identified significant impacts. No new mitigation measures would be necessary to reduce significant impacts. No changes have occurred with respect to the circumstances surrounding the WOSP that would cause significant environmental impacts to which the Project would contribute considerably, and no new information has been put forward that shows that the Project would cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this addendum, in accordance with Public Resources Code Section 21166 and CEQA Guidelines Section 15164.
- **Program EIRs:** The analysis in the Program EIRs and in this CEQA Analysis demonstrates that the Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162, because the level of development proposed for the site is within the broader development assumptions analyzed in the

Program EIRs. The effects of the Project as proposed have been addressed in the Program EIRs and no further environmental documents are required in accordance with CEQA Guidelines Sections 15168.

- **Qualified Infill Exemption.** The following analysis demonstrates that the Project is located in an urban area on a site that has been previously developed; satisfies the performance standards provided in CEQA Guidelines Appendix M; and is consistent with the General Plan land use designation, density, building intensity and applicable policies. As such, this environmental review is limited to an assessment of whether the project may cause any project-specific effects, and relies on uniformly applicable development policies or standards to substantially mitigate cumulative effects.

Each of the above findings provides a separate and independent basis for CEQA compliance.

for

Darin Ranelletti
Environmental Compliance Officer

11/30/17

Date

VII. Class 32 Categorical Exemption Overview

Article 19 of the CEQA Guidelines Sections 15300 to 15333, includes a list of classes of projects determined to not have a significant effect on the environment, and therefore are exempt from CEQA. Among the classes of projects that are exempt from CEQA review are those projects that urban infill development, as defined by CEQA Guidelines Section 15332 (Class 32 exemption). Infill projects must meet the following conditions to be exempt:

(a) *The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.*

(b) *The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.*

(c) *The project site has no value as habitat for endangered, rare or threatened species.*

(d) *Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.*

(e) *The site can be adequately served by all required utilities and public services.*

Even if a project is ordinarily exempt under any of the potential categorical exemptions, CEQA Guidelines Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. In these cases, the CEQA exemption would not apply to a project. Exceptions to a categorical exemption would occur under the following circumstances:

(a) *Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located. A project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.*

(b) *Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.*

(c) *Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.*

(d) *Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.*

(e) *Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.*

(f) *Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.*

The analysis presented in the following section provides substantial evidence that the Project properly qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would **not** have a significant effect on the environment. In addition, the analysis also presents substantial evidence that there are **no exceptions** that apply to the Project or its site, that the Project would not have a significant effect on the environment, and that the Class 32 exemption remains applicable.

Further, as outlined in Section IV–Purpose and Summary, the exemption and exception analyses in Section–VIII, Class 32 Categorical Exemption Analysis, and Section IX–Exceptions to Categorical Exemptions, as well as Attachments B through D, provide substantial evidence to support the use of the:

- Community Plan Exemption,
- Addendum,
- Program EIR, and
- Infill Project Streamlining.

VIII. Class 32 Categorical Exemption Analysis

The following analysis demonstrates that the Project qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would not have a significant effect on the environment.

Criterion §15332(a): General Plan & Zoning Consistency

Yes No
☑ ☐ The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

General Plan

The General Plan land use designation for the site is Regional Commercial (Retail/Commercial). The intent of the Regional Commercial classification is to maintain, support, and create areas of the City that serve as region-drawing centers of activity. The Regional Commercial classification includes a mix of commercial, office, entertainment, arts, recreation, sports, and visitor-serving activities, as well as residential, mixed use development, and other uses of similar character or supportive of regional drawing power.

Development of the Project would result in an urban commercial hotel development, which is consistent with the Regional Commercial intent. The Project is also aligned with policies set forth in the WOSP, which implements the General Plan as listed below.

- *Policy M/WG 1C-1: Focus initial efforts throughout the northwest quadrant of the Mandela/West Grand Opportunity Area on intensification of use and infill of existing underutilized older warehouse space, and on the re-use of vacant, blighted and underutilized properties.*

The Project site is currently a vacant lot in the northwest quadrant of the Mandela/West Grand Opportunity Area. The Project as proposed would develop the underutilized site with infill commercial hotel use.

- *Policy M/WG 1C-3: Support the establishment of new retail and commercial uses along the northerly portion of Mandela Parkway near the I-580 overpass.*

The Project would develop a new commercial use (hotel) on a vacant 1-acre parcel bounded by Mandela Parkway and I-580 and I-880 ramps associated with approaches to the Bay Bridge (I-80). Therefore, the Project would be consistent with the WOSP policies detailed above, and the Project would construct commercial uses consistent with the General Plan.

Zoning

The Project site is zoned as Regional Commercial (CR-1), per the City of Oakland Planning Code Section 17.58.01. The intent of the CR-1 zone is to maintain, support, and create areas of the City that serve as region-drawing centers of activities. Transient habitation activities (e.g., hotel) are permitted in this zone with a Minor Conditional Use Permit.

The Project proposes development of a 6-story hotel with a total area of 142,813 square feet fronting Mandela Parkway. The proposed design complies with design standards and regulations of the Planning Code, including but not limited to the following:

- The building height would be approximately 83 feet to the roof. The zoning district CR-1 allows for a maximum building height of 90 feet with a maximum of 8 stories (not including underground construction). The Project would be consistent with the maximum building height for the CR-1 zone (**Figures 4a – 4b**).
- The building would conform to the request for front yard setback reduction with a proposed minor variance for a small section of the building, thus meeting the regulations under the Planning Code.

The Oakland Planning Code defines a hotel as a Transient Habitation Commercial Activity (Chapter 17.09, Definitions). Authorization for development or use of a Transient Habitation Commercial Activity will be made by the City Planning Commission within the terms of a Conditional Use Permit, as provided in Section 17.103.050. The Planning Commission must be able to make the following findings in its consideration of an application for a Conditional Use Permit for a hotel use:

1. That the proposal is consistent with the goal of attracting first-class, luxury hotels in downtown, along the waterfront, near the airport, along the I-880 freeway, in a specific plan area, and/or in an area with a concentration of amenities for hotel patrons, including but not limited to restaurant, retail, recreation, open space and exercise facilities, and is well-served by public transit
2. That the proposal considers the impact of the employees of the hotel or motel on the demand in the City for housing, public transit, and social services
3. That the proposed development will be of an architectural and visual quality and character which harmonizes and enhances the surrounding area, and that such design includes:
    a. Site planning that insures appropriate access and circulation, locates building entries which face the primary street, provides a consistent development pattern along the primary street, and insures a design that promotes safety for its users

    b. Landscaping that creates a pleasant visual corridor along the primary streets with a variety of local species and high quality landscape materials

    c. Signage that is integrated and consistent with the building design and promotes the building entry, is consistent with the desired character of the area, and does not detract from the overall streetscape

    d. The majority of the parking is located either to the side or rear of the site, or where appropriate, within a structured parking facility that is consistent, compatible and integrated into the overall development

    e. Appropriate design treatment for ventilation of room units as well as structured parking areas; and prominent entry features that may include attractive porte-cocheres

    f. Building design that enhances the building's quality with strong architectural statements, high quality materials particularly at the pedestrian level and appropriate attention to detail

    g. Lighting standards for hotel buildings, grounds and parking lots that are not overly bright and direct the downward placement of light

General Exterior Elevation Notes

1. Colors indicated on this drawing are approximate and will vary depending on printer/monitor display source. Refer to Colors and Materials Boards for true representation of all proposed finishes.
2. All landscaping indicated on this drawing is diagrammatic and intended only to convey a sense of general landscaped areas. Refer to actual Landscape Plan for all proposed landscaping.

Material/Finish Legend

Refer to Colors and Materials Boards for true representation of all proposed finishes.

AL-1	Aluminum Storefront
GL-1	Vision Glass
GL-2	Spandrel Panel
MP-1	Metal Panel - Perforated
MP-2	Metal Panel - Perforated & Corrugated
MP-3	Metal Wall Panel
PT-1	Paint - on Cement Plaster
PT-2	Paint - on Cement Plaster
PT-3	Paint - on Cement Plaster
PT-4	Paint - on Cement Plaster
PT-5	Painted Metal Coping

Keynotes

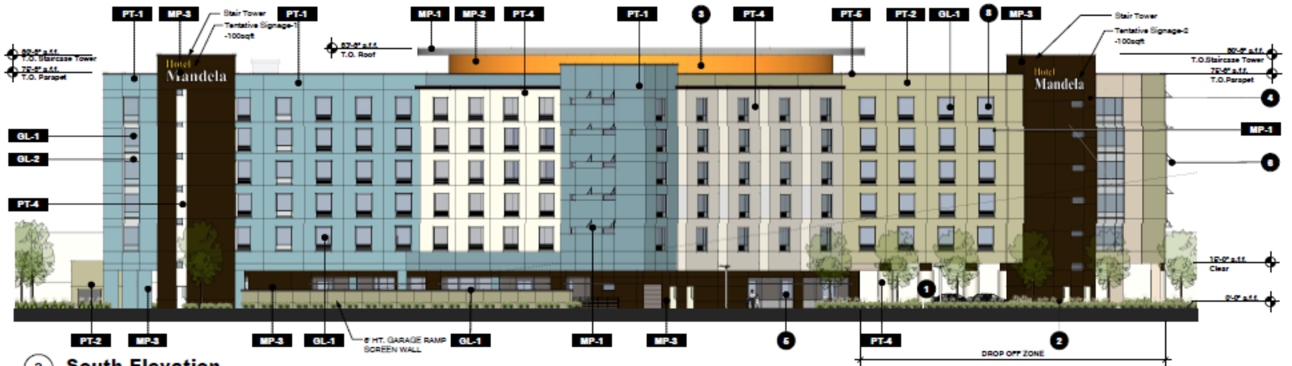
Note: Not all keynotes listed apply to this particular sheet.

❶ Drop off Zone
❷ Planter
❸ Screenwall for Rooftop Equipment
❹ Internally Illuminated Channel Letter Signage.
❺ Aluminum Storefront System
❻ Metal Awning
❼ Spandrel Glass
❽ Aluminum Window System (Packaged Terminal Air Conditioning - PTAC unit integral to window system. Color and finish to match aluminum windows)

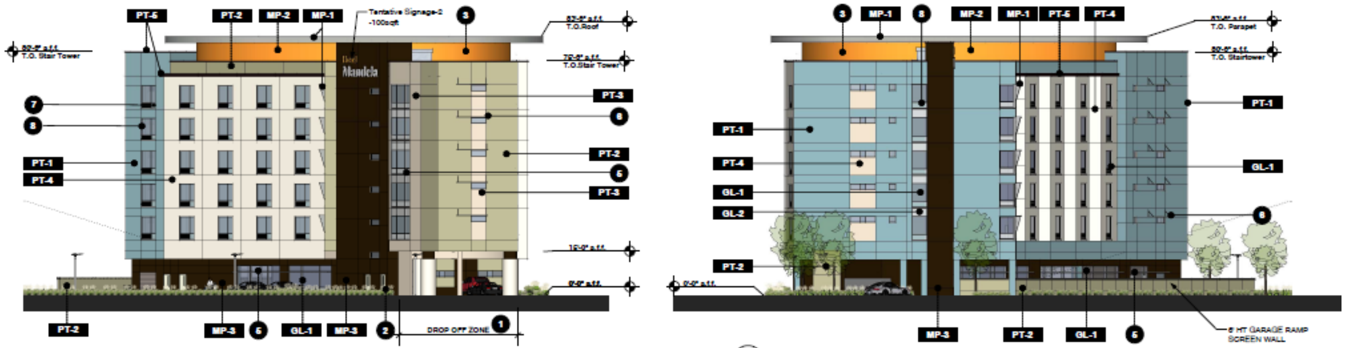
② **North Elevation**
Scale: 1/16" = 1'-0"

Figure 4a. North Elevation

Source: Architectural Dimensions



③ **South Elevation**
Scale: 1/16" = 1'-0"



④ **East Elevation**
Scale: 1/16" = 1'-0"

⑤ **West Elevation**
Scale: 1/16" = 1'-0"

Figure 4b. South, East, and West Elevations

Source: Architectural Dimensions

4. That the proposed development provides adequately buffered loading areas and to the extent possible, are located on secondary streets
5. The proposed operator of the facility shall be identified as part of the project description at the time of application

The determination as to whether the Project proposal for the operation of a hotel meets the required findings for Conditional Use Permit will need to be made by the Planning Commission when the application proposal comes before them for final consideration. That is, the granting of a Conditional Use Permit would demonstrate that the Project development conforms to the criteria of CEQA Guidelines under Section 15332(a) because is consistent with the City's General Plan and applicable zoning regulations for the subject site and the hotel use as described herein.

Based on the information provided in the application and as described above, the Project adheres to the criteria of CEQA Guidelines Section 15332(a) as being consistent with the General Plan and applicable zoning regulations for the site and the proposed hotel use.

Criterion §15332(b): Project Location, Size & Context

Yes	No	
☑	☐	The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses

The Project site is in a highly urbanized area within the City of Oakland on an approximately 1.07-acre site, and is surrounded by parcels developed with urban land uses and paved public roads as described above in the Project Description and shown in Figure 1. Therefore, the Project is consistent with the Section 15332(b).

Criterion §15332(c): Endangered, Rare of Threatened Species

Yes	No	
☑	☐	The project site has no value as habitat for endangered, rare or threatened species.

As shown in Figure 1, the Project site is a vacant lot surrounded by urban commercial uses, elevated highways, and a rail line. Vegetation on-site is consistent with disturbed lands (e.g., ruderal species) and includes a small group of trees on the northeastern portion of the site as well as several street trees along Mandela Parkway. Wildlife use in the area is expected to be relatively low due to the absence of suitable habitat, the proximity of streets and development, and the lack of protective cover. Special-status species are not expected to inhabit or use the site because of a lack of suitable habitat, prior disturbance, and the current level of human activity. According to the Open Space, Conservation and Recreation Element of the City of Oakland General Plan, there are no special-status species known to inhabit the immediate vicinity of the Project site.[8] Therefore, the Project site has no value as habitat for endangered, rare or threatened species and the Project is consistent with Section 15332(c).

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[8] City of Oakland, 1996. General Plan, Open Space, Conservation, and Recreation Element.

Criterion §15332(d): Traffic, Noise, Air Quality, Water Quality

Yes No

☑ ☐ Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

As described in the analysis below, development of the Project would not result in significant effects related to the resource topics in this criterion, organized as follows: traffic, noise, air quality, and water quality.

Traffic

Senate Bill 743 (Steinberg 2013) creates a process to modify the environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. Effective October 2016, the City of Oakland has updated its CEQA Thresholds of Significance as they relate to transportation. The update aligns with proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis with adopted plans and polices related to transportation, which promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. The new thresholds replaced LOS with vehicle miles traveled (VMT) criteria to determine whether a project causes a significant impact on the environment related to transportation. Subsequent to this update, the City of Oakland released revised guidelines for the review of transportation issues associated with land use development projects. These guidelines became effective April 18, 2017. In conformance with the most recent City guidelines, a Transportation Assessment was prepared for the Project by Fehr and Peers (**Attachment D**), which has been summarized below.

Conflicts with Plans, Ordinances, or Policies Relating to Safety, or Performance of the Circulation System

The Project is consistent with both the City's Pedestrian Master Plan and Bicycle Master Plan as it would not make major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities.

Furthermore, the Project would be consistent with the previously published WOSP EIR which evaluated reasonably foreseeable development expected to occur in the next 20 to 25 years in the Plan Area. The WOSP and its EIR intend to provide flexibility in the location, amount, and type of development. Thus, as long as the trip generation for the overall WOSP (West Oakland Specific Plan) Plan area remains below the levels estimated in the EIR, the traffic impact analysis presented in the EIR continues to remain valid. Trip generation for development projects to date, including the Project, within the WOSP area amounts to 1,390 total daily trips, or 11% of the estimated total trip generation of 12,235 daily trips.

The uses proposed by the Project are consistent with the assumptions in the WOSP EIR for the Mandela/West Grand Avenue Opportunity Area and the Project would generate fewer automobile trips than assumed in WOSP EIR; therefore, the Project would not result in additional impacts on traffic operations at the intersections analyzed in the WOSP EIR. In addition, all traffic-related mitigation measures identified in the WOSP EIR are included in the citywide transportation impact fee.

Development of the Project would not conflict with adopted transportation policies, plans, or ordinances addressing the safety or performance of the circulation system, and will be required to comply with **SCA-TRANS-1: Construction Activity in the Public Right-of-Way** and **SCA-TRANS-2:**

Transportation and Parking Demand Management. The Project would not cause a significant impact on the Alameda County Congestion Management Program or the Metropolitan Transportation System roadways in the vicinity. The Project would be consistent with polices, plans, and programs supporting public transit, bicycle, and pedestrian uses. Impacts would be ***less than significant***.

Vehicle Miles Traveled Assessment

The Project satisfies the Low-VMT Area screening criterion for VMT analysis, as detailed below. The Project would generate more than 100 trips per day and therefore does not meet the small project screening criterion. The Project would be about 1.4 miles from the MacArthur BART Station and 1.8 miles from the West Oakland BART Station. The Project is also more than one-half mile from an intersection of two or more major bus routes (nearest intersection of two major bus routes is San Pablo Avenue and 40th Street, which is about 0.7 mile away). Although the Project would not satisfy the near transit station criterion, it would satisfy the three additional conditions for this criterion:

- The Project would have a FAR of 3.07, which is greater than 0.75.
- The City of Oakland Planning Code (Section 17.116.080), requires the Project to provide a minimum of 155 parking spaces; there is no parking maximum. The Project would provide 166 spaces, which is 11 spaces more than the minimum required, but less than the peak parking demand at maximum occupancy (see Table 5 in Attachment D). Thus, the Project would not provide more parking for use by visitors or employees than other typical nearby uses, nor would it provide more parking than required by City Code.
- The Project is located within the West Oakland Priority Development Area as defined by Plan Bay Area, and is therefore consistent with the region's Sustainable Communities Strategy.

As shown in **Table 2**, the 2020 average daily VMT per capita in transportation analysis zone (TAZ) 988 (the TAZ in which the Project site is located) is 9.9, which is below the 2020 regional average daily VMT per capita of 15.0. Because the Project site is in an area where existing VMT is 15 percent or less than the 2020 regional average, the Project would not result in substantial additional VMT per capita and impacts would be ***less than significant***.

Table 2: Daily Vehicle Miles Traveled Per Capita

	Bay Area				**TAZ 988**	
	2020		**2040**			
Land Use	**Regional Average**	**Regional Average minus 15%**	**Regional Average**	**Regional Average minus 15%**	**2020**	**2040**
Residential (VMT per Capita)	15.0	12.8	13.8	11.7	9.9	9.0

Source: Fehr and Peers Transportation Assessment included as Attachment D.

Additionally, the 2040 average daily VMT per capita in the Project TAZ is more than 15 percent below the regional average. Therefore, it is presumed that the Project would not result in substantial additional VMT and Project impacts with respect to VMT would be less than significant under 2040 conditions.

Induced Automobile Travel

No roadway modifications or additions are planned as part of the Project. The Project would not induce automobile travel through roadway additions or modifications.

Non-CEQA Transportation Issues

Site Access, Circulation, and Sight Distance

Access to the Project site would be provided through the following two driveways on Mandela Parkway:

- An existing full-access driveway at the north end of the Project site, about 550 feet southwest of Horton Street, which currently provides shared access to a Target Store to the north and an East Bay Municipal Utility District (EBMUD) facility to the west.
- A new right-in/right-out only driveway at the south end of the Project site. The median along Mandela Parkway and prohibition on U-turns at the north driveway intersection prevent left-turn access between this driveway and northbound Mandela Parkway.

Both Project driveways would provide adequate sight distance between exiting motorists and vehicles traveling on Mandela Parkway, as well as between exiting motorists and pedestrians on the adjacent sidewalk along Mandela Parkway. The north driveway would be shared between the Project and the existing Target Store and EBMUD facility to the north. There may be potential conflicts at the north driveway between motorists turning into and out of the Project site and motorists waiting to turn onto Mandela Parkway traveling to and from the Target Store and EBMUD facility because only one vehicle can be queued before blocking access to the Project. A few outbound vehicles from the Target Store may block the hotel driveway as they queue to turn onto Mandela Parkway, blocking the hotel driveway for vehicles waiting to turn into the Project site from Mandela Parkway, and inbound queues may spill back onto Mandela Parkway. Landscaping along the Mandela Parkway median may limit sight distance for vehicles turning left from northbound Mandela Parkway onto the site and/or vehicles turning left from the north Project driveway onto northbound Mandela Parkway.

The proposed two-level below-ground parking garage would be gated and accessed through a ramp at the southwest side of the Project site, opposite the right-in/right-out only driveway on Mandela Parkway. The configuration of the second garage level may not provide adequate circulation because of dead-end aisles. The garage ramp would provide adequate sight distance between exiting and entering vehicles.

Recommendation TRANS-1: While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:

- If the parking garage would be accessible to the public, ensure adequate space is provided for turn-around at the end of the dead-end drive aisle on the second level.

Recommendation TRANS-2: While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:

- Provide “KEEP CLEAR” pavement markings on the existing driveway to ensure motorists turning into and out of the Project site do not conflict with vehicles queueing on the existing driveway to turn onto Mandela Parkway.
- Ensure landscaping in the median along Mandela Parkway is maintained to provide adequate sight lines for left turning vehicles.

Pedestrian Access and Circulation

Primary pedestrian access for the Project would be through a main lobby entrance at the northeast end of the Project site. Pedestrian access to the hotel rooms would be provided through three elevators and two staircases in the lobby. The elevators and the northwest staircase would provide access to the below-ground garage. A staircase adjacent to the guest drop-off area outside the building would also provide garage access.

Along the southeast side of the Project site, Mandela Parkway provides a 10-foot sidewalk, which the Project would continue to maintain for pedestrian street access. Trees and street lighting narrow the through passage zone to 5.5 feet. The nearest marked crosswalk across Mandela Parkway is provided at the intersection with Horton Street. The intersection is all-way stop controlled with marked crosswalks and directional curb ramps at all three approaches of the intersection. The curb ramps on the south side of Mandela Parkway are currently missing truncated domes.

> **Recommendation TRANS-3:** While not required to address a CEQA impact, the following should be considered as part of the final design for the Project:
>
> - Ensure proposed landscaping at the two Project driveways would not limit the sight distance between exiting motorists and pedestrians along Mandela Parkway.
> - Provide truncated domes at the south side of the Mandela Parkway/Horton Street intersection.

Bicycle Access and Bicycle Parking

Bicycle access to the Project site is provided by bicycle facilities within the Project vicinity, including Class 2 bike lanes on Mandela Parkway.

The Project is required by the Oakland Municipal Code Section 17.117.110 to provide 11 long-term and 11 short-term parking spaces. Oakland Municipal Code Section 17.117.070 specifies that long-term bicycle parking must be on-site or within 500 feet of the building entrance and short-term parking must be within 50 feet of the building entrance.

The site plan shows that the Project would provide 11 long-term bicycle parking spaces in the first level of the parking garage, which would be accessed by riding through the garage driveway, or using the elevator or staircase through the lobby. Riding through the garage may result in potential conflicts between motorists and bicyclists, and using stairs or elevators may be inconvenient for bicyclists. Eleven short-term bicycle parking spaces would be provided adjacent to the main entrance near the guest drop-off area. The Project would provide the long-term and short-term spaces required by the City Code.

> **Recommendation TRANS-4:** While not required to address a CEQA impact, the following should be considered as part of the final design for the project:
>
> - Consider relocating long-term bicycle parking to a more convenient location on the ground level.

Transit Access

Transit service providers in the vicinity of the Project include BART, AC Transit, and Emery Go-Round (a free shuttle service in the City of Emeryville). The nearest BART station to Project site is the MacArthur BART Station. The Project would not modify access between the Project site and the BART Station. AC Transit operates Routes 36, 57, C, J, and F in the vicinity of the Project. The nearest bus stop is approximately 0.2 mile north of the Project site in both directions of 40th Street at the intersection with Horton Street. A bus stop sign is provided at both stops and a bench is provided at the westbound stop.

No changes to the bus routes operating near the Project are planned and the Project would not modify access between these bus stops and the Project. The Emery Go-Round Shellmound Route serves the Project site.

Loading Requirements

The City of Oakland Municipal Code Section 17.116.140 requires two off-street loading berths for commercial uses between 60,000 and 159,000 square feet. The site plan shows two back-in commercial loading berths adjacent to the pick-up/drop off area near the principal entry; these loading berths meet the minimum required standard dimensions required by City Code.

Parking

Per the City of Oakland off-street parking requirement for hotel uses, the Project is required to provide a minimum of 1 space per 600 square feet of ground floor area and 1 space per 1,000 square feet of remaining floor area, for a total of at least 155 parking spaces.

The Project would provide 166 spaces for hotel guests and employees—160 spaces in the proposed two-level belowground garage and 6 spaces along the drive aisle between the north and south Project driveways—exceeding City of Oakland Municipal Code requirements by 11 spaces. The proposed parking supply is within the supply range allowed by the Municipal Code. The Project, however, will be required to implement **SCA-TRANS-1: Transportation and Parking Demand Management** because it would generate more than 50 peak hour trips.

Project Traffic Impact Analysis

Although automobile delay is not a CEQA topic, this document evaluates the effect of the proposed Project on intersection operations to inform the decision makers and the public.

The Project is anticipated to generate approximately 1,800 daily vehicle trips, 190 daily transit trips, 50 daily bicycle trips, and 260 daily pedestrian trips as shown in **Table 3**.

Table 3. Project Trip Generation by Travel Mode

Mode	Mode Share Adjustment Factors[1]	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
Automobile	91.4%	1,800	135	141
Transit	9.8%	190	15	15
Bike	2.5%	50	4	4
Walk	13.2%	260	20	20
Total Trips		*2,300*	*174*	*180*

[1] Based on City of Oakland Transportation Impact Study Guidelines

Source: Fehr and Peers Transportation Assessment included as Attachment D.

Intersection Operations

As noted above, the Project is consistent with the assumptions in the WOSP EIR and would generate fewer automobile trips than assumed in WOSP EIR; therefore, the Project would not result in new significant or more severe impacts at the intersections than as analyzed in the WOSP EIR.

Pursuant to the City of Oakland Guidelines, the following three intersections, which were not evaluated in the WOSP EIR, have been evaluated for this CEQA Analysis:

- Mandela Parkway/South Driveway (side-street stop-controlled)
- Mandela Parkway/North Driveway (side-street stop-controlled)
- Horton Street/Mandela Parkway (all-way stop-controlled)

Figure 5 shows the location and trip distribution for the study intersections. The Mandela Parkway/South Driveway and Mandela Parkway/North Driveway intersections currently operate at LOS A during weekday AM and PM peak hours, while the Horton Street/Mandela Parkway intersection operates at LOS A during weekday AM peak hour and LOS D during weekday PM peak hour. The addition of Project traffic would not have a noticeable effect at the study intersections under Existing Plus Project conditions. The Horton Street/Mandela Parkway intersection currently meets the California Manual on Uniform Traffic Control Devices peak hour signal warrant. Signalizing the intersection, however, is not recommended for the following reasons:

- The intersection is not identified on the City's High Injury Network (2017 Pedestrian Plan Update).
- The intersection would continue to operate at LOS A during the AM peak hour and LOS D during the PM peak hour under Existing Plus Project conditions and the project would increase the average delay at the intersection by less than one second during the AM peak hour and less than three seconds during the PM peak hour, which would not be noticeable to most intersection users.
- The proposed project would increase the traffic volume at the intersection by less than four percent during the PM peak hour, which is negligible.

Recommendation TRANS-5: While not required to address a CEQA impact, the following should be considered at the Horton Street/Mandela Parkway intersection as part of the final design for the project, consistent with the **SCA-TRANS-3: Transportation Improvements**:

- Improve the crosswalk striping pursuant to City standards
- Improve all curb ramps to provide directional curb ramps (two per corner) pursuant to City standards
- Update traffic paving markings, signage, and others as needed pursuant to City standards
- Study the feasibility of installing a stop sign on the northbound approach (Best Buy) of the intersection; install if determined feasible

Conclusion

Construction activities associated with the Project could potentially temporarily disrupt transportation, bicycle, and pedestrian movement. Compliance with **SCA-TRANS-1: Construction Activity in the Public Right-of-Way** would reduce these potential impacts. The Project would not conflict with adopted transportation policies, plans, or ordinances addressing the safety or performance of the circulation

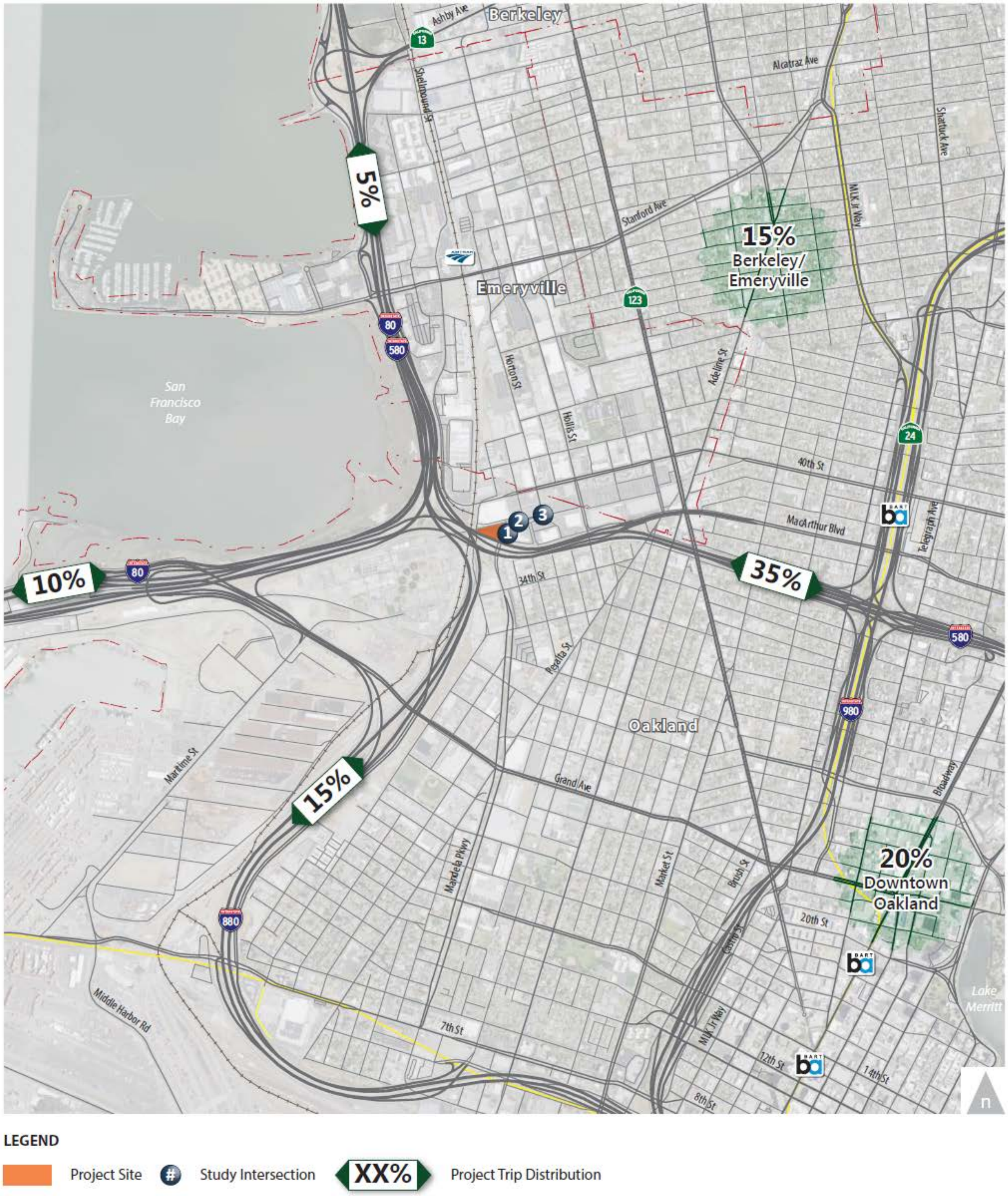

Figure 5. Study Intersections

Source: Fehr & Peers

system, and would be required to comply with **SCA-TRANS-2: Transportation and Parking Demand Management** and **SCA-TRANS-3: Transportation Improvements**.

Implementation of the City of Oakland's SCAs would lessen the Project's potential impacts related to construction activity in the public right-of-way and transportation and parking demand. With the implementation of the required SCAs (SCA-TRANS-1: Construction Activity in the Public Right-of-Way, SCA-TRANS-2: Transportation and Parking Demand Management, and SCA-TRANS-3: Transportation Improvements), the Project would not result in significant effects related to traffic. Therefore, the Project is consistent with Section 15332(d), traffic.

Noise

The analysis and conclusions described under this environmental topic are derived from the Preliminary Site Noise Assessment prepared by RGD Acoustics (**Attachment E**).

The WOSP EIR found that construction activities related to plan buildout would temporarily increase noise levels near individual project sites and that implementation of SCAs would ensure construction noise would not violate the City of Oakland Noise Ordinance or the City of Oakland nuisance standards regarding persistent construction-related noise. Specifically, the Project would be required to implement **SCA-NOS-1: Construction Days/Hours**, **SCA-NOS-2: Construction Noise**, **SCA-NOS-3: Extreme Construction Noise**, and **SCA-NOS-4: Construction Noise Complaints** to lessen the impacts of construction noise. These SCAs are comprehensive in their content and for practical purposes represent all feasible measures available to mitigate construction noise.

The WOSP EIR also found that ongoing operational noise generated by stationary sources could generate noise in violation of the City of Oakland Noise Ordinance and that implementation of SCAs would ensure operational noise impacts would be less than significant. Specifically, the Project would be required to implement **SCA-NOS-5: Operational Noise,** which requires compliance with City of Oakland operational noise standards including for noise generated by the rooftop mechanical equipment (e.g., heating, ventilating, air conditioning, and refrigeration equipment) and delivery trucks, and requires the incorporation of noise reduction measures into the building's design. In addition, noise attenuation recommendations as identified in Attachment E and described below, would further reduce potential noise impacts. Recommendations NOS-1 through NOS-3 are also included as conditions of approval (see Attachment A) for the Project.

> **Recommendation NOS-1:** Guest rooms shall be designed to achieve an interior L_{dn} of 45 dBA or less as required by California Building Code 1207.4. Detailed recommendations for window and exterior wall Sound Transmission Class (STC) ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.
>
> **Recommendation NOS-2:** Non-guest rooms shall be designed to meet an hourly L_{eq} of 50 dBA as required by CalGreen 5.507.4.2. Detailed recommendations for window and exterior wall STC ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.
>
> **Recommendation NOS-3:** A report prepared by an acoustical consultant should be submitted prior to issuance of building permit confirming that the Project has been designed to meet the required

interior noise levels in California Building Code 1207.4 and CalGreen 5.507.4.2 as per recommendations NOS-1 and NOS-2.

The ground-floor level of the Project would be exposed to an exterior hourly L_{eq} of 71 to 72 dBA, exceeding the Green Building Standards Code requiring an interior hourly L_{eq} of 50 dBA for non-residential areas (e.g., non-guest rooms). A noise reduction of 22 dBA will be required on the ground-floor level, which would likely be met with a typical commercial window glazing system (e.g., one-inch-thick glazing unit consisting of two 1⁄4-inch-thick glass panes separated by a 1⁄2-inch airspace). The exact window type and corresponding STC rating requirements would be determined during the design phase.

The increase in traffic noise associated with the Project has been fully accounted for in the WOSP EIR, which found less than significant impacts related to traffic noise. Development of the Project would not result in a substantial permanent increase above existing traffic noise levels, and would not generate significant traffic noise nor result in new significant or substantially more severe impacts than analyzed in the 2014 WOSP EIR. Nor would it result in new significant or substantially more severe impacts than analyzed in the 2003 Redevelopment Plan or 1998 LUTE EIRs.

With the implementation of Recommendations NOS-1 through NOS-3 and the required SCAs listed above and included in Attachment A at the end of this CEQA Analysis (SCA-NOS-1: Construction Days/Hours, SCA-NOS-2: Construction Noise, SCA-NOS-3: Extreme Construction Noise, SCA-NOS-4: Construction Noise Complaints, SCA-NOS-5: Operational Noise), the Project would not result in significant effects related to noise and vibration. Therefore, the Project is consistent with Section 15332(d), noise.

Air Quality

The Project would not result in significant impacts related to air quality, as discussed below.

Criteria Pollutants

Construction-period Emissions

Construction activities would result in emissions of fugitive dust and criteria pollutants, including PM_{10} and $PM_{2.5}$, on a temporary and intermittent basis during the construction period. Construction-related emissions are not peculiar because the Project would use standard construction equipment such as loaders, backhoes, cranes, and haul trucks, similar to other projects under construction in Oakland and the site's proximity to sensitive receptors is typical of other project sites in this urbanized area.

Construction of the Project would include soil import/export in excess of 10,000 cubic yards, and these potential impacts have been anticipated and accounted for in the WOSP EIR which found that individual development projects pursuant to the WOSP will generate regional ozone precursor emissions and regional particulate matter emissions from construction equipment exhaust.

Implementation of **SCA-AIR-1: Construction-Related Air Pollutant Controls (Dust and Equipment Emissions)** will be required to ensure reductions in construction-period fugitive dust and criteria pollutant emissions. The enhanced control measures for construction emissions under SCA-AIR-1 would apply for the Project. In accordance with SCA-AIR-1, all off-road diesel equipment will be equipped with engines certified to meet CARB's Tier 4 emission standards, which have incorporated best available control technologies into the engine design to reduce emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$. Compliance with the requirements found under the City Municipal Code (Section 15.36.100; Dust

Control Measures) would also be required. Implementation of SCA-AIR-1 and compliance with the City's Dust Control Measures would ensure ***less than significant*** impacts related to construction-period fugitive dust and criteria pollutants.

Operational Emissions

The Project would not exceed applicable operational screening level sizes for criteria pollutants (489-room hotel), and thus would not exceed the City thresholds. Impacts related to operational criteria pollutant emissions would be ***less than significant***.

Toxic Air Contaminants

Construction-period Emissions

Construction activities associated with the Project would generate construction-related TAC emissions, specifically diesel particulate matter, from on-road haul trucks and off-road equipment exhaust emissions, resulting in increased cancer risk or non-cancer health concerns for nearby sensitive receptors. Due to the variable nature of construction activity, the generation of TAC emissions would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. The WOSP EIR analyzed construction-related health risks (see WOSP EIR Impact AIR-6) and determined impacts to be less than significant with implementation of SCA A: Construction-Related Air Pollution Controls for Dust and Equipment Emissions. Moreover, construction-related emissions are not peculiar because the Project would use standard construction equipment such as loaders, backhoes, cranes, and haul trucks, similar to other projects under construction in Oakland and the site's proximity to sensitive receptors is typical of other project sites in this urbanized area.

Potential impacts related to the Project's construction-period TAC emissions therefore have been anticipated and accounted for in the WOSP EIR. Construction-related TAC emissions will be reduced to a less than significant level with implementation of the required City of Oakland **SCA-AIR-1: Construction-Related Air Pollutant Controls (Dust and Equipment Emissions)**. Effective implementation of SCA-AIR-1 would reduce TAC emissions and resultant exposure to health risks below City significance thresholds for cancer and $PM_{2.5}$ exposure. Implementation of SCA-AIR-1 (for construction-related air pollution controls) would also reduce health risks to sensitive receptors from temporary construction emissions of diesel particulate matter. The enhanced control measures for construction emissions under SCA-AIR-1 would apply for the Project. In accordance with SCA-AIR-1, all off-road diesel equipment will be equipped with engines certified to meet CARB's Tier 4 emission standards, which can reduce emissions of diesel particulate matter by at least 85 percent relative to equipment without emission control technologies installed.[9] Tier 4 equipment is routinely used at construction sites throughout California and can feasibly be required by the City to reduce construction-related diesel particulate matter.

With implementation of SCA-AIR-1, impacts from construction-period TAC emissions would be less than significant. There is nothing particular or unusual about the Project that would cause it to generate uncharacteristically high diesel particulate matter and $PM_{2.5}$ emissions during construction, nor result in new significant or substantially more severe impacts than analyzed in the WOSP EIR.

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[9] California Air Resources Board 2015. Frequently Asked Questions; Regulation for In-Use Off-Road Diesel-Fueled Fleets. Revised December.

Operational Emissions

The hotel uses associated with the Project would not result in significant ground-level concentrations of TACs. Because the Project includes a building over 70 feet tall, consistent with California Building Code requirements, it is assumed a back-up diesel generator would be required for the elevator.

The WOSP EIR found that development pursuant to the WOSP would include the introduction of new diesel generators that could emit TACs resulting in (a) a cancer risk level greater than 10 in one million, (b) a chronic or acute hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ concentration of greater than 0.3 micrograms per cubic meter; or under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a chronic or acute hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter. Mitigation Measure AIR-9: Risk Reduction Plan was identified in the WOSP EIR to reduce these potential impacts and requires applicants for projects that would include backup generators to prepare and submit a Risk Reduction Plan for City review and approval. The mitigation measure recommended (as AIR-9) in the WOSP EIR to further reduce increased cancer risk and $PM_{2.5}$ exposure is no longer a requirement for the Project because it has since been incorporated into **SCA-AIR-2: Exposure to Air Pollution (Toxic Air Contaminants)** and adopted for all City projects.

Implementation of **SCA-AIR-2: Exposure to Air Pollution (Toxic Air Contaminants)** and **SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants)** will be applicable to the Project. The Project would not otherwise have the potential to act as a substantial source of health risk to others. Impacts would be ***less than significant***. Therefore, the Project is consistent with Section 15332(d), air quality and would not result in new significant or substantially more severe impacts than analyzed in the WOSP EIR.

Water Quality

The Project is in a highly urbanized environment and there are no lakes or creeks in the immediate proximity. The San Francisco Bay lies approximately 0.25 mile to the west of the Project site; all surface water from the Project site would drain to the Bay.

Construction of the Project would involve excavation, dewatering, grading, and construction on an approximately 1-acre site, which could result in erosion and/or sedimentation of downstream receiving waters. A Stormwater Pollution Prevention Plan (SWPPP) is required for coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB).

The Project as proposed would require excavation of up to 32,500 cubic yards of soil for construction of the underground parking garage (56,951 square feet). As indicated in City of Oakland Code of Ordinance Section 15.04.660, projects within the City that propose to excavate more than 500 cubic yards of soil are required to obtain a grading permit. The grading permit would require the Project to comply with local and state construction requirements, including the California Building Code, for the design and construction of the Project. **SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction** would reduce the Project's potential to cause erosion and sedimentation from construction activities.

Under the existing condition, the entire Project site is pervious surface area. Development of the Project would create approximately 40,040 square feet of new impervious area and is subject to Provision C.3 of the City's municipal regional stormwater permit. As such, the Project proposes the use of Bay-Friendly landscaping, the provision of stormwater biotreatment areas, and minimizing surface parking, among other site-design and source control measures. The Project would capture stormwater runoff by directing roof runoff and runoff from sidewalks, walkways, driveways, and uncovered parking lots onto vegetated areas, ultimately treating 100 percent of the site's impervious surface runoff via 2,230 square feet of biotreatment areas (**Figure 6**).

Therefore, the potential of the Project to substantially alter drainage patterns or increase the flow of runoff would not be significant. The Project will also incorporate stormwater treatment measures in compliance with the C.3 requirements and implement the **SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects**.

With implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (SCA-HYD-1 and SCA-HYD-2), the Project would comply with the NPDES Permit requirements and reduce potential impacts related to water quality. Therefore, as described above, the Project would not result in significant effects related to water quality, is consistent with Section 15332(d), water quality, and would not result in new significant or substantially more severe impacts than analyzed in the WOSP EIR.

Criterion §15332(e): Utilities and Public Services

Yes No
☑ ☐ The site can be adequately served by all required utilities and public services.

On-site utilities would include storm drainage, electricity, gas, water, and wastewater. All on-site utilities would be designed in accordance with applicable codes and current engineering practices. The required utilities can be adequately serviced by utility providers. Development of the Project would increase demand on utilities and service systems, but not to a substantial degree that it would impose a burden on existing utilities and service systems. The applicant will pay applicable Sewer Mitigation Fees, which would be used either to replace pipes as part of the local collection system repair, or to perform inflow and infiltration rehabilitation projects off-site. Impacts related to utilities would be ***less than significant***.

With implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (for reference, these are **SCA-UTIL-1: Construction and Demolition Waste Reduction and Recycling**, **SCA-UTIL-2: Underground Utilities**, **SCA-UTIL-3: Recycling Collection and Storage Space**, **SCA-UTIL-4: Green Building Requirements**, **SCA-UTIL-5: Sanitary Sewer System**, and **SCA-UTIL-6: Storm Drain System**), potential impacts to utilities and public services would be reduced. Therefore, the Project site can be adequately served by all required utilities and public services and would not result in significant effects, consistent with Section 15332(e), utilities and public services. Impacts related to utilities and service systems would be ***less than significant*** with implementation of SCAs UTIL-1, UTIL-2, UTIL-3, UTIL-4, UTIL-5, and UTIL-6.

Development of the Project would slightly increase the demand for local fire and police service and result in an associated increase in service calls, but not to an extent that would result in the need for new or physically altered fire or police protection facilities. As a land use, the proposed hotel is consistent with the Program EIRs and the Project's increase in demand for public services is consistent with these prior CEQA analyses. The Project would be subject to the policies, regulations, standards, and SCAs of the City, including appropriate standards for emergency access roads, emergency water supply, and fire preparedness, capacity, and response. The Project would not substantially increase the permanent population and would not substantially affect other public services such as schools or libraries. Impacts related to public services would be ***less than significant***.

Therefore, the Project site can be adequately served by all required utilities and public services and would not result in significant effects, consistent with Section 15332(e), utilities and public services.

STORMWATER TREATMENT AREAS

DMA	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	I.M.P. REQUIRED (SF) (4% OF IMP. AREA)	I.M.P. PROVIDED (SF)	NOTES
1	27620	2690	1100	1260	STORMWATER FROM ROOF
2	5290	870	210	420	SURFACE PARKING DRAINAGE THROUGH CURB CUT
3	3070	470	120	180	RAINWATER LEADER TO SURFACE DRAINAGE TO BIORETENTION AREA VIA CURB CUTS
4	1510	230	60	270	ENTRY DRIVE SURFACE DRAINAGE TO BIORETENTION AREA VIA CURB CUTS
5	2450	90	100	100	LOADING DOCK ACCESS SURFACE DRAINAGE TO BIORETENTION AREA VIA CURB CUTS
6	100	0	0	0	SELF TREATING AREA. SEPARATE AREA DRAIN
7	1340	0	0	0	SELF TREATING AREA. SEPARATE AREA DRAIN
8	940	0	0	0	SELF TREATING AREA. SEPARATE AREA DRAIN
TOTAL	40040	4350	1590	2230	

STORMWATER CONTROL PLAN
SCALE: 1' = 20'

Figure 6. Stormwater Control Plan

Source: Architectural Dimensions

IX. Exceptions to Categorical Exemptions Checklist

Under the Class 32 Categorical Exemption Overview, even if a project is ordinarily exempt under any of the potential categorical exemptions, CEQA Guidelines Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. The following section addresses whether any of the exceptions to the CEQA exemption apply to the Project, consistent with CEQA Guidelines Section 15300.2.

Criterion 15300.2(a): Location

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project due to its location in a particularly sensitive environment, such that the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies?

This exception applies only to CEQA exemptions under Classes 3, 4, 5, 6 or 11. Since the Project qualifies as a Class 32 urban infill exemption, this criterion is not applicable and is provided here for information purposes only. There are no environmental resources of hazardous or critical concern that are designated, precisely mapped or officially adopted near the Project site, or that could be adversely affected by the Project. Therefore, exception under CEQA Guidelines Section 15300.2(a) does not apply.

Criterion 15300.2(b): Cumulative Impact

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project due to significant cumulative impacts of successive projects of the same type and in the same place, over time?

As demonstrated under Criterion Section 15332(a), General Plan and Zoning Consistency, the Project is consistent with the development allowed under the General Plan and zoning for the site. There are no peculiar aspects, other than those evaluated herein, that would increase the severity of any of the previously identified significant cumulative effects in the WOSP EIR. Therefore, the Project would not contribute to cumulative impacts not already anticipated in the WOSP EIR.

Pursuant to the streamlining provisions of CEQA Guidelines Section 15183, the cumulative effect of successive projects of the same type in the same place, over time would not be significant. Community Plan Exemption findings are provided in Attachment B of this CEQA Analysis. The additional exemption analysis presents findings that an exception under CEQA Guidelines Section 15300.2(b) regarding cumulative effects does not apply to the Project.

Criterion 15300.2(c): Significant Effect

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project because there is a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances?

There are no known unusual circumstances applicable to the Project or its site that have not already been discussed herein, that may result in a significant effect on the environment. Therefore, the exception under CEQA Guidelines Section 15300.2(c) does not apply to the Project.

Criterion 15300.2(d): Scenic Highway

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project because the project may result in damage to scenic resources including but not limited to, trees, historic buildings, rock outcroppings or similar resources, within a highway officially designated as a state scenic highway?

The Project site is not visible from any state scenic highways described in the General Plan's Scenic Highway Element or as identified by California Department of Transportation.[10] Therefore, the exception under CEQA Guidelines Section 15300.2(d) does not apply to the Project.

Criterion 15300.2(e): Hazardous Waste Sites

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project because the project is located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code?

The provisions of Government Code Section 65962.5 are commonly referred to as the Cortese List. The provisions require the Department of Toxic Substance Control (DTSC), the SWRCB, the California Department of Public Health (DPH), and the California Department of Resources Recycling and Recovery to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of California Environmental Protection Agency (CalEPA).

The WOSP identified 123 reported environmental cases within the Mandela/West Grand Opportunity Area, of which 54 sites remain open or unresolved. The Project site is not among the active environmental cases in the Mandela/West Grand Opportunity Area. The Project site is not identified on

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[10] Department of Transportation, California. 2016. *Officially Designated State Scenic Highways and Historic Parkways, Alameda County*. Accessed November 18, 2016 at www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

any lists compiled pursuant to Section 65962.5 of the Government Code;[11] therefore, an exception to the exemption under CEQA Guidelines Section 15300.2(e) does not apply to the Project.

Construction and operational activities associated with development of the Project could result in the accidental release of hazardous materials and may involve the handling, transport, or use of small quantities of hazardous materials. The Project will be required to follow the applicable laws and regulations related to transportation, use, and storage of all hazardous materials and to safeguard workers and the public. The Project will be required to implement the City's **SCA-HAZ-1: Hazardous Materials Related to Construction** and **SCA-HAZ-3: Hazardous Materials Business Plan**.

The geotechnical report prepared for the Project by Kleinfelder evaluated soil and groundwater samples for potential contaminants of concern (**Attachment F**). Onsite soil samples and groundwater borings detected contaminants above their respective San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, but did not exceed hazardous levels. The report therefore included the following recommendations to be implemented during construction.

> **Recommendation HAZ-1:** Soil and groundwater on the site, while not exceeding hazardous levels, have detectable concentrations of select contaminants of concern that may pose a risk to human health and the environment. Contractors performing work on the site should incorporate the constituents detected and their concentrations described herein into their site-specific health and safety protocols and potentially into a Soil and Groundwater Management Plan in order to take the appropriate cautions to protect their workers.
>
> **Recommendation HAZ-2:** Soils on site may be re-used with discretion. Soils observed during construction with signs of obvious discoloration, sheen or odor should be segregated, protected by plastic sheeting and resampled. Soils designated for off-site disposal should receive analytical testing for solubility potential for landfill waste characterization acceptance criteria. Finished landscape areas should utilized imported topsoil.
>
> **Recommendation HAZ-3:** If groundwater is pumped for de-watering purposes, it should be contained and analyzed for constituents of concern before off-site disposal.
>
> **Recommendation HAZ-4:** The site should be secured from public access and measures taken to minimize the generation of dust during construction. Storm drains and off-site drainage pathways should be protected to prevent unauthorized discharge from the site.

As noted in the LUTE EIR, hazardous substances are likely to be present within Oakland due to existing or historical land uses. Historical uses of hazardous substances were not subject to the current level of regulation, and previous handling, storage and management practices may have resulted in the contamination of soils or groundwater that has been previously unidentified. Although the identification of contaminates related to past uses on infill development sites is not peculiar as their existence is not different from the usual or normal, because the Project involves the redevelopment or change of use of a historically industrial or commercial site, it will therefore be subject to **SCA-HAZ-2: Hazardous Building**

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[11] State Water Resources Control Board GeoTracker Database, website accessed November 18, 2016 at http://geotracker.waterboards.ca.gov/; Department of Toxic Substances Control EnviroStor Database, website accessed November 18, 2016 at http://www.envirostor.dtsc.ca.gov/public/.

Materials and Site Contamination, which includes among its requirements the preparation of a Phase I Environmental Site Assessment.

Consistent with the requirements of CEQA, a determination of whether the Project would have a significant impact will occur as part of the preparation of this document prior to the approval of the Project and, where applicable, SCAs have been identified that will mitigate them. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies (e.g., the results of the Phase I Environmental Site Assessment), an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified, where subsequent compliance with identified federal, state, or local regulations or requirements apply, where specific performance criteria is specified and required, and where the Project commits to developing measures that comply with the requirements and criteria identified.

Therefore, with the implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (**SCA-HAZ-1: Hazardous Materials Related to Construction**, **SCA-HAZ-2: Hazardous Building Materials and Site Contamination** and **SCA-HAZ-3: Hazardous Materials Business Plan**), Project's potential impacts related to the disturbance of potential soil and/or groundwater contamination would not be significant.

Criterion 15300.2(f): Historical Resources

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project because the project may cause a substantial adverse change in the significance of a historical resource?

Historic Architectural Resources

The Project site is a vacant lot. The WOSP EIR did not identify any historic resources on the Project site or in the immediate vicinity. Therefore, the Project would not have any direct impacts to historical resources. The exception under CEQA Guidelines Section 15300.2(f) does not apply.

Archaeological Resources

The Project site is in urbanized West Oakland and is surrounded by urban development. Previous archaeological investigations conducted for various projects along the I-880 corridor recovered significant historic-era archaeological materials. Review of historical literature and maps also indicates a high potential of identifying unrecorded historic period archaeological resources in the WOSP area.

The WOSP found that there is a high potential of identifying unrecorded Native American resources, especially buried archaeological deposits, within its Planning Area, which includes the Project site. Additionally, West Oakland overlies geologic units that have low to moderate paleontological sensitivity. Excavation associated with the Project could result in the discovery or disturbance of buried archaeological or paleontological resources, and the inadvertent discovery of human remains.

Implementation of **SCA-CUL-1: Archaeological and Paleontological Resources–Discovery During Construction**, **SCA-CUL-2: Archaeologically Sensitive Areas – Pre-construction Measures**, and **SCA-CUL-3: Human Remains–Discovery During Construction** will be required for the Project so that appropriate procedures will be followed in the event of accidental discovery of archaeological resources or human remains to minimize potential risks of impact during Project construction. With required implementation of these SCAs, potential adverse effect on as-yet undiscovered archaeological and/or historic resources would not be significant. Therefore, the exception under CEQA Guidelines Section 15300.2(f) does not apply to the Project.

Criterion 15300.2: Other Potential Effects

Yes	No	
☐	☑	Is there an exception to the Class 32 exemption for the project because the project may result in substantial adverse impacts other than those discussed above?

Greenhouse Gases Emissions

Construction and operation of the Project would contribute additional sources of GHG emissions, though primarily through consumption of fuel for transportation and energy usage on an ongoing basis. Although the Project may use back-up diesel generators for elevator safety, project-specific stationary sources of GHGs would not generate emissions approaching the stationary source threshold of 10,000 $MTCO_2e$ per year. Any new stationary sources will be subject to BAAQMD's requirement for New Source Review, and BAAQMD may impose conditions that would lead to emissions reductions from any new stationary sources that may be proposed.

The WOSP EIR found that construction-related GHG emissions under the WOSP would contribute approximately 612 $MTCO_2e$ emissions per year. On a project-level, WOSP operational GHG emissions would exceed the annual emission threshold of 1,100 $MTCO_2e$ per year, but would not exceed the service population threshold of 4.6 $MTCO_2e$ per service population. Because the Project site is within the Mandela/West Grand Opportunity Area, its contribution to GHG emissions has been accounted for in the WOSP and impacts would be ***less than significant***.

Additionally, the Project would comply with the Oakland Energy and Climate Action Plan, current City Sustainability Programs, and General Plan policies and regulations regarding GHG reductions and other local, regional, and statewide plans, policies, and regulations that are related to the reduction of GHG emissions.

City SCAs that would contribute to minimizing potential GHG emissions from construction and operation of development projects would apply to the Project; they pertain to transportation demand management (SCA-TRANS-2), alternative transportation facilities (SCA-TRANS-2), construction equipment emissions (SCA-AIR-1 and SCA-AIR-2), construction waste reduction and recycling (SCA-AIR-1 and SCA-UTIL-1), and California Green Building Standards (SCA-UTIL-4; see Attachment A). Overall, the Project would not have a significant GHG impact.

Acronyms and Terms

AC Transit	Alameda–Contra Costa Transit District
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
CalEPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
City	City of Oakland
CO	carbon monoxide
DPH	Department of Public Health
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
FAR	floor area ratio
GHG	greenhouse gas
I-580	Interstate 580
I-880	Interstate 880
LOS	level of service
LUTE	Land Use and Transportation Element
NPDES	National Pollution Discharge Elimination System
$PM_{2.5}$	particulate matter, 2.5 micrometers or less
PM_{10}	particulate matter, 10 micrometers or less
Project	Mandela Parkway Hotel Project
Redevelopment Plan	West Oakland Redevelopment Plan
RWQCB	Regional Water Quality Control Board
SCA	Standard Condition of Approval
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
VMT	vehicle miles traveled
WOSP	West Oakland Specific Plan

Attachment A: City of Oakland Standard Conditions of Approval

The City of Oakland's Uniformly Applied Development Standards adopted as Standard Conditions of Approval (Standard Conditions of Approval, or SCAs) were originally adopted by the City in 2008 (Ordinance No. 12899 C.M.S.) pursuant to Public Resources Code section 21083.3) and have been incrementally updated over time. The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, Green Building Ordinance, historic/Landmark status, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City determines which SCAs apply based upon the zoning district, community plan, site, surroundings, project proposal, and the type of permits/approvals required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCAs apply to a specific project. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume that these SCAs will be imposed and implemented by the project sponsor, and are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA Analysis—which is consistent with the measures and conditions presented in the City of Oakland General Plan, LUTE EIR—are included herein. To the extent that any SCA identified in the CEQA Analysis was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA Analysis.
- The second column identifies the monitoring schedule or timing applicable to the Project.
- The third column names the party responsible for monitoring the required action for the Project.

In addition to the SCAs identified and discussed in the CEQA Analysis, other SCAs that are applicable to the Project are included herein.

The Project sponsor is responsible for compliance with any recommendations in approved technical reports and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific SCA, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the SCAs will be the responsibility of the Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the Project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—e.g., **SCA-AIR-1**, **SCA-AIR-2**. The SCA title and the SCA number that corresponds to the City's master SCA list are also provided—e.g., **SCA-AIR-1: Construction-Related Air Pollution (Dust and Equipment Emissions; #19)**.

Table 4. City of Oakland Standard SCAs Required for the Project

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
Aesthetics, Shadow, and Wind			
SCA-AES-1: Graffiti Control. (#16) a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation: i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces. ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces. iii. Use of paint with anti-graffiti coating. iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED). v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement. b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include: i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system. ii. Covering with new paint to match the color of the surrounding surface. iii. Replacing with new surfacing (with City permits if required).	Ongoing	N/A	Bureau of Building
SCA-AES-2: Landscape Plan. (#17) a. *Landscape Plan Required* The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with	Prior to approval of construction-related permit	Bureau of Planning	N/A

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
the landscape requirements of chapter 17.124 of the Planning Code. *b. Landscape Installation* The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.	Prior to building permit final	Bureau of Planning	Bureau of Building
c. Landscape Maintenance All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.	Ongoing	N/A	Bureau of Building
SCA-AES-3: Lighting. (#18) Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Prior to building permit final	N/A	Bureau of Building
Air Quality			
SCA-AIR-1: Construction-Related Air Pollution Controls (Dust and Equipment Emissions). (#19) The project applicant shall implement all of the following applicable air pollution control measures during construction of the project: a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible. b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The	During construction	N/A	Bureau of Planning

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
use of dry power sweeping is prohibited. d. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used. e. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). f. Limit vehicle speeds on unpaved roads to 15 miles per hour. g. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points. h. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). i. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas. k. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph. m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).			
o. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.			
p. Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.			
q. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.			
r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time.			
s. All trucks and equipment, including tires, shall be washed off prior to leaving the site.			
t. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.			
u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.			
v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).			
w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.			
x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard.			
y. Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.			
SCA-AIR-2: Exposure to Air Pollution (Toxic Air Contaminants). (#20) *a. Health Risk Reduction Measures* The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. – or – ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for	Prior to Approval of Construction-Related Permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
the building's HVAC air filtration system shall be required. • Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). • Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. • The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods. • Sensitive receptors shall be located on the upper floors of buildings, if feasible. • Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*x Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids x trichocarpa*), and Redwood (*Sequoia sempervirens*). • Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible. • Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible. • Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible: • Installing electrical hook-ups for diesel trucks at loading docks. • Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. • Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels. • Prohibiting trucks from idling for more than two minutes.			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
- Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.			
b. Maintenance of Health Risk Reduction Measures The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.	Ongoing	N/A	Bureau of Building
SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants). (#21) The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants. The project applicant shall choose one of the following methods: a. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk associated with proposed stationary sources of pollution in the project. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. - or - b. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
construction-related permit or on other documentation submitted to the City: i. Installation of non-diesel fueled generators, if feasible, or; ii. Installation of diesel generators with an EPA-certified Tier 4 engine or engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy, if feasible.			
Cultural Resources			
SCA-CUL-1: Archaeological and Paleontological Resources – Discovery During Construction. (#29) Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.			
SCA-CUL-2: Archaeologically Sensitive Areas – Pre-construction Measures. (#30) The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision B (Construction ALERT Sheet) concerning archaeological resources. *Provision A: Intensive Pre-Construction Study.* The project applicant shall retain a qualified archaeologist to conduct a site-specific, intensive archaeological resources study for review and approval by the City prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. At a minimum, the study shall include: a. Subsurface presence/absence studies of the project site. Field studies may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources. b. A report disseminating the results of this research. c. Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources. If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist	Prior to approval of construction-related permit; during construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
to monitor any ground disturbing activities on the project site during construction and prepare an ALERT sheet pursuant to Provision B below that details what could potentially be found at the project site. Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT sheet, required per Provision B below) and the procedures to follow if any artifacts are encountered, field recording and sampling in accordance with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation, notifying the appropriate officials if human remains or cultural resources are discovered, and preparing a report to document negative findings after construction is completed if no archaeological resources are discovered during construction. *Provision B: Construction ALERT Sheet.* The project applicant shall prepare a construction "ALERT" sheet developed by a qualified archaeologist for review and approval by the City prior to soil-disturbing activities occurring on the project site. The ALERT sheet shall contain, at a minimum, visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project's prime contractor, any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving), and utility firms involved in soil-disturbing activities within the project site. The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, all work must stop and the City's Environmental Review Officer contacted in the event of discovery of the following cultural materials: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew,			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
pile drivers, and supervisory personnel. The ALERT sheet shall also be posted in a visible location at the project site.			
SCA-CUL-2: Human Remains – Discovery during Construction. (#31) Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.	During Construction	N/A	Bureau of Building
Geology and Soils			
SCA-GEO-1: Construction-Related Permit(s). (#33) The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-GEO-2: Soils Report. (#34) The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
Hazards and Hazardous Materials			
SCA-HAZ-1: Hazardous Materials Related to Construction. (#39) The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction; b. Avoid overtopping construction equipment fuel gas tanks; c. During routine maintenance of construction equipment, properly contain and remove grease and oils; d. Properly dispose of discarded containers of fuels and other chemicals; e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.	During construction	N/A	Bureau of Building
SCA-HAZ-2: Hazardous Building Materials and Site Contamination. (#40) a. *Erosion and Sedimentation Control Plan Required*	Prior to approval of demolition, grading, or	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
The project applicant shall submit a comprehensive assessment report to the Bureau of Building, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACMs), lead-based paint, polychlorinated biphenyls (PCBs), and any other building materials or stored materials classified as hazardous materials by State or federal law. If lead-based paint, ACMs, PCBs, or any other building materials or stored materials classified as hazardous materials are present, the project applicant shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal of the identified hazardous materials in accordance with all applicable laws and regulations. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	building permits		
b. *Environmental Site Assessment Required* The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or federal regulatory agency.	Prior to approval of construction-related permit	Applicable regulatory agency with jurisdiction	Applicable regulatory agency with jurisdiction
c. *Health and Safety Plan Required* The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
d. Best Management Practices (BMPs) Required for Contaminated Sites The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site in a secure and safe manner. All	During construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal requirements. ii. Groundwater pumped from the subsurface shall be contained on-site in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.			
SCA-HAZ-3: Hazardous Materials Business Plan. (#41) The project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following: a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. b. The location of such hazardous materials. c. An emergency response plan including employee training information. d. A plan that describes the manner in which these materials are handled, transported, and disposed.	Prior to building permit final	Oakland Fire Department	Oakland Fire Department
Hydrology and Water Quality			
SCA-HYD-2: Erosion and Sedimentation Control Plan for Construction. (#45) a. *Erosion and Sedimentation Control Plan Required* The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. The Erosion and Sedimentation Control Plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by	Prior to Approval of Construction-Related Permit	Bureau of Building	N/A

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading and/or construction operations. The Plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the City. The Plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.			
b. Erosion and Sedimentation Control During Construction The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.	During Construction	N/A	Bureau of Building
SCA-HYD-1: State Construction General Permit. (#46) The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.	Prior to approval of construction-related permit	State Water Resources Control Board; evidence of compliance submitted to Bureau of Building	State Water Resources Control Board
SCA-HYD-3: NPDES C.3 Stormwater Requirements for Regulated Projects. (#50) *a. Post-Construction Stormwater Management Plan Required* The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved	Prior to Approval of Construction-Related Permit	Bureau of Planning; Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff. *b. Maintenance Agreement Required* The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.	Prior to Building Permit Final	Bureau of Building	Bureau of Building
Noise			
SCA-NOS-1: Construction Days/Hours. (#58) The project applicant shall comply with the following restrictions concerning construction days and hours:	During Construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.			
SCA-NOS-2: Construction Noise. (#59) The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following: a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.	During Construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures. c. Applicant shall use temporary power poles instead of generators where feasible. d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.			
SCA-NOS-3: Extreme Construction Noise. (#60) a. *Construction Noise Management Plan Required* Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration),	Prior to Approval	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
where feasible, in consideration of geotechnical and structural requirements and conditions; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. *b. Public Notification Required* The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.			
SCA-NOS-4: Construction Noise Complaints. (#62) The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
SCA-NOS-5: Operational Noise. (#64) Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.	Ongoing	N/A	Bureau of Building
Recommendation NOS-1 Guest rooms shall be designed to achieve an interior L_{dn} of 45 dBA or less as required by California Building Code 1207.4. Detailed recommendations for window and exterior wall Sound Transmission Class ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.	Prior to Approval of Construction Related Permit	Bureau of Building	Bureau of Building
Recommendation NOS-2 Non-guest rooms shall be designed to meet an hourly L_{eq} of 50 dBA as required by CalGreen 5.507.4.2. Detailed recommendations for window and exterior wall STC ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.	Prior to Approval of Construction Related Permit	Bureau of Building	Bureau of Building
Recommendation NOS-3 A report prepared by an acoustical consultant should be submitted prior to issuance of building permit confirming that the Project has been designed to meet the required interior noise levels in California Building Code 1207.4 and CalGreen 5.507.4.2 as per recommendations NOS-1 and NOS-2.	Prior to Approval of Construction Related Permit	Bureau of Building	Bureau of Building
Transportation and Traffic			
SCA-TRANS-1: Construction Activity in the Public Right-of-Way. (#68) a. *Obstruction Permit Required* The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks.	Prior to Approval of Construction Related Permit	Bureau of Building	Bureau of Building
b. *Traffic Control Plan Required* In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic	Prior to Approval of Construction Related	Public Works Department, Transportation Services	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.	Permit	Division	
c. *Repair City Streets* The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	Prior to Building Permit Final	N/A	Bureau of Building
SCA-TRANS-4: Bicycle Parking. (#69) The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA-TRANS-3: Transportation Improvements. (#70) The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Study for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, and pedestrian and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these	Prior to building permit final or as otherwise specified	Bureau of Building; Public Works Department, Transportation Services Division	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below: a. 2070L Type Controller with cabinet accessory b. GPS communication (clock) c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) d. Countdown pedestrian head module switch out e. City Standard ADA wheelchair ramps f. Video detection on existing (or new, if required) g. Mast arm poles, full activation (where applicable) h. Polara Push buttons (full activation) i. Bicycle detection (full activation) j. Pull boxes k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum l. Conduit replacement contingency m. Fiber switch n. PTZ camera (where applicable) o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor p. Signal timing plans for the signals in the coordination group			
SCA-TRANS-2: Transportation and Parking Demand. (#71) a. *Transportation and Parking Demand Management (TDM) Plan Required* The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City. i. The goals of the TDM Plan shall be the following: • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable, consistent with the potential traffic and parking impacts of the project. • Achieve the following project vehicle trip reductions (VTR): • Projects generating 50-99 net new a.m. or p.m.	Prior to Approval of Construction-Related Permit	Bureau of Planning	N/A

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
peak hour vehicle trips: 10 percent VTR • Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR • Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. • Enhance the City's transportation system, consistent with City policies and programs. ii. TDM strategies to consider include, but are not limited to, the following: • Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. • Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping. • Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. • Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency). • Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties. • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours. The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.			

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
b. TDM Implementation — Physical Improvements For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.	Prior to Building Permit Final	Bureau of Building	Bureau of Building
c. TDM Implementation — Operational Strategies For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.	Ongoing	Bureau of Planning	Bureau of Planning
Utilities and Service Systems			
SCA-UTIL-1: Construction and Demolition Waste Reduction and Recycling. (#74) The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on	Prior to Approval of Construction-Related Permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
the City's website and in the Green Building Resource Center.			
SCA-UTIL-2: Underground Utilities. (#75) The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During Construction	N/A	Bureau of Building
SCA-UTIL-3: Recycling Collection and Storage Space. (#76) The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 sf of building floor area is required, with a minimum of ten cubic feet.	Prior to Approval of Construction-Related Permit	Bureau of Planning	Bureau of Building
SCA-UTIL-4: Green Building Requirements. (#77) a. *Compliance with Green Building Requirements During Plan-Check* The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit: • Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption,	Prior to Approval of Construction-Related Permit	Bureau of Building	N/A

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. • Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • All pre-requisites per the green building checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit. • A minimum of 23 points (3 Community; 6 IAQ/Health; 6 Resources; 8 Water) as defined by the Green Building Ordinance for Residential New Construction. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories.			
b. Compliance with Green Building Requirements During Construction The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.	During Construction	N/A	Bureau of Building

Standard Conditions of Approval	When Required	Initial Approval	Monitoring/ Inspection
The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.			
c. Compliance with Green Building Requirements After Construction Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green and attain the minimum required certification/point level. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Bureau of Planning the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.	After Project Completion as Specified	Bureau of Planning	Bureau of Building
SCA-UTIL-5: Sanitary Sewer System. (#79) The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to Approval of Construction-Related Permit	Public Works Department, Department of Engineering and Construction	N/A
SCA-UTIL-6: Storm Drain System. (#80) The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building

Attachment B: Project Consistency with Community Plan or Zoning, Per CEQA Guidelines Section 15183

CEQA Guidelines Section 15183 allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Section 15183(c) specifies that an EIR does need to be prepared for the project "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards."

The analysis in the Program EIRs (LUTE EIR and WOSP EIR) is applicable to the Project and the Program EIRs are the previous CEQA documents that provide the basis for use of the streamlined review for consistency with a Community Plan or Zoning.

Proposed Mandela Parkway Hotel Project. The Project is in the City of Oakland General Plan area and WOSP Mandela/West Grand Opportunity Area. The Project would construct a new commercial development (hotel) of approximately 142,813 square feet (not including underground parking), with 6 stories up to approximately 83 feet in height. The Project would include 220 guest rooms with a FAR of 3.07, as well as an underground (two levels) garage and surface parking.

Project Consistency. The City of Oakland completed an update of the General Plan LUTE in March 1998. The LUTE includes the City's current Land Use and Transportation Diagram as well as strategies, policies, and priorities for Oakland's development and enhancement during a two-decade period. The EIR certified for the LUTE is used to simplify the task of preparing environmental documents on later projects that occur as a result of LUTE implementation. Cumulative environmental effects identified in the LUTE's EIR as significant unavoidable and significant, but which can be reduced to a less than significant level through mitigation, are limited to the following topics: aesthetics/wind, cultural resources, hazards/hazardous materials, land use/planning, population/housing, and public services.

As outlined below and as determined by the City of Oakland Bureau of Planning, the Project is conditionally permitted in the zoning district in which it is located and is consistent with the bulk, density, and land uses envisioned in the WOSP area for which the 2014 WOSP EIR was prepared and certified. The WOSP implements the Oakland General Plan.

- As demonstrated under Criterion Section 15332(a): General Plan and Zoning Consistency (above), the Project is consistent with the development density established by existing zoning and General Plan policies for the site, and there are no peculiar aspects, other than those evaluated herein, that would increase the severity of any of the previously identified significant cumulative effects in the LUTE EIR.
- The land use designation for the site is Regional Commercial (Retail/Commercial); this designation is intended to maintain, support, and create areas of the City that serve as region-drawing centers of activity. The Regional Commercial classification includes a mix of commercial, office, entertainment, arts, recreation, sports, and visitor-serving activities, as well as residential, mixed use development, and other uses of similar character or supportive of regional drawing power. The proposed commercial Project would be consistent with this designation.

- The Project site is zoned as Regional Commercial (CR-1), which is intended to maintain, support, and create areas of the City that serve as region-drawing centers of activities. Transient habitation activities (e.g., hotel) are permitted in this zone with a Conditional Use Permit. The building height limit in this zone is 90 feet with a maximum of eight stories (not including underground construction), and the maximum nonresidential FAR is 4.0.

- The building would be approximately 83 feet in height and would have a FAR of 3.07. The Project would be in compliance with the height limits and development density on the site.

Cumulative environmental effects identified in the 1998 LUTE EIR as significant and unavoidable and less than significant with mitigation are limited to the following topics: aesthetics/wind, cultural resources, hazards and hazardous materials, land use, population and housing, and public services. Cumulative environmental effects identified in the 2014 WOSP EIR as significant and unavoidable are limited to traffic and transportation, and less than significant with mitigation cumulative effects are limited to air quality (toxic air contaminants).

Since the Project is consistent with the development assumptions for the site as provided under the LUTE EIR and WOSP EIR, the Project's potential contribution to cumulatively significant effects has already been addressed in these prior EIRs. Therefore, consistent with CEQA Guidelines Section 15183 which allows for streamlined environmental review, this document needs only to consider whether there are project-specific effects peculiar to the Project or its site, and relies on the streamlining provisions of CEQA Guidelines Section 15183 to not reconsider cumulative effects.

Therefore, the Project is eligible for consideration of an exemption under California Public Resources Code Section 21083.3, and Section 15183 of the CEQA Guidelines.

Attachment C: Criteria for Use of an Addendum, Per CEQA Guidelines Sections 15162, 15164, and 15168

Section 15164(a) of the CEQA Guidelines states that "a lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." Section 15164(e) states that "a brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR."

CEQA Guidelines Section 15168 states that "subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." An addendum to a previously certified Program EIR may be prepared pursuant to Section 15162, if no new effects could occur or no new mitigation measures would be required. The WOSP is a Program EIR.

The analysis in the 2014 WOSP EIR is considered for this assessment under Sections 15162 and 15164. The 1998 LUTE EIR and WOSP EIR Addendum are Program EIRs considered for this assessment of an Addendum, pursuant to Section 15162 and 15164. The WOSP EIR analysis is a Program EIR specifically considered for this assessment, pursuant to CEQA Guidelines Section 15168.

Project Modifications. The Oakland Planning Commission certified the WOSP EIR in 2014. The intent of the WOSP is to provide a set of comprehensive and multi-faceted strategies for development and redevelopment of vacant and/or underutilized commercial and industrial properties. It establishes a land use and development framework, identifies needed transportation and infrastructure improvements, and recommends implementation strategies needed to develop those parcels in the Plan Area, while conforming to the CEQA analysis and thresholds established in the EIR.

The WOSP EIR analyzed the WOSP development framework, which assumed future development for the Plan to include the addition of 11,110 new jobs, 1,180 new housing units, 3,020,000 square feet of industrial business uses, and 305,000 square feet of commercial/retail uses in the Mandela/West Grand Opportunity Area (which contains the Project site). Project-specific details for each potential development project in the WOSP Opportunity Areas were not known, and could not have been known, at the time the WOSP EIR was certified. Therefore, an Addendum is required to evaluate the Project details would not result in new or more severe significant environmental effects than those analyzed in the WOSP EIR.

The Project would be consistent with the development envisioned in the Mandela/West Grand Opportunity Area for the WOSP and as analyzed in the EIR.

Conditions for Addendum. None of the following conditions for preparation of a subsequent EIR per Section 15162(a) apply to the Project:

(1) Substantial changes are proposed in the project, which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR or Negative Declaration due

to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) 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 previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

  (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

  (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

  (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 previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Project Consistency with Sections 15162 and 15168 of the CEQA Guidelines. Since certification of the 2014 WOSP EIR, no changes have occurred in the circumstances under which the Project would be implemented that would change the severity of the Project's physical impacts, as explained in this document. No new information has emerged that would substantially change the analyses or conclusions set forth in the WOSP EIR.

Furthermore, as demonstrated in the CEQA Analysis, the Project would not result in any new significant environmental impacts, result in any substantial increases in the significance of previously identified effects, or necessitate implementation of additional or considerably different mitigation measures than those identified in the 2014 WOSP EIR, nor render any mitigation measures or alternatives found not to be feasible, feasible. The effects of the proposed project would be substantially the same as those reported in the 2014 WOSP EIR.

The analysis presented in this CEQA document, combined with the prior 2014 WOSP EIR analysis and other previous CEQA documents, demonstrates that the Project would not result in significant impacts that were not previously identified in the WOSP EIR. The Project would not result in a substantial increase in the significance of impacts, nor would the Project contribute considerably to cumulative effects that were not already accounted for in the certified 2014 WOSP EIR or other previous CEQA documents. Overall, the Project's impacts are similar to those identified and discussed in the 2014 WOSP EIR and other previous CEQA documents, as described in the CEQA Analysis, and the findings reached in the WOSP EIR and other previous CEQA documents are applicable.

Attachment D: Infill Performance Standards, Per CEQA Guidelines Section 15183.3

Table D-1 demonstrates how the proposed Project meets the eligibility requirements to qualify as an infill project under CEQA Guidelines Section 15183.3(b) and CEQA Guidelines Appendix M.

Table D-1. Eligibility for Streamlining – Infill Project

CEQA Eligibility Criteria	Eligibility of Project
To be eligible for the streamlining procedures prescribed in this section, an infill project must:	
1) Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least seventy-five percent of the site's perimeter. For the purpose of this subdivision "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved public right-of-way.	The Project is eligible. The Project site is in an urban area in West Oakland, it has been previously developed, and it adjoins existing urban uses on 75 percent of its perimeter or is only separated from such uses by an improved public right-of-way.
2) Satisfy the performance standards provided in Appendix M.	The Project is eligible. See responses to individual standards below.
3) Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy.	The Project is eligible. The Project site is within the West Oakland Priority Development Area as identified in the region's sustainable communities strategy (Plan Bay Area) and as identified in the City of Oakland's Energy and Climate Action Plan. The Project site is in West Oakland, a community of concern as defined by Plan Bay Area. The land use designation for the site is Regional Commercial (Retail/Commercial); this designation is intended to maintain, support, and create areas of the City that serve as region-drawing centers of activity. The Project site is zoned as Regional Commercial (CR-1). TheCR-1 zone seeks to maintain, support, and create areas of the City that serve as region-drawing centers of activities. Transient habitation activities (e.g., hotel) are permitted in this zone with a Conditional Use Permit. For sites in CR-1, the maximum nonresidential FAR is 4.0. The Project would provide commercial hotel uses and have a FAR of 3.07, which is consistent with the CR-1 zone. The building height limit in this zone is 90 feet with a maximum of eight stories (not including underground construction). The Project, is proposing development of a 220-room, 6-story hotel over two levels of underground parking, with a height of approximately 83 feet, and would be consistent with the CR-1 zoning.

CEQA Eligibility Criteria	Eligibility of Project
	Each of these factors demonstrates the Project's overall consistency with the applicable policies of the region's sustainable communities strategy, as well as the City of Oakland's Energy and Climate Action Plan.
Satisfaction of Appendix M Performance Standards[1]	
Renewable Energy. All non-residential projects shall include on-site renewable power generation, such as solar photovoltaic, solar thermal and wind power generation, or clean backup power supplies, where feasible. Residential projects are also encouraged to include such on-site renewable power generation.	The Project is eligible. The predominant use for the Project is commercial and includes rooftop solar photovoltaic power generation.
Soil and Water Remediation. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.	The Project is eligible. The Project is not on any list compiled pursuant to Section 65962.5 of the Government Code identifying prior releases of hazardous materials and no remediation requirements have been identified.
Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.	Not applicable. The Project is not a residential project.
Residential. To be eligible for streamlining pursuant to Section 15183.3, a Residential project must satisfy one of the following: ***Projects achieving below average regional per capita vehicle miles traveled (VMT).*** A residential project is eligible if it is located in a "low vehicle travel area" within the region. ***Projects located within 1/2 mile of an Existing Major Transit Stop or High Quality Transit Corridor.*** A	Not applicable. The Project is not a residential project.

CEQA Eligibility Criteria	Eligibility of Project
residential project is eligible if it is located within 1/2 mile of an existing major transit stop or an existing stop along a high quality transit corridor. ***Low-Income Housing.*** A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	
Commercial/Retail. To be eligible for streamlining pursuant to Section 15183.3, a Commercial/Retail project must satisfy one of the following: ***Regional Location.*** A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a "low vehicle travel area."[1] ***Proximity to Households.*** A project with no single-building floor-plate greater than 50,000 square feet located within one-half mile of 1800 households is eligible.	The Project is eligible. The Project site is in a low vehicle travel area and would not have a floor-plate greater than 50,000 square feet. The Project site is not within ½ mile of 1,800 households.
To be eligible for streamlining pursuant to Section 15183.3, an **Office Building** project must satisfy one of the following: ***Regional Location***. Office buildings, both commercial and public, are eligible if they. locate in a low vehicle travel area. ***Proximity to a Major Transit Stop***. Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.	Not applicable. The Project is not an office building project.
Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not applicable. The Project is not a transit project.
Schools. Elementary schools within one mile of fifty percent of the projected student population are eligible. Middle schools and high schools within two miles of fifty percent of the projected student population are eligible. Alternatively, any school within % mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible. Additionally, in order to be eligible, all schools shall provide parking and storage for bicycles and scooters and shall comply with the requirements in Sections 17213, 17213.1 and 17213.2 of the California Education Code.	Not applicable. The Project is not a school project.

CEQA Eligibility Criteria	Eligibility of Project
Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivision (e)(6), that implement the project features described in Section Ill above are eligible.	Not applicable. The Project is not a small walkable community project.
Mixed Use Projects. Where a project includes some combination of residential, commercial and retail, office building, transit station, and/or schools, the performance standards in this Section that apply to the predominant use shall govern the entire project.	Not applicable. The Project is not a mixed use project.

[1] A traffic analysis zone that exhibits a below average existing level of travel as determined using a regional travel demand model. For residential projects, travel refers to either home-based or household vehicle miles traveled per capita. For commercial and retail projects, travel refers to non-work attraction trip length; however, where such data are not available, commercial projects reference either home-based or household vehicle miles traveled per capita. For office projects, travel refers to commute attraction vehicle miles traveled per employee; however, where such data are not available, office projects reference either home-based or household vehicle miles traveled per capita.

Attachment E: Transportation Assessment

FEHR & PEERS

MEMORANDUM

Date: November 29, 2017

To: Sharon Wright, Lamphier-Gregory

From: Sam Tabibnia and Natalie Chyba

Subject: Mandela Hotel in Oakland –Transportation Assessment

OK16-0146

This memorandum summarizes the transportation assessment that Fehr & Peers completed for the proposed Mandela Hotel project in Oakland. This document lists the thresholds of significance, provides a brief description of the proposed project, followed by an analysis of project impacts under CEQA, including consistency with the previously certified West Oakland Specific Plan Environmental Impact Report (WOSP EIR), and a discussion of planning-related non-CEQA issues including effects of the project on intersection operations in the vicinity of the project, access, circulation, and parking.

Based on our analysis, the proposed project would not cause significant impacts to the transportation network, beyond the ones identified in WOSP EIR. This document also provides recommendations that improve multi-modal access, circulation, and safety.

THRESHOLDS OF SIGNIFICANCE

According to the City of Oakland Transportation Impact Review Guidelines dated April 14, 2017, a project would have a significant effect on the environment if it would:

1. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay); or
2. Cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure; or

3. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.

PROJECT DESCRIPTION

The proposed project is located on the northwest side of Mandela Parkway between the I-580 freeway overpass and Horton Street in West Oakland on a currently vacant lot. The hotel would consist of 220 rooms, and amenities such as a fitness room, meeting rooms, a breakfast room, and lounges.

Vehicular Access for the site would be provided through two driveways on Mandela Parkway: an existing full access driveway on the north end of the project that would be shared with an existing Target Store and an East Bay Municipal Utility District facility, and a right-in/right-out only driveway on the south end of the project.

The project proposes a parking garage with 160 parking spaces. The proposed garage would consist of two below grade levels, with the entrance on the southwest side of the project site accessible through both driveways on Mandela Parkway. A guest drop-off area in front of the building with six parking spaces would also be accessible through both driveways.

CONFLICTS WITH PLANS, ORDINANCES, OR POLICIES RELATING TO SAFETY, OR PERFORMANCE OF THE CIRCULATION SYSTEM (THRESHOLD 1)

The proposed project is consistent with applicable plans, ordinances, and policies, and would not cause a significant impact by conflicting with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).

The proposed project is consistent with both the City's Pedestrian Master Plan and Bicycle Master Plan as it would not make major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities. Further, because the proposed project would generate more than 50 peak hour trips, preparation and implementation of a TDM Plan is required for the proposed project, per City of Oakland's Standard Condition of Approval #71 (Transportation and Parking Demand Management).

Overall, the proposed project would not conflict with adopted plans, ordinances, or policies addressing the safety and performance of the circulation system. This is a less-than-significant impact; no mitigation measures are required.

In addition, the proposed project is consistent with the *West Oakland Specific Plan (WOSP) EIR* (certified in June 2014), which evaluated the impacts of developments in the West Oakland area, as described below.

Consistency with WOSP EIR

The proposed project site is located within the WOSP area. The development evaluated in the WOSP EIR represents the reasonably foreseeable development expected to occur in the next 20 to 25 years in the Plan Area. The Specific Plan and the EIR intend to provide flexibility in the location, amount, and type of development. Thus, as long as the trip generation for the overall Plan Area remains below the levels estimated in the WOSP EIR, the traffic impact analysis presented in the WOSP EIR continues to remain valid.

Since the approval of the WOSP EIR, five developments, including this project, have been proposed and are in some stage of the City's approval process at this time. **Table 1** summarizes the trip generation for these developments. The five developments combined would generate about 656 AM peak hour and 734 PM peak hour trips. The combined trip generation is less than the total trip generation estimated in the WOSP EIR. Similarly, inclusive of the proposed project, the five developments currently proposed within the Plan Area are substantially less than the total cumulative development approved within the Plan Area by the WOSP EIR.

Although the WOSP EIR does not identify the project site as an opportunity site, the project is located in the Mandela/West Grand Avenue Opportunity Area and the project is consistent with the assumptions used in the WOSP EIR for the Mandela/West Grand Avenue Opportunity Area. Since the proposed project, combined with other currently proposed developments in the Plan Area, would generate fewer automobile trips than assumed in the WOSP EIR, the proposed project would not result in additional impacts on traffic operations at the intersections analyzed in the WOSP EIR. In addition, all the mitigation measures identified in the WOSP EIR are included in the citywide TIF.

TABLE 1
TRIP GENERATION FOR DEVELOPMENT PROJECTS WITHIN THE WOSP AREA

Project Name	AM Peak Hour	PM Peak Hour
2201 Filbert (Icehouse) [1]	52	84
532 Union Street (The Union Project) [2]	34	47
1708 Wood Street (Roadway Express) [3]	50	58
500 Kirkham [4]	385	404
Mandela Parkway Hotel [5]	135	141
Total Projects trips	**656**	**734**
WOSP Estimated Trip Generation [6]	5,537	6,698
Percent Complete	***12%***	***11%***

Notes:

1. Source: *West Grand Avenue & Market Street CEQA Analysis* (August 20, 2015)
2. Source: *532 Union Street CEQA Analysis* (July 15, 2016)
3. Source: *1708 Wood Street CEQA Analysis* (June 20, 2016)
4. Source: *500 Kirkham Street Project CEQA Analysis and Addendum* (March 30, 2016)
5. Source: Table 6
6. Source: *West Oakland Specific Plan Draft EIR* (May 2014), Table 4.10-4

Source: Fehr & Peers, 2017.

VEHICLE MILES TRAVELLED (VMT) ASSESSMENT (THRESHOLD 2)

On September 21, 2016, the City of Oakland's Planning Commission directed staff to update the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines related to transportation impacts in order to implement the directive from Senate Bill 743 (Steinberg 2013) to modify local environmental review processes by removing automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, as a significant impact on the environment pursuant to CEQA. The recommendation aligns with draft proposed guidance from the Governor's Office of Planning and Research and the City's approach to transportation impact analysis with adopted plans and polices related to transportation, which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

Many factors affect travel behavior, including density of development, diversity of land uses, design of the transportation network, access to regional destinations, distance to high-quality transit, development scale, demographics, and transportation demand management. Typically, low-density development that is located at a great distance from other land uses, in areas with poor access to non-single occupancy vehicle travel modes generate more automobile travel compared to development located in urban areas, where a higher density of development, a mix of land uses, and travel options other than private vehicles are available.

Given these travel behavior factors, most of Oakland has a lower VMT/capita and VMT/employee ratios than the nine-county San Francisco Bay Area region. In addition, some neighborhoods of the city have lower VMT ratios than other areas of the city.

Vehicle Miles Traveled Estimate

Neighborhoods within Oakland are expressed geographically in transportation analysis zones, or TAZs. The Metropolitan Transportation Commission (MTC) Travel Model includes 116 TAZs within Oakland that vary in size from a few city blocks in the downtown core, to multiple blocks in outer neighborhoods, to even larger geographic areas in lower density areas in the hills. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

The MTC Travel model is a model that assigns all predicted trips within, across, or to or from the nine-county San Francisco Bay Area region onto the roadway network and the transit system, by mode (single-driver and carpool vehicle, biking, walking, or transit) and transit carrier (bus, rail) for a particular scenario.

The travel behavior from MTC Travel Model is modeled based on the following inputs:

- Socioeconomic data developed by the Association of Bay Area Governments (ABAG)
- Population data created using 2000 US Census and modified using the open source PopSyn software
- Zonal accessibility measurements for destinations of interest
- Travel characteristics and automobile ownership rates derived from the 2000 Bay Area Travel Survey
- Observed vehicle counts and transit boardings

The daily VMT output from the MTC Travel Model for residential and office uses comes from a tour-based analysis. The tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from the project site. In this way, all of the VMT for an individual resident or employee is included; not just trips into and out of the person's home or workplace. For example: a resident leaves her apartment in the morning, stops for coffee, and then goes to the office. In the afternoon she heads out to lunch, and then returns to the office, with a stop at the drycleaners on the way. After work she goes to the gym to work out, and then joins some friends at a restaurant for dinner before returning home. The tour-based approach would add up the total amount driven and assign the daily VMT to this resident for the total number of miles driven on the entire "tour".

Based on the MTC Travel Model, the regional average daily VMT per capita is 15.0 under 2020 conditions and 13.8 under 2040 conditions, and the regional average daily VMT per worker is 21.8 under 2020 conditions and 20.3 under 2040 conditions.

Thresholds of Significance

The following are thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.
- For retail projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.

Screening Criteria

VMT impacts would be less-than-significant for a project if any of the identified screening criteria are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day.
2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15 percent or more below the regional average.

3. Near Transit Stations: The project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop[1] and satisfies the following:
    - Has a Floor Area Ratio (FAR) of more than 0.75
    - Includes less parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site)
    - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Transportation Commission)

VMT Impact Analysis

The Project would consist of a 220-room hotel. Based on the guidance provided in the City of Oakland's guidelines, hotels are treated as residential land use for the purpose of VMT screening.

The Project satisfies the Low-VMT Area criterion (#2), as detailed below.

Criterion #1: Small Projects

The project would generate more than 100 trips per day and therefore does not meet criterion #1.

Criterion #2: Low-VMT Area

Table 2 describes the 2020 and 2040 VMT for TAZ 988, the TAZ in which the project is located as well as applicable VMT thresholds of 15 percent below the regional average.

As shown in **Table 2**, the 2020 and 2040 average daily VMT per capita in the project TAZ is more than 15 percent below the regional average. Therefore, it is presumed that the proposed project would not result in substantial additional VMT and project impacts with respect to VMT would be less-than-significant.

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[1] Major transit stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

TABLE 2: DAILY VEHICLE MILES TRAVELED SUMMARY

Land Use	Bay Area				TAZ 988	
	2020		2040		2020	2040
	Regional Average	Regional Average minus 15%	Regional Average	Regional Average minus 15%		
Residential (VMT per Capita)[1]	15.0	12.8	13.8	11.7	9.9	9.0

Notes:
1. MTC Model results at analytics.mtc.ca.gov/foswiki/Main/PlanBayAreaVmtPerCapita and accessed in December 2016.
Source: Fehr & Peers, 2016

Criterion #3: Near Transit Stations

The project would be about 1.4 miles from the MacArthur and about 1.8 miles from the West Oakland BART Stations. The project is also more than one-half mile of an intersection of two or more major bus routes (nearest intersection of two major bus routes is San Pablo Avenue and 40th Street, which is about 0.7 miles away). Therefore, the project would not satisfy Criterion #3. However, the project would satisfy the three conditions for this criterion:

- The proposed project would have a FAR of 3.1, which is greater than 0.75.
- The City of Oakland Planning Code (Section 17.116.080), requires the project to provide a minimum of 155 parking spaces. City code does not have parking maximums for this project. The project would provide 166 spaces, which is 11 spaces more than the minimum required. However, the project peak parking demand at maximum occupancy is estimated to exceed the project parking supply (see Table 5). Thus, the project would not provide more parking for use by visitors or employees than other typical nearby uses, nor would it provide more parking than required by City Code.
- The project is located within the West Oakland Priority Development Area (PDA) as defined by Plan Bay Area, and is therefore consistent with the region's Sustainable Communities Strategy.

VMT Screening Conclusion

The project would satisfy the Low-VMT Area Criterion (#2) and is therefore presumed to have a less-than-significant impact on VMT.

INDUCED AUTOMOBILE TRAVEL (THRESHOLD 3)

The proposed project would not modify the roadway network surrounding the project site. Therefore, it would not increase the physical roadway capacity and would not add new roadways to the network, and would not induce additional automobile traffic. This is a less-than-significant impact; no mitigation measures are required.

PROJECT ACCESS AND CIRCULATION

Access and circulation for various travel modes in and around the site are described below.

Automobile Access and Circulation

Access to the project site would be provided through the following two driveways on Mandela Parkway:

- An existing full-access driveway at the north end of the project site, about 550 feet southwest of Horton Street, which currently provides shared access to a Target Store to the north and an East Bay Municipal Utility District (EBMUD) facility to the west.
- A right-in/right-out only driveway at the south end of the project site. The median along Mandela Parkway and prohibition on U-turns at the north driveway intersection prevent left-turn access between this driveway and northbound Mandela Parkway.

The two driveways would be connected through an internal two-way drive-aisle between the project building and Mandela Parkway. The drive-aisle would provide access to the guest drop-off area outside the lobby, six parking spaces, two commercial loading berths, and the proposed two-level underground parking garage.

The proposed two-level belowground parking garage would be gated and accessed through a ramp at the southwest side of the project site, opposite the right-in/right-out only driveway on Mandela Parkway. The garage would provide 160 parking spaces, consisting of 102 stacked parking spaces and 58 regular parking spaces. It is expected that the stacked parking spaces would be used for valet parking only and not be directly accessed by hotel guests. The configuration of the second garage level may not provide adequate circulation because of dead-end aisles.

The garage ramp would provide adequate sight distance between exiting and entering vehicles.

Both project driveways would provide adequate sight distance between exiting motorists and vehicles traveling on Mandela Parkway, as well as between exiting motorists and pedestrians on the adjacent sidewalk along Mandela Parkway. The north driveway would be shared between the project and the existing Target Store and EBMUD facility to the north. There may be potential conflicts at the north driveway between motorists turning into and out of the project site and motorists traveling to and from the Target Store and EBMUD facility because only one vehicle can be queued before blocking access to the project. Thus, only a few outbound vehicles from the Target Store may block the hotel driveway as they queue to turn onto Mandela Parkway. As a result, they may block the hotel driveway for vehicles waiting to turn into the project site from Mandela Parkway and inbound queues may spill back onto Mandela Parkway.

Landscaping along the Mandela Parkway median may limit sight distance for vehicles turning left from northbound Mandela Parkway onto the site and/or vehicles turning left from the north project driveway onto northbound Mandela Parkway.

Recommendation 1: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- If the parking garage would be accessible to the public, ensure adequate space is provided for turn-around at the end of the dead-end drive aisle on the second level.

Recommendation 2: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- Provide “KEEP CLEAR” pavement markings on the existing driveway to ensure motorists turning into and out of the project site do not conflict with vehicles queueing on the existing driveway to turn onto Mandela Parkway (See **Figure 1**).
- Ensure landscaping in the median along Mandela Parkway is maintained to provide adequate sight lines for left turning vehicles.

Bicycle Access and Bicycle Parking

Bicycle access to the project site is provided by bicycle facilities within the project vicinity, including Class 2 bike lanes on Mandela Parkway.

Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks. The Code requires one long-term space and one short-term space for every 20 rentable rooms.

Table 3 summarizes the bicycle parking requirements for the project. The project is required by the Oakland Municipal Code Section 17.116.110 to provide 11 long-term and 11 short-term parking spaces. Section 17.116.070 of the Oakland Municipal Code specifies location and design standards of required bicycle parking. Long-term bicycle parking must be on-site, or within 500-feet of the building entrance, and short-term parking must be within 50-feet of the building entrance. The bicycle parking areas should be well lit and not impede pedestrian accessibility.

TABLE 3: BICYCLE PARKING REQUIREMENTS

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit[2]	Spaces	Spaces per Unit[2]	Spaces
Hotel	220 RM	1:20 RM	11	1:20 RM	11
Total Required Bicycle Spaces			11		11
Total Bicycle Parking Provided			11		11
Bicycle Parking Deficit			**0**		**0**

Notes:

1. RM = Rooms
2. Based on Oakland Municipal Code Sections 17.116.110

Source: Fehr & Peers, 2017

The site plan dated October 25, 2017shows that the project would provide 11 long-term bicycle parking spaces in the first level of the parking garage, which would be accessed by riding through the garage driveway, or using the elevator or staircase through the lobby. Riding through the garage may result in potential conflicts between motorists and bicyclists, and using stairs or elevators may be inconvenient for bicyclists. Eleven short-term bicycle parking spaces would be provided adjacent to the main entrance near the guest drop-off area. As shown in Table 3, the project would provide the long-term and short-term spaces required by the City Code.

Recommendation 3: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- Consider relocating long-term bicycle parking to a more convinient location on the ground level.

Pedestrian Access and Circulation

The hotel lobby would be accessible through the main entrance at the northeast end of the project site. Pedestrian street access would be provided by one walkway connecting to the existing sidewalk along Mandela Parkway.

Three elevators and two staircases in the lobby would provide access to the 220 hotel rooms. The three elevators and the northwest staircase would provide access to the belowground garage. A staircase adjacent to the guest drop-off area outside the building would also provide garage access.

Mandela Parkway provides a ten-foot sidewalk along the southeast side of the project site. Trees and street lighting narrow the through passage zone to 5.5 feet. The nearest marked crosswalk across Mandela Parkway is provided at the intersection with Horton Street. The intersection is all-way stop controlled with marked crosswalks and directional curb ramps at all three approaches of the intersection. The curb ramps on the south side of Mandela Parkway are currently missing truncated domes.

The site plan dated October 25, 2017 shows no changes on Mandela Parkway.

Recommendation 4: While not required to address a CEQA impact, the following should be considered as part of the final design for the project:

- Ensure proposed landscaping at the two project driveways would not limit the sight distance between exiting motorists and pedestrians along Mandela Parkway.

- Provide truncated domes at the south side of the Mandela Parkway/Horton Street intersection.

Transit Access

Transit service providers in the project vicinity include Bay Area Rapid Transit (BART), AC Transit, and Emery Go-Round.

BART provides regional rail service throughout the East Bay and across the Bay. The nearest BART station to the project site is the MacArthur BART Station, about 1.4 miles east of the project. The proposed project would not modify access between the project site and the BART Station.

AC Transit is the primary bus service provider in the City of Oakland. AC Transit operates Routes 36, 57, C, J, and F in the vicinity of the project. Emery Go-Round is a free shuttle service within the City of Emeryville. The Emery Go-Round Shellmound Route serves the project site.

The nearest bus stop to the project site is approximately 0.2 miles north of the project site in both directions of 40th Street at the intersection with Horton Street. A bus stop sign is provided at both stops and a bench is provided at the westbound stop.

No changes to the bus routes operating in the vicinity of the project are planned and the proposed project would not modify access between these bus stops and the proposed project.

Loading Requirements

The City of Oakland Municipal Code Section 17.116.140 requires two off-street loading berths for commercial uses between 60,000 and 159,000 square feet. The current site plan, dated October 25, 2017 (page DR-3) shows two back-in loading berths adjacent to the the pick-up/drop off area near the principal entry. These loading berths meet the minimum dimensions required by City Code.

Automobile Parking

Although parking is not an environmental impact required for evaluation under CEQA, this section summarizes parking requirements, supply, and demand for automobiles. Based on the project site plan dated October 25, 2017, the proposed project would provide 166 parking spaces; 160 spaces in the proposed two-level belowground garage and six spaces along the drive aisle between the north and south project driveways.

Parking Requirements

The City of Oakland Municipal Code establishes minimum and maximum parking requirements. **Table 4** presents the off-street automobile parking requirements for the proposed project per City Code. The proposed project would require a minimum of one parking space per 600 square feet of ground floor area and one parking space per 1,000 square feet of floor area not on ground floor. The proposed project would be required to provide at least 155 parking spaces per City Code. The project proposes 166 spaces, exceeding City of Oakland Municipal Code requirements by 11 spaces.

TABLE 4: AUTOMOBILE PARKING CODE REQUIREMENTS

Land Use	Size[1]	Required Parking Supply	Provided Parking Supply	Parking Surplus
Hotel[2]	142.8 KSF	155	166	+11

Notes:

1. KSF = 1,000 square feet
2. City of Oakland off-street parking requirement for hotel uses is a minimum of 1 space per 600 square feet of ground floor area and 1 space per 1,000 square feet of remaining floor area.

Source: Fehr & Peers, 2017

Estimated Parking Demand

This analysis compares proposed parking supply to project parking demand estimated using Institute of Transportation Engineers' (ITE) *Parking Generation, 4th Edition*. A non-auto adjustment of 8.6-percent (Oakland City guidelines for mode split adjustment over a mile from BART in an urban environment) is applied to account for non-auto trips.

Table 5 summarizes parking demand for the project. The parking demand values represent average parking demand and assumes the hotel would operates at 100 percent occupancy. The project peak parking demand would be about 178 spaces, resulting in a deficit of 12 spaces. The deficit is estimated to occur when the project is about 90 percent or more occupied. Since the project would implement attendant parking to utilize the stacked parking spaces, attendant parking can also be used to park cars in the drive aisles when parking demand would exceed the provided supply. The parking drive aisles can accommodate the estimated parking deficit.

TABLE 5: PROJECT PARKING SUPPLY AND DEMAND

Land Use	Units[1]	Rate	Weekday Demand
Hotel	220 RM[2]	0.81[3]	178
Total Parking Demand			178
Total Proposed Parking Supply			166
Total Parking Deficit			**-12**

Notes:

1. RM = Rooms
2. To remain conservative, 100% occupancy is assumed.
3. Based on ITE *Parking Generation* (4th Edition) land use category 310 (Hotel – weekday, suburban):
   Average Peak Period Parking Demand of 0.89 vehicles per occupied room with Oakland's 8.6% reduction applied.

Source: Fehr & Peers, 2017

PROJECT TRAFFIC IMPACT ANALYSIS

Although automobile delay is not a CEQA topic, this document evaluates the effects of the proposed project on intersection operations to inform the decision makers and the public.

Vehicular Trip Generation

Trip generation is the process of estimating the number of vehicles that would likely access the project on any given day. **Table 6** summarizes the trip generation for the proposed project. Trip generation data published by ITE in the *Trip Generation Manual* (Ninth Edition) was used as a starting point to estimate the vehicle trip generation.

TABLE 6: PROJECT VEHICLE TRIP GENERATION SUMMARY

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Hotel	220 RM	310 [2]	1,970	86	62	148	75	79	154
Subtotal			1,970	86	62	148	75	79	154
Non-Auto Reduction (-8.6%)[3]			-170	-7	-6	-13	-6	-7	-13
Adjusted Project Trips			**1,800**	**79**	**56**	**135**	**69**	**72**	**141**

Notes:

1. RM = Rooms.
2. ITE Trip Generation (9th Edition) land use category 310 (Hotel- Adj. Streets, 7-9 AM, 4-6 PM):
    Daily: T = 8.92*(X)
    AM Peak Hour: T = 0.67*(X) (58% in, 42% out)
    PM Peak Hour: T = 0.70*(X) (49% in, 51% out)
3. The 8.6% reduction is based on data from the *City of Oakland Transportation Impact Study Guidelines* for development in an urban environment more than a mile away from a BART Station.

Source: Fehr & Peers, 2017.

ITE's *Trip Generation Manual* (Ninth Edition) is primarily based on data collected at single-use suburban sites where the automobile is often the only travel mode. However, the project site is in an urban environment with walking, biking, and transit options. Since the project is about 1.4 miles from the MacArthur BART Station, this analysis reduces the ITE based trip generation by 8.6 percent to account for non-vehicular trips. This reduction is consistent with the City of Oakland's *Transportation Impact Study Guidelines* and is based on the Bay Area Travel Survey (BATS) 2000 which shows that the non-automobile mode share over a mile from a BART Station in an urban setting within Alameda County is about 8.6 percent. This reduction is further confirmed by a 2011 research study which found that reducing ITE based trip generation using BATS data results in a more accurate estimation of trip generation for urban developments versus using ITE based trip generation alone.[2]

As summarized in **Table 6,** the net trip generation for the proposed development is approximately 1,800 daily, 135 AM peak hour, and 141 PM peak hour trips.

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[2] *Evaluation of the Operation and Accuracy of Five Available Smart Growth Trip Generation Methodologies.* Institute of Transportation Studies, UC Davis, 2011.

Non-Vehicular Trip Generation

Consistent with City of Oakland Transportation Impact Study Guidelines, **Table 7** presents the estimates of project trip generation for all travel modes.

TABLE 7: TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	Weekday AM Peak Hour	Weekday PM Peak Hour
Automobile	91.4%	1,800	135	141
Transit	9.8%	190	15	15
Bike	2.5%	50	4	4
Walk	13.2%	260	20	20
Total Trips		**2,300**	**174**	**180**

1. Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment over a mile away from a BART Station.

Source: Fehr & Peers, 2017.

Trip Distribution

The trip distribution and assignment process is used to estimate how the trips generated by the project would be distributed across the roadway network. Based on existing travel patterns and locations of complementary land uses, we determined directions of approach to and departure from the project site. **Figure 2** shows the resulting trip distribution.

Study Intersection Selection

Trips generated by the proposed project, as shown in **Table 6**, were assigned to the roadway network according to the trip distribution shown on **Figure 2**. **Figure 3** shows the resulting trip assignment by intersection traffic movements.

According to the City of Oakland's Transportation Impact Review Guidelines, the criteria the intersections to be studied include the following:

- All intersection(s) of streets adjacent to project site;
- All signalized intersection(s), all-way stop-controlled intersection(s) or roundabouts where 100 or more peak hour trips are added by the project;
- All signalized intersection(s) currently operating at LOS D, E, or F, where 50 or more peak hour trips are added by the project;

- Side-street stop-controlled intersection(s) where 50 or more peak hour trips are added by the project to any individual movement other than the major-street through movement; and,

According to the City of Oakland's Guidelines, the following three intersections, which were not evaluated in the WOSP EIR, are evaluated in the study:

1. Mandela Parkway/South Driveway (side-street stop-controlled)
2. Mandela Parkway/North Driveway (side-street stop-controlled)
3. Horton Street/Mandela Parkway (all-way stop controlled)

Intersection Operations Analysis

Traffic data, consisting of automobile turning movement, as well as pedestrian and bicycle counts, were collected at the two existing study intersections on a clear day, while area schools were in normal session. The traffic data collection was conducted from 7:00 AM to 9:00 AM (weekday AM) and from 4:00 PM to 6:00 PM (weekday PM) in April 2017, at the study intersections. **Appendix A** presents the existing traffic volume counts. For all study intersections, the peak hour (i.e., the hour with the highest traffic volumes) within each peak period was selected for evaluation.

Figure 4 presents existing intersection lane configurations, traffic control, and peak hour traffic volumes, as well as the peak hour pedestrian and bicycle volumes at the study intersections.

Based on the volumes and roadway configurations presented on Figure 4, Fehr & Peers calculated the Level of Service (LOS)[3] at the study intersections using the 2010 *Highway Capacity Manual* (HCM) methodologies. **Table 8** summarizes the existing intersection analysis results. The three study intersections currently operate at LOS D or better during weekday AM and PM peak hours. **Appendix B** provides the detailed LOS calculation sheets. The Horton Street/Mandela Parkway intersection currently meets the California Manual on Uniform Traffic Control Devices (CA MUTCD) peak hour signal warrant.

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[3] The operations of roadway facilities are typically described with the term level of service (LOS), a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents "at-capacity" operations. When traffic volumes exceed the intersection capacity, stop-and-go conditions result and a vehicle may wait through multiple signal cycles before passing through the intersection; these operations are designated as LOS F.

TABLE 8: EXISTING AND EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Intersection	Control[1]	Peak Hour	Existing No Project		Existing Plus Project	
			Delay[2]	LOS	Delay[2]	LOS
1. Mandela Parkway/ South Driveway	TWSC	AM PM	N/A	N/A	0.7 (9.6) 0.5 (10.9)	A (A) A (B)
2. Mandela Parkway/ North Driveway	TWSC	AM PM	0.9 (9.7) 1.8 (12.7)	A (A) A (B)	1.3 (10.9) 2.3 (15.0)	A (B) A (C)
3. Horton Street/ Mandela Parkway	AWSC	AM PM	9.4 25.1	A D	9.6 28.0	A D

Notes:
1. AWSC = intersection is all way stop controlled; TWSC = intersection is two-way stop controlled (side street stop)
2. For signalized intersections, average intersection delay and LOS based on the 2010 HCM method is shown. For TWSC intersections, average intersection delay and LOS is displayed with the worst turning movement delay and LOS in parenthesis.

Source: Fehr & Peers, 2017

Figure 5 shows traffic volumes under Existing Plus Project conditions, which consists of Existing traffic volumes (shown on Figure 4) plus added traffic volumes generated by the project (shown on Figure 3).

Table 8 summarizes the intersection operations results for the Existing No Project and Existing Plus Project conditions. All study intersections would continue to operate at LOS D or better during both AM and PM peak hours under Existing Plus Project conditions. The proposed project would not have a noticeable effect at the study intersections under Existing Plus Project conditions. The Horton Street/Mandela Parkway intersection would meet the CA MUTCD peak hour signal warrant under Existing Plus Project conditions. However, signalizing the intersection is not recommended for the following reasons:

- The intersection is not identified on the City's High Injury Network (*2017 Pedestrian Plan Update)*.
- The intersection would continue to operate at LOS A during the AM peak hour and LOS D during the PM peak hour under Existing Plus Project conditions and the project would increase the average delay at the intersection by less than one second during the AM peak hour and less than three seconds during the PM peak hour, which would not be noticeable to most intersection users.
- The proposed project would increase the traffic volume at the intersection by less than four percent during the PM peak hour, which is negligible.

The other study intersections would not meet the peak hour signal warrant.

Recommendation 5: While not required to address a CEQA impact, the following should be considered at the Horton Street/Mandela Parkway intersection as part of the final design for the project:

- Improve the crosswalk striping per City Standards
- Improve all curb ramps to provide directional curb ramps (two per corner) per City Standards
- Update traffic paving markings, signage, and others as needed per City Standards
- Study the feasibility and if feasible, install a stop-sign on the northbound approach (Best Buy) of the intersection

Please contact Sam or Natalie with questions or comments.

ATTACHMENTS

Figures:

Figure 1 – Site Plan Recommendations

Figure 2 – Project Trip Distribution

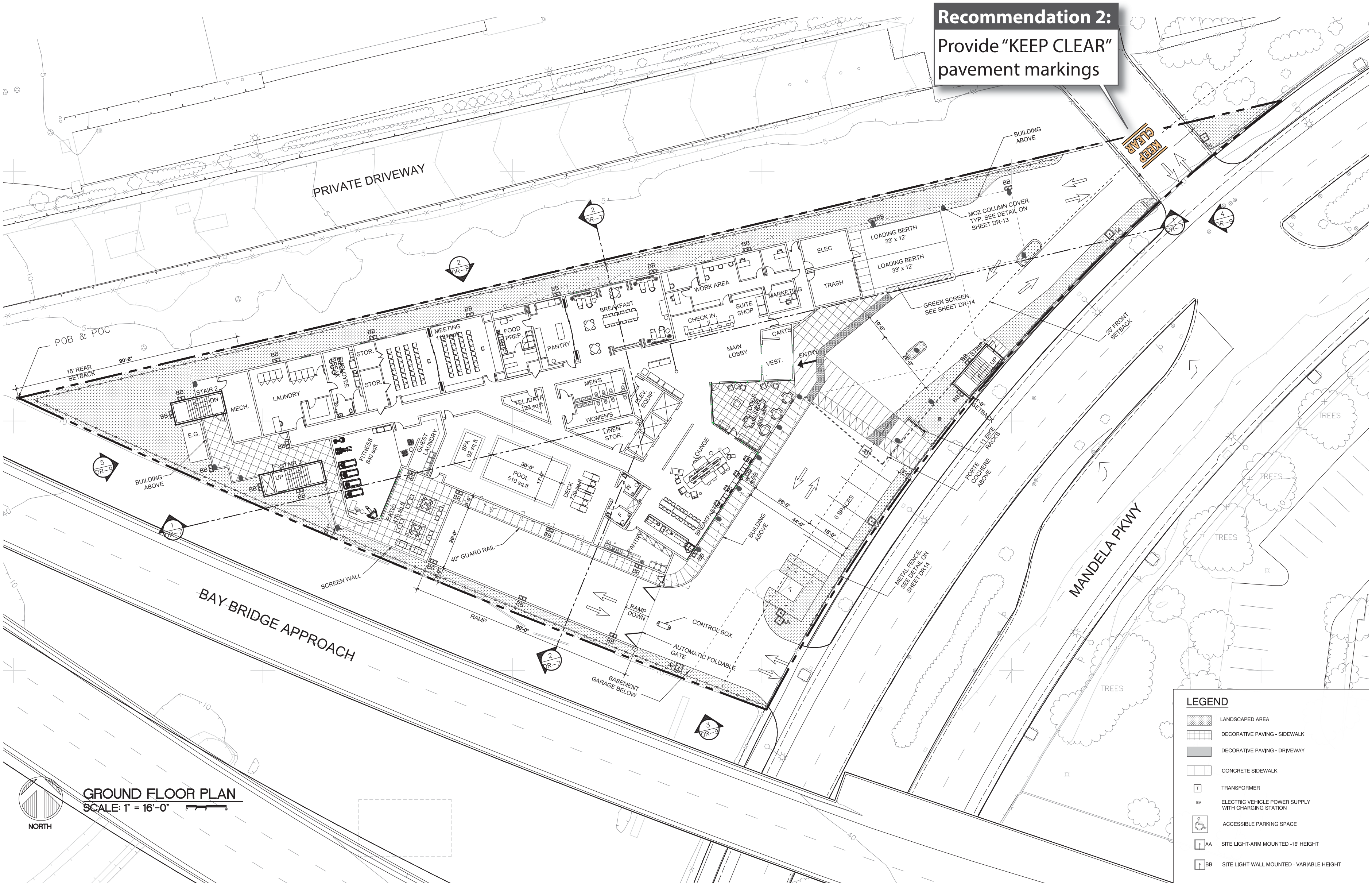
Figure 3 – Project Trip Assignment

Figure 4 – Existing Peak Hour Traffic, Pedestrian, and Bicycle Volumes, Lane Configurations, and Traffic Controls

Figure 5 – Existing Plus Project Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls

Appendix:

Appendix A	Traffic Counts
Appendix B	LOS Calculations



Recommendation 2:
Provide “KEEP CLEAR” pavement markings

Site Plan Source:
Architectural Dimensions, October 25, 2017.

Figure 1

Site Plan Recommendations

Figure 2

Project Trip Distribution

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

🟧 Project Site

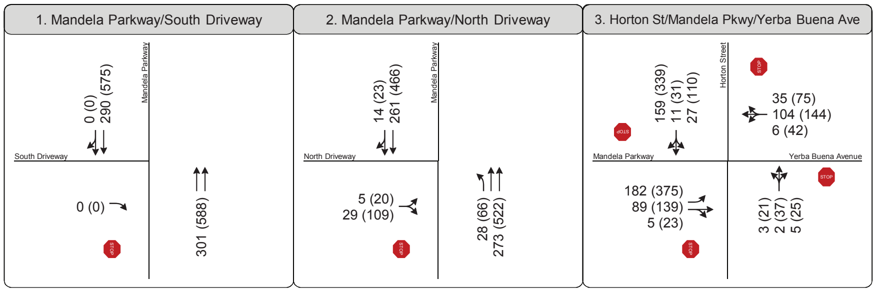
\# Study Intersection

🛑 Stop Sign

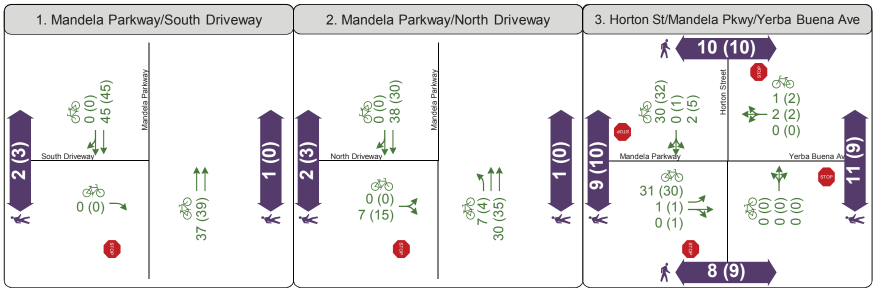
Figure 3

Project Trip Assignment

Existing Automobile Volumes



Existing Pedestrian and Bicycle Volumes



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

🚦 Signalized Intersection

● Stop Sign

x (y) AM (PM) Peak Hour Pedestrian Volumes

x (y) AM (PM) Peak Hour Bicycle Volumes

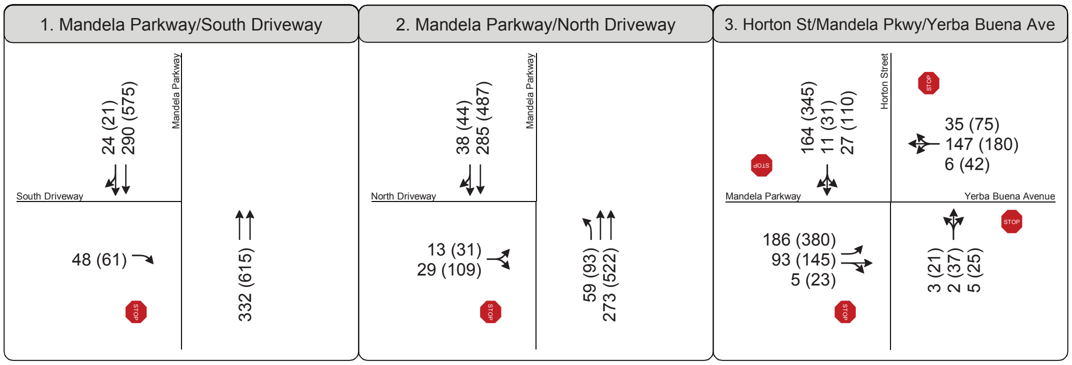
🟧 Project Site

Study Intersection

Figure 4

Existing Peak Hour Traffic, Pedestrian, and Bicycle Volumes, Lane Configurations, and Traffic Controls

OK16-0146_4_Vol-ExPedBike



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

🟧 Project Site

Study Intersection

STOP Stop Sign

Figure 5

Existing Plus Project Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls

Appendix A

Traffic Counts

National Data and Surveying Services

City of Oakland
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Heavy Trucks On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7344-001 Target Dwy & Mandela Pkwy
Date : 4/27/2017

Unshifted Count = All Vehicles & Uturns

	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	5	0	5	0	39	4	0	43	0	0	0	0	0	0	31	0	0	31	79	0
7:15	1	0	3	0	4	0	49	8	0	57	0	0	0	0	0	1	48	0	0	49	110	0
7:30	1	0	3	0	4	0	43	5	0	48	0	0	0	0	0	2	63	0	0	65	117	0
7:45	1	0	7	0	8	0	62	2	1	65	0	0	0	0	0	9	51	0	0	60	133	1
Total	3	0	18	0	21	0	193	19	1	213	0	0	0	0	0	12	193	0	0	205	439	1
8:00	1	0	2	0	3	0	56	4	0	60	0	0	0	0	0	2	63	0	0	65	128	0
8:15	1	0	6	0	7	0	68	2	0	70	0	0	0	0	0	10	71	0	0	81	158	0
8:30	3	0	9	0	12	0	67	5	0	72	0	0	0	0	0	12	68	0	0	80	164	0
8:45	0	0	12	0	12	0	70	3	0	73	0	0	0	0	0	4	71	0	0	75	160	0
Total	5	0	29	0	34	0	261	14	0	275	0	0	0	0	0	28	273	0	0	301	610	0
16:00	4	0	17	0	21	0	96	14	0	110	0	0	0	0	0	13	112	0	0	125	256	0
16:15	4	0	24	0	28	0	101	8	0	109	0	0	0	0	0	6	107	0	0	113	250	0
16:30	2	0	23	0	25	0	122	9	0	131	0	0	0	0	0	17	131	0	0	148	304	0
16:45	14	0	24	0	38	0	104	5	0	109	0	0	0	0	0	17	125	0	0	142	289	0
Total	24	0	88	0	112	0	423	36	0	459	0	0	0	0	0	53	475	0	0	528	1099	0
17:00	7	0	28	0	35	0	140	6	0	146	0	0	0	0	0	17	124	0	0	141	322	0
17:15	5	0	25	0	30	0	114	2	0	116	0	0	0	0	0	16	126	0	0	142	288	0
17:30	4	0	24	0	28	0	107	8	0	115	0	0	0	0	0	19	130	0	0	149	292	0
17:45	4	0	32	0	36	0	105	7	0	112	0	0	0	0	0	14	142	0	0	156	304	0
Total	20	0	109	0	129	0	466	23	0	489	0	0	0	0	0	66	522	0	0	588	1206	0
Grand Total	52	0	244	0	296	0	1343	92	1	1436	0	0	0	0	0	159	1463	0	0	1622	3354	1
Apprch %	17.6%	0.0%	82.4%	0.0%		0.0%	93.5%	6.4%	0.1%		0.0%	0.0%	0.0%	0.0%		9.8%	90.2%	0.0%	0.0%			
Total %	1.6%	0.0%	7.3%	0.0%	8.8%	0.0%	40.0%	2.7%	0.0%	42.8%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	43.6%	0.0%	0.0%	48.4%	100.0%	

AM PEAK HOUR	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	1	0	2	0	3	0	56	4	0	60	0	0	0	0	0	2	63	0	0	65	128
8:15	1	0	6	0	7	0	68	2	0	70	0	0	0	0	0	10	71	0	0	81	158
8:30	3	0	9	0	12	0	67	5	0	72	0	0	0	0	0	12	68	0	0	80	164
8:45	0	0	12	0	12	0	70	3	0	73	0	0	0	0	0	4	71	0	0	75	160
Total Volume	5	0	29	0	34	0	261	14	0	275	0	0	0	0	0	28	273	0	0	301	610
% App Total	14.7%	0.0%	85.3%	0.0%		0.0%	94.9%	5.1%	0.0%		0.0%	0.0%	0.0%	0.0%		9.3%	90.7%	0.0%	0.0%		
PHF	.417	.000	.604	.000	.708	.000	.932	.700	.000	.942	.000	.000	.000	.000	.000	.583	.961	.000	.000	.929	.930

PM PEAK HOUR	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	7	0	28	0	35	0	140	6	0	146	0	0	0	0	0	17	124	0	0	141	322
17:15	5	0	25	0	30	0	114	2	0	116	0	0	0	0	0	16	126	0	0	142	288
17:30	4	0	24	0	28	0	107	8	0	115	0	0	0	0	0	19	130	0	0	149	292
17:45	4	0	32	0	36	0	105	7	0	112	0	0	0	0	0	14	142	0	0	156	304
Total Volume	20	0	109	0	129	0	466	23	0	489	0	0	0	0	0	66	522	0	0	588	1206
% App Total	15.5%	0.0%	84.5%	0.0%		0.0%	95.3%	4.7%	0.0%		0.0%	0.0%	0.0%	0.0%		11.2%	88.8%	0.0%	0.0%		
PHF	.714	.000	.852	.000	.896	.000	.832	.719	.000	.837	.000	.000	.000	.000	.000	.868	.919	.000	.000	.942	.936

National Data and Surveying Services

City of Oakland
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Heavy Trucks On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7344-001 Target Dwy & Mandela Pkwy
Date : 4/27/2017

Bank 1 Count = Peds & Bikes

	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	4	0	0	6	7	1
7:15	0	0	2	0	2	0	9	0	0	9	0	0	0	0	0	0	1	0	0	1	12	0
7:30	0	0	4	1	4	0	5	0	0	5	0	0	0	0	0	1	5	0	0	6	15	1
7:45	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	2	2	0	1	4	13	1
Total	0	0	7	2	7	0	23	0	0	23	0	0	0	0	0	5	12	0	1	17	47	3
8:00	0	0	1	2	1	0	11	0	0	11	0	0	0	0	0	0	6	0	0	6	18	2
8:15	0	0	3	0	3	0	12	0	0	12	0	0	0	0	0	3	7	0	1	10	25	1
8:30	0	0	2	0	2	0	10	0	0	10	0	0	0	0	0	1	8	0	0	9	21	0
8:45	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	3	9	0	0	12	18	0
Total	0	0	7	2	7	0	38	0	0	38	0	0	0	0	0	7	30	0	1	37	82	3
16:00	0	0	4	1	4	0	3	0	0	3	0	0	0	0	0	2	2	0	0	4	11	1
16:15	1	0	3	0	4	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	16	0
16:30	0	0	0	0	0	0	6	0	1	6	0	0	0	0	0	0	8	0	0	8	14	1
16:45	0	0	0	0	0	0	12	0	1	12	0	0	0	0	0	1	5	0	0	6	18	1
Total	1	0	7	1	8	0	26	0	2	26	0	0	0	0	0	3	22	0	0	25	59	3
17:00	0	0	4	0	4	0	6	0	1	6	0	0	0	0	0	1	8	0	0	9	19	1
17:15	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	0	0	9	19	0
17:30	0	0	4	0	4	0	9	0	1	9	0	0	0	0	0	2	11	0	0	13	26	1
17:45	0	0	7	0	7	0	5	0	0	5	0	0	0	0	0	1	7	0	0	8	20	0
Total	0	0	15	0	15	0	30	0	2	30	0	0	0	0	0	4	35	0	0	39	84	2
Grand Total	1	0	36	5	37	0	117	0	4	117	0	0	0	0	0	19	99	0	2	118	272	11
Apprch %	2.7%	0.0%	97.3%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			16.1%	83.9%	0.0%				
Total %	0.4%	0.0%	13.2%		13.6%	0.0%	43.0%	0.0%		43.0%	0.0%	0.0%	0.0%		0.0%	7.0%	36.4%	0.0%		43.4%	100.0%	

AM PEAK HOUR	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	1	2	1	0	11	0	0	11	0	0	0	0	0	0	6	0	0	6	18
8:15	0	0	3	0	3	0	12	0	0	12	0	0	0	0	0	3	7	0	1	10	25
8:30	0	0	2	0	2	0	10	0	0	10	0	0	0	0	0	1	8	0	0	9	21
8:45	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	3	9	0	0	12	18
Total Volume	0	0	7	2	7	0	38	0	0	38	0	0	0	0	0	7	30	0	1	37	82
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			18.9%	81.1%	0.0%			
PHF	.000	.000	.583		.583	.000	.792	.000		.792	.000	.000	.000		.000	.583	.833	.000		.771	.820

PM PEAK HOUR	Target Dwy Southbound					Mandela Pkwy Westbound					Target Dwy Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	4	0	4	0	6	0	1	6	0	0	0	0	0	1	8	0	0	9	19
17:15	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	9	0	0	9	19
17:30	0	0	4	0	4	0	9	0	1	9	0	0	0	0	0	2	11	0	0	13	26
17:45	0	0	7	0	7	0	5	0	0	5	0	0	0	0	0	1	7	0	0	8	20
Total Volume	0	0	15	0	15	0	30	0	2	30	0	0	0	0	0	4	35	0	0	39	84
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			10.3%	89.7%	0.0%			
PHF	.000	.000	.536		.536	.000	.750	.000		.750	.000	.000	.000		.000	.500	.795	.000		.750	.808

National Data and Surveying Services

City of Oakland
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Heavy Trucks On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7344-002 Horton St & Mandela Pkwy
Date : 4/27/2017

Unshifted Count = All Vehicles & Uturns

	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	3	1	27	0	31	2	14	2	0	18	1	0	1	0	2	20	12	2	0	34	85	0
7:15	2	0	40	0	42	2	18	5	0	25	1	0	0	0	1	36	16	1	0	53	121	0
7:30	5	2	25	0	32	2	22	3	0	27	0	1	1	0	2	36	31	0	0	67	128	0
7:45	1	0	44	0	45	2	21	5	0	28	0	0	1	0	1	42	10	0	0	52	126	0
Total	11	3	136	0	150	8	75	15	0	98	2	1	3	0	6	134	69	3	0	206	460	0
8:00	3	2	37	1	43	0	20	4	0	24	1	0	1	0	2	39	28	2	0	69	138	1
8:15	10	3	38	0	51	2	30	9	0	41	2	0	2	0	4	48	18	0	0	66	162	0
8:30	3	2	41	0	46	3	28	11	0	42	0	1	1	0	2	49	20	0	0	69	159	0
8:45	10	4	43	0	57	1	26	11	0	38	0	1	1	0	2	46	23	3	0	72	169	0
Total	26	11	159	1	197	6	104	35	0	145	3	2	5	0	10	182	89	5	0	276	628	1
16:00	16	10	68	0	94	6	30	11	0	47	8	9	9	0	26	74	40	6	0	120	287	0
16:15	13	7	77	0	97	13	30	16	0	59	4	7	10	0	21	74	29	4	0	107	284	0
16:30	27	6	86	0	119	11	40	18	0	69	6	8	2	0	16	98	27	6	1	132	336	1
16:45	24	9	66	2	101	12	37	13	0	62	3	10	10	0	23	93	44	3	0	140	326	2
Total	80	32	297	2	411	42	137	58	0	237	21	34	31	0	86	339	140	19	1	499	1233	3
17:00	25	9	103	0	137	9	39	26	0	74	4	12	7	0	23	91	37	8	0	136	370	0
17:15	32	7	84	0	123	10	28	18	0	56	8	7	6	0	21	92	31	6	0	129	329	0
17:30	23	9	66	0	98	9	47	17	0	73	5	12	11	0	28	82	35	8	0	125	324	0
17:45	17	10	78	0	105	5	29	6	0	40	8	7	8	0	23	114	35	6	0	155	323	0
Total	97	35	331	0	463	33	143	67	0	243	25	38	32	0	95	379	138	28	0	545	1346	0
Grand Total	214	81	923	3	1221	89	459	175	0	723	51	75	71	0	197	1034	436	55	1	1526	3667	4
Apprch %	17.5%	6.6%	75.6%	0.2%		12.3%	63.5%	24.2%	0.0%		25.9%	38.1%	36.0%	0.0%		67.8%	28.6%	3.6%	0.1%			
Total %	5.8%	2.2%	25.2%	0.1%	33.3%	2.4%	12.5%	4.8%	0.0%	19.7%	1.4%	2.0%	1.9%	0.0%	5.4%	28.2%	11.9%	1.5%	0.0%	41.6%	100.0%	

AM PEAK HOUR	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	3	2	37	1	43	0	20	4	0	24	1	0	1	0	2	39	28	2	0	69	138
8:15	10	3	38	0	51	2	30	9	0	41	2	0	2	0	4	48	18	0	0	66	162
8:30	3	2	41	0	46	3	28	11	0	42	0	1	1	0	2	49	20	0	0	69	159
8:45	10	4	43	0	57	1	26	11	0	38	0	1	1	0	2	46	23	3	0	72	169
Total Volume	26	11	159	1	197	6	104	35	0	145	3	2	5	0	10	182	89	5	0	276	628
% App Total	13.2%	5.6%	80.7%	0.5%		4.1%	71.7%	24.1%	0.0%		30.0%	20.0%	50.0%	0.0%		65.9%	32.2%	1.8%	0.0%		
PHF	.650	.688	.924	.250	.864	.500	.867	.795	.000	.863	.375	.500	.625	.000	.625	.929	.795	.417	.000	.958	.929

PM PEAK HOUR	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	27	6	86	0	119	11	40	18	0	69	6	8	2	0	16	98	27	6	1	132	336
16:45	24	9	66	2	101	12	37	13	0	62	3	10	10	0	23	93	44	3	0	140	326
17:00	25	9	103	0	137	9	39	26	0	74	4	12	7	0	23	91	37	8	0	136	370
17:15	32	7	84	0	123	10	28	18	0	56	8	7	6	0	21	92	31	6	0	129	329
Total Volume	108	31	339	2	480	42	144	75	0	261	21	37	25	0	83	374	139	23	1	537	1361
% App Total	22.5%	6.5%	70.6%	0.4%		16.1%	55.2%	28.7%	0.0%		25.3%	44.6%	30.1%	0.0%		69.6%	25.9%	4.3%	0.2%		
PHF	.844	.861	.823	.250	.876	.875	.900	.721	.000	.882	.656	.771	.625	.000	.902	.954	.790	.719	.250	.959	.920

National Data and Surveying Services

City of Oakland
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Heavy Trucks On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7344-002 Horton St & Mandela Pkwy
Date : 4/27/2017

Bank 1 Count = Peds & Bikes

	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	1	0	1	1	0	0	0	4	0	5	0	0	1	5	6	6
7:15	0	0	7	0	7	0	1	0	2	1	0	0	0	2	0	1	0	0	2	1	9	6
7:30	1	0	7	3	8	0	0	0	1	0	0	0	0	0	0	3	1	0	1	4	12	5
7:45	0	0	6	0	6	0	1	0	0	1	0	0	0	1	0	3	0	0	2	3	10	3
Total	1	0	20	3	21	0	3	0	4	3	0	0	0	7	0	12	1	0	6	13	37	20
8:00	0	0	7	1	7	0	0	0	0	0	0	0	0	1	0	7	0	0	0	7	14	2
8:15	0	0	11	1	11	0	2	0	4	2	0	0	0	5	0	8	0	0	5	8	21	15
8:30	0	0	6	2	6	0	0	0	2	0	0	0	0	2	0	6	1	0	5	7	13	11
8:45	2	0	6	6	8	0	0	1	3	1	0	0	0	0	0	10	0	0	1	10	19	10
Total	2	0	30	10	32	0	2	1	9	3	0	0	0	8	0	31	1	0	11	32	67	38
16:00	0	1	4	2	5	0	0	0	3	0	0	1	0	2	1	2	0	0	8	2	8	15
16:15	0	0	4	6	4	0	1	0	8	1	0	0	1	0	1	7	2	0	4	9	15	18
16:30	0	0	8	1	8	0	1	1	2	2	0	0	0	2	0	7	0	1	2	8	18	7
16:45	1	1	10	1	12	0	0	1	3	1	0	0	0	2	0	4	1	0	0	5	18	6
Total	1	2	26	10	29	0	2	2	16	4	0	1	1	6	2	20	3	1	14	24	59	46
17:00	0	0	7	4	7	0	0	0	3	0	0	0	0	0	0	8	0	0	1	8	15	8
17:15	4	0	7	4	11	0	1	0	2	1	0	0	0	5	0	11	0	0	6	11	23	17
17:30	2	0	8	0	10	0	1	0	2	1	0	2	0	2	2	8	1	0	6	9	22	10
17:45	0	1	8	5	9	0	0	0	2	0	0	0	0	2	0	6	1	0	2	7	16	11
Total	6	1	30	13	37	0	2	0	9	2	0	2	0	9	2	33	2	0	15	35	76	46
Grand Total	10	3	106	36	119	0	9	3	38	12	0	3	1	30	4	96	7	1	46	104	239	150
Apprch %	8.4%	2.5%	89.1%			0.0%	75.0%	25.0%			0.0%	75.0%	25.0%			92.3%	6.7%	1.0%				
Total %	4.2%	1.3%	44.4%		49.8%	0.0%	3.8%	1.3%		5.0%	0.0%	1.3%	0.4%		1.7%	40.2%	2.9%	0.4%		43.5%	100.0%	

AM PEAK HOUR	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	7	1	7	0	0	0	0	0	0	0	0	1	0	7	0	0	0	7	14
8:15	0	0	11	1	11	0	2	0	4	2	0	0	0	5	0	8	0	0	5	8	21
8:30	0	0	6	2	6	0	0	0	2	0	0	0	0	2	0	6	1	0	5	7	13
8:45	2	0	6	6	8	0	0	1	3	1	0	0	0	0	0	10	0	0	1	10	19
Total Volume	2	0	30	10	32	0	2	1	9	3	0	0	0	8	0	31	1	0	11	32	67
% App Total	6.3%	0.0%	93.8%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			96.9%	3.1%	0.0%			
PHF	.250	.000	.682		.727	.000	.250	.250		.375	.000	.000	.000		.000	.775	.250	.000		.800	.798

PM PEAK HOUR	Horton St Southbound					Mandela Pkwy Westbound					Horton St Northbound					Mandela Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	8	1	8	0	1	1	2	2	0	0	0	2	0	7	0	1	2	8	18
16:45	1	1	10	1	12	0	0	1	3	1	0	0	0	2	0	4	1	0	0	5	18
17:00	0	0	7	4	7	0	0	0	3	0	0	0	0	0	0	8	0	0	1	8	15
17:15	4	0	7	4	11	0	1	0	2	1	0	0	0	5	0	11	0	0	6	11	23
Total Volume	5	1	32	10	38	0	2	2	10	4	0	0	0	9	0	30	1	1	9	32	74
% App Total	13.2%	2.6%	84.2%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			93.8%	3.1%	3.1%			
PHF	.313	.250	.800		.792	.000	.500	.500		.500	.000	.000	.000		.000	.682	.250	.250		.727	.804

Appendix B

LOS Calculations

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	301	290	0
Future Vol, veh/h	0	0	0	301	290	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	327	315	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	158	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	859	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	859	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

2: Mandela Parkway & North Driveway

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑↑	↑↱	
Traffic Vol, veh/h	5	29	28	273	261	14
Future Vol, veh/h	5	29	28	273	261	14
Conflicting Peds, #/hr	0	1	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	29	28	273	261	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	463	141	277	0	-	0
Stage 1	270	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	528	881	1283	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	515	878	1282	-	-	-
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1282	-	796	-	-
HCM Lane V/C Ratio	0.022	-	0.043	-	-
HCM Control Delay (s)	7.9	-	9.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↰	↱				✥				✥	
Traffic Vol, veh/h	0	182	89	5	0	6	104	35	0	3	2	5
Future Vol, veh/h	0	182	89	5	0	6	104	35	0	3	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	182	89	5	0	6	104	35	0	3	2	5
Number of Lanes	0	1	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.9	8.9	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	30%	100%	0%	4%	14%
Vol Thru, %	20%	0%	95%	72%	6%
Vol Right, %	50%	0%	5%	24%	81%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	182	94	145	197
LT Vol	3	182	0	6	27
Through Vol	2	0	89	104	11
RT Vol	5	0	5	35	159
Lane Flow Rate	10	182	94	145	197
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.014	0.285	0.133	0.19	0.247
Departure Headway (Hd)	4.975	5.639	5.098	4.716	4.511
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	715	635	700	757	794
Service Time	3.035	3.388	2.848	2.768	2.547
HCM Lane V/C Ratio	0.014	0.287	0.134	0.192	0.248
HCM Control Delay	8.1	10.6	8.6	8.9	9
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0	1.2	0.5	0.7	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			✥	
Traffic Vol, veh/h	0	27	11	159
Future Vol, veh/h	0	27	11	159
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	27	11	159
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9
HCM LOS	A

1: Mandela Parkway & South Driveway

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	0	0	588	575	0
Future Vol, veh/h	0	0	0	588	575	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	639	625	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	313	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	683	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	683	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗		↰	↑↑	↑↱	
Traffic Vol, veh/h	20	109	66	522	466	23
Future Vol, veh/h	20	109	66	522	466	23
Conflicting Peds, #/hr	2	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	20	109	66	522	466	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	873	245	489	0	-	0
Stage 1	478	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Critical Hdwy	6.82	6.92	4.12	-	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	2.21	-	-	-
Pot Cap-1 Maneuver	291	758	1078	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	758	1078	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1078	-	594	-	-
HCM Lane V/C Ratio	0.061	-	0.217	-	-
HCM Control Delay (s)	8.6	-	12.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-	-

Intersection	
Intersection Delay, s/veh	25.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↰	↱				✥				✥	
Traffic Vol, veh/h	0	375	139	23	0	42	144	75	0	21	37	25
Future Vol, veh/h	0	375	139	23	0	42	144	75	0	21	37	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	375	139	23	0	42	144	75	0	21	37	25
Number of Lanes	0	1	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	26	16.6	12.2
HCM LOS	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	25%	100%	0%	16%	23%
Vol Thru, %	45%	0%	86%	55%	6%
Vol Right, %	30%	0%	14%	29%	71%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	375	162	261	480
LT Vol	21	375	0	42	110
Through Vol	37	0	139	144	31
RT Vol	25	0	23	75	339
Lane Flow Rate	83	375	162	261	480
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.174	0.777	0.308	0.497	0.817
Departure Headway (Hd)	7.527	7.462	6.848	6.849	6.129
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	474	484	523	525	590
Service Time	5.613	5.226	4.613	4.919	4.178
HCM Lane V/C Ratio	0.175	0.775	0.31	0.497	0.814
HCM Control Delay	12.2	31.8	12.7	16.6	31
HCM Lane LOS	B	D	B	C	D
HCM 95th-tile Q	0.6	6.9	1.3	2.7	8.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			✥	
Traffic Vol, veh/h	0	110	31	339
Future Vol, veh/h	0	110	31	339
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	1	1	1	1
Mvmt Flow	0	110	31	339
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	31
HCM LOS	D

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	48	0	332	290	24
Future Vol, veh/h	0	48	0	332	290	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	52	0	361	315	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	171	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	843	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	843	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	843	-	-
HCM Lane V/C Ratio	-	0.062	-	-
HCM Control Delay (s)	-	9.6	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

2: Mandela Parkway & North Driveway

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱		↰	↑↑	↑↱	
Traffic Vol, veh/h	13	29	59	273	285	38
Future Vol, veh/h	13	29	59	273	285	38
Conflicting Peds, #/hr	0	1	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	29	59	273	285	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	561	165	325	0	-	0
Stage 1	306	-	-	-	-	-
Stage 2	255	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	458	850	1231	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	434	848	1230	-	-	-
Mov Cap-2 Maneuver	434	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1230	-	655	-	-
HCM Lane V/C Ratio	0.048	-	0.064	-	-
HCM Control Delay (s)	8.1	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↰	↱				✥				✥	
Traffic Vol, veh/h	0	186	93	5	0	6	147	35	0	3	2	5
Future Vol, veh/h	0	186	93	5	0	6	147	35	0	3	2	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	186	93	5	0	6	147	35	0	3	2	5
Number of Lanes	0	1	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.1	9.4	8.3
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	30%	100%	0%	3%	13%
Vol Thru, %	20%	0%	95%	78%	5%
Vol Right, %	50%	0%	5%	19%	81%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	186	98	188	202
LT Vol	3	186	0	6	27
Through Vol	2	0	93	147	11
RT Vol	5	0	5	35	164
Lane Flow Rate	10	186	98	188	202
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.014	0.295	0.141	0.25	0.259
Departure Headway (Hd)	5.115	5.701	5.162	4.78	4.624
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	694	629	691	746	774
Service Time	3.191	3.458	2.919	2.838	2.67
HCM Lane V/C Ratio	0.014	0.296	0.142	0.252	0.261
HCM Control Delay	8.3	10.8	8.8	9.4	9.3
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0	1.2	0.5	1	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			✥	
Traffic Vol, veh/h	0	27	11	164
Future Vol, veh/h	0	27	11	164
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	27	11	164
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.3
HCM LOS	A

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↱		↑↑	↑↱	
Traffic Vol, veh/h	0	61	0	615	575	21
Future Vol, veh/h	0	61	0	615	575	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	66	0	668	625	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	324	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	672	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	672	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	672	-	-
HCM Lane V/C Ratio	-	0.099	-	-
HCM Control Delay (s)	-	10.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

2: Mandela Parkway & North Driveway

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		↰	↑↑	↑↱	
Traffic Vol, veh/h	31	109	93	522	487	44
Future Vol, veh/h	31	109	93	522	487	44
Conflicting Peds, #/hr	2	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	31	109	93	522	487	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	958	266	531	0	-	0
Stage 1	509	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	6.82	6.92	4.12	-	-	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	2.21	-	-	-
Pot Cap-1 Maneuver	257	735	1040	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	234	735	1040	-	-	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1040	-	499	-	-
HCM Lane V/C Ratio	0.089	-	0.281	-	-
HCM Control Delay (s)	8.8	-	15	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-

Intersection	
Intersection Delay, s/veh	28
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↰	↱				✣				✣	
Traffic Vol, veh/h	0	380	145	23	0	42	180	75	0	21	37	25
Future Vol, veh/h	0	380	145	23	0	42	180	75	0	21	37	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	380	145	23	0	42	180	75	0	21	37	25
Number of Lanes	0	1	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	28.6	19.2	12.7
HCM LOS	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	25%	100%	0%	14%	23%
Vol Thru, %	45%	0%	86%	61%	6%
Vol Right, %	30%	0%	14%	25%	71%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	380	168	297	486
LT Vol	21	380	0	42	110
Through Vol	37	0	145	180	31
RT Vol	25	0	23	75	345
Lane Flow Rate	83	380	168	297	486
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.183	0.806	0.328	0.576	0.85
Departure Headway (Hd)	7.924	7.639	7.029	6.983	6.297
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	456	471	509	514	573
Service Time	5.924	5.422	4.811	5.072	4.361
HCM Lane V/C Ratio	0.182	0.807	0.33	0.578	0.848
HCM Control Delay	12.7	35.4	13.2	19.2	35.4
HCM Lane LOS	B	E	B	C	E
HCM 95th-tile Q	0.7	7.5	1.4	3.6	9.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			✥	
Traffic Vol, veh/h	0	110	31	345
Future Vol, veh/h	0	110	31	345
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	1	1	1	1
Mvmt Flow	0	110	31	345
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	35.4
HCM LOS	E

Attachment F: Noise Study

PRELIMINARY SITE NOISE ASSESSMENT FOR:

Mandela Hotel

Oakland, CA

RGD Project #: 16-059

PREPARED FOR:

Architectural Dimensions
300 Frank H. Ogawa Plaza
Suite 375
Oakland, CA 94612

PREPARED BY:

Alan Rosen
Harold Goldberg, P.E.
Tsz “Anthony” Wong

DATE:

11 November 2016
Revised 21 September 2017

1. Introduction

The proposed project is a 6-story hotel along Mandela Parkway in the City of Oakland. The project site is surrounded by elevated ramps for Interstate 580 and Interstate 80. Parking is provided by an at-grade area along the site perimeter as well as a below-grade garage. This study addresses the existing and future noise with respect to the requirements of the State of California Building Code and the City of Oakland General Plan.

2. Environmental Noise Fundamentals

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels. To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car passby or airplane flyover. To express the average noise level the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (DNL or L_{dn}) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dB penalty during nighttime hours (and a 5 dB penalty during evening hours in the CNEL) to account for peoples increased sensitivity during these hours. The CNEL and L_{dn} are typically less that one decibel apart.

In environmental noise, a change in noise level of 3 dB is considered a just noticeable difference. A 5 dB change is clearly noticeable, but not dramatic. A 10 dB change is perceived as a halving or doubling in loudness.

3. Acoustical Criteria

3.1. California Building Code

Section 1207.4 of the California Building Code has exterior noise transmission requirements for residential dwelling units. The code states that allowable interior noise levels attributable to exterior sources shall not exceed an L_{dn} of 45 dB in any habitable room.

3.2. CALGreen

Section 5.507 of the State of California Green Building Standards Code has exterior noise transmission requirements for new nonresidential buildings. If the building will be exposed to an hourly L_{eq} of 65 dB or more, the building envelope shall be constructed to achieve an interior hourly equivalent noise level (L_{eq}) of 50 dBA in the occupied areas during any hour of operation. The aforementioned performance standard is an alternative to use of the prescriptive standard which tends to be much more restrictive for buildings exposed to normal exterior noise levels.

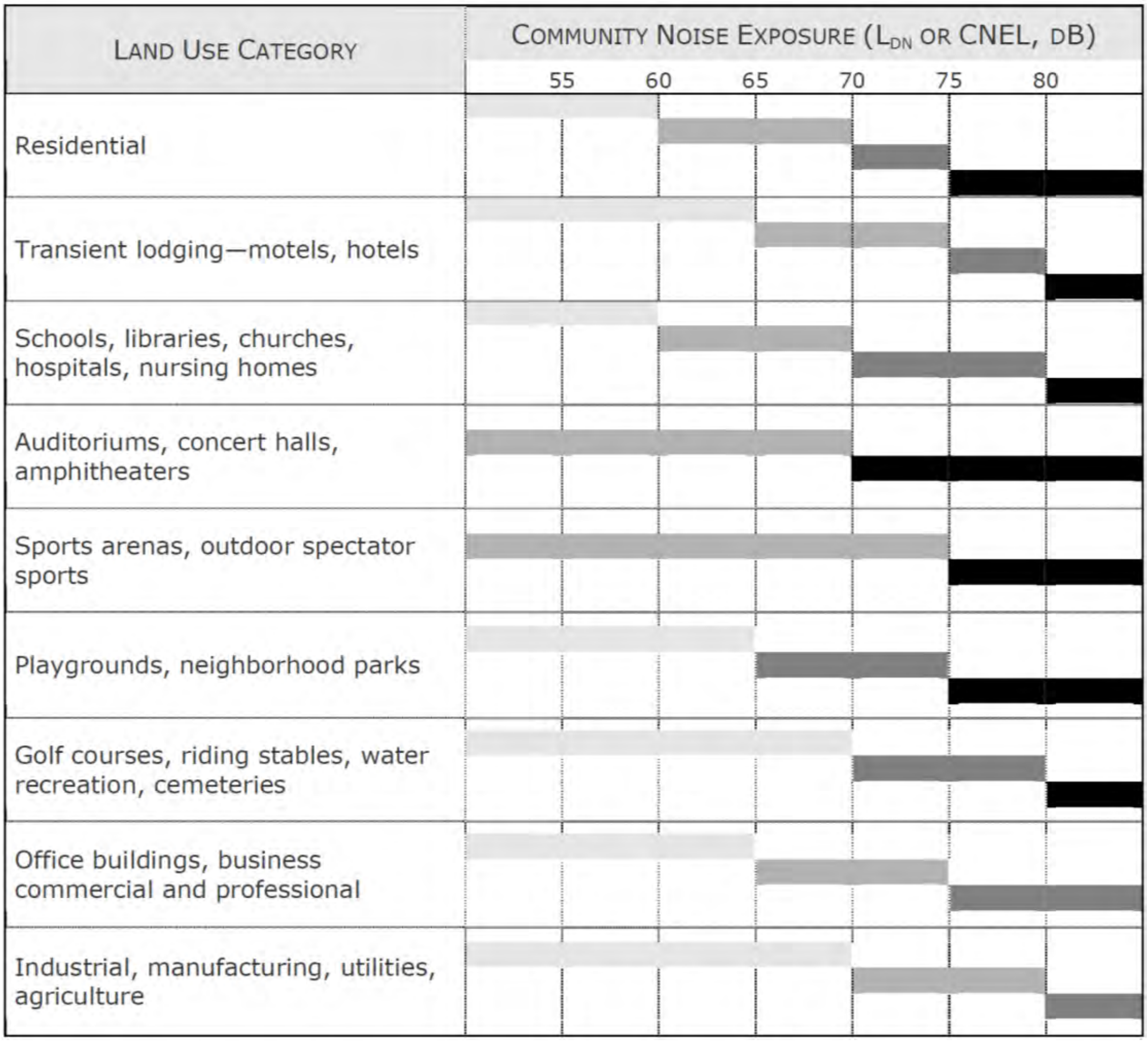
3.3. Oakland General Plan

The Noise Element of the City of Oakland General Plan has policies and actions to assure the appropriateness of new development with the noise environment of Oakland. The applicable actions are below:

- ACTION 1.1: Use the noise-land use compatibility matrix (Figure 1) in conjunction with the noise contour maps (especially for roadway traffic) to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.

- ACTION 3.1: Continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings.

Figure 1: City of Oakland General Plan Noise-Land Use Compatibility Matrix



INTERPRETATION

░

NORMALLY ACCEPTABLE: Development may occur without an analysis of potential noise impacts *to the proposed development* (though it might still be necessary to analyze noise impacts that the project might have *on its surroundings*).

▒

CONDITIONALLY ACCEPTABLE: Development should be undertaken only after an analysis of noise-reduction requirements is conducted, and if necessary noise-mitigating features are included in the design. Conventional construction will usually suffice as long as it incorporates air conditioning or forced fresh-air-supply systems, though it will likely require that project occupants maintain their windows closed.

▓

NORMALLY UNACCEPTABLE: Development should generally be discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise insulation, mitigation or abatement features are included in the design.

█

CLEARLY UNACCEPTABLE: Development should not be undertaken.

4. Noise Environment

Two long-term, 48–hour noise measurements and three short-term, 15-minute measurements were made at the project site to quantify existing noise levels. The noise measurement locations are shown in Figure 2.

The noise monitor at LT-1 was attached to a light pole on Mandela Parkway approximately twelve feet above ground. The noise monitor at LT-2 was attached to a utility pole at the west property line, approximately twelve feet above ground. Two short-term measurements were conducted at location ST-1 at 40 feet and 5 feet above ground to represent the noise exposure of upper and lower building levels, respectively. The short-term measurement at ST-2 was made 24 feet above ground near the setback of the proposed building from Mandela Parkway.

The major noise sources affecting the project site are traffic on the I-580 and I-80 freeways to the south and west of the project site. Local traffic on Mandela Parkway and Beach Street as well as Freight and Amtrak trains also contributed to the overall noise level. Freight and Amtrak trains were observed on the tracks to the west and noise and had maximum noise levels (L_{max}) of 75 to 94 dBA. Figures 3 and 4 show the long-term noise measurement results and Table 1 shows the short-term measurement results.

Figure 2: Noise Measurement Locations

Figure 3: Noise Measurement Results Location LT- 1 (L_{dn} = 74 dBA)

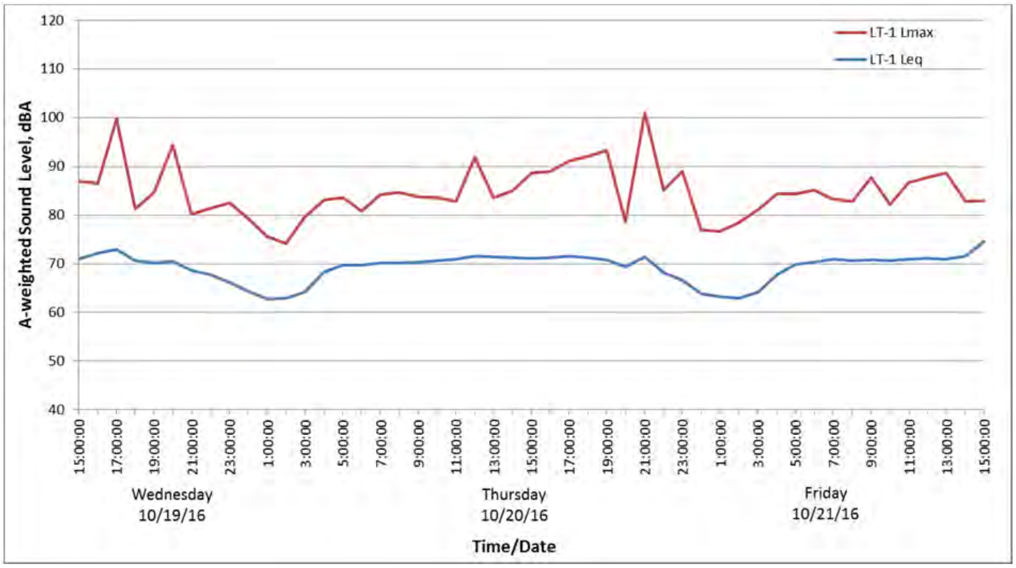


Figure 4: Noise Measurement Results Location LT- 2 (L_{dn} = 77 dBA)

Table 1: Short-Term Noise Measurement Results

Location		Time	A-weighted Sound Level, dBA					
			L_{eq}	L_{max}	L_{10}	L_{50}	L_{90}	L_{dn}*
ST-1	40 feet above ground	10/21/16 14:15 – 14:30	70	76	71	70	69	78
	5 feet above ground		67	71	68	67	66	74
ST-2	24 feet above ground	10/19/16 16:58 – 17:13	69	78	70	68	67	71

*L_{dn} calculated based on correlation with simultaneous measurement at long-term locations.

5. Analysis and Conclusions

Based on our measurements and calculations, the proposed building would be exposed to an exterior L_{dn} of 79 to 84 dBA for upper floor rooms with view the I-580 and I-80 freeways. The noise exposure at lower levels of the building would be less due to the acoustical shielding provided by the edge of the elevated roadway structures. For example the L_{dn} would be 72 to 75 dBA at the first and second floor. No future traffic data was readily available so for the purposes of this report we have included a 0.4 dBA increase in the L_{dn} to account for a 10% increase in future traffic.

5.1. City of Oakland

The City of Oakland considers hotels exposed to an L_{dn} 65 to 75 dBA to be “conditionally acceptable”, 75 to 80 dBA to be “normally unacceptable”, and above 80 dBA to be “clearly unacceptable.” Based on the results of our measurements and analysis, noise levels would be considered “conditionally acceptable” at the lower floor rooms, “normally unacceptable” at the middle floor rooms, and “clearly unacceptable” at the upper floor rooms. Noise level interpretations are shown in Figure 1.

5.2. State of California – Building Code Section 1207.4

The 2016 State of California Building Code requires that interior noise levels be reduced to an L_{dn} of 45 dBA or less in guest rooms. The project can achieve the State requirement through use of sound rated windows and, in some areas, special exterior wall construction. Table 2 shows preliminary recommendations for sound ratings based on the architectural drawings by Architectural Dimensions (received on 11/3/2016). For windows, the Sound Transmission Class (STC) rating applies to the glass and the frame as a system.

The windows will need to be in the closed position to meet the required interior noise level. The project elevations appear to indicate that the rooms would have through-the-wall packaged terminal air-conditioners or heat pumps (i.e. PTAC). A PTAC would represent a significant sound leak in the exterior wall. For rooms on the lower levels of the proposed building the use of PTACs would result in the need for windows with higher sound ratings.

On the upper levels, the noise exposure would be high enough that the sound transmitted by the PTAC units alone would exceed the interior noise level requirement. Therefore, at these locations the rooms will require a different type of HVAC system. This aspect should be reviewed by the project mechanical engineer. It is important that any ventilation system not compromise the noise reduction provided by the exterior window and wall assembly.

Table 2: Preliminary STC Ratings for Guest Rooms

Room Locations	STC Rating*		
	Wall**	Window	PTAC (Y/N)***
Upper level rooms with view of I-580 or I-80	55	42	N
Second floor rooms with PTAC	46	32	Y

***STC ratings are preliminary and not to be used for final design or construction**. Detailed recommendations for window and exterior wall STC ratings would be determined during the architectural design phase and are excluded from this report.

**STC 55 Wall example – Resilient Clips with two layers gypsum board on the interior
STC 46 Wall example – Stucco or siding. If siding is used then additional layer of gypsum board would be needed in the exterior wall construction.

***PTAC units are assumed to be sealed so that fresh air would need to be provided by a separate, ducted system.

5.3. State of California – CalGreen Section 5.507.4

The 2016 State of California Green Building Standards Code requires that non-residential areas (i.e. non-guest rooms) in the proposed building meet an interior hourly L_{eq} of 50 dBA. The ground floor level of the proposed building would be exposed to an exterior hourly L_{eq} of 71 to 72 dBA. Therefore, those areas that must meet CalGreen will need a noise reduction of 22 dBA.

A noise reduction of 22 dBA would likely be met with a typical commercial window glazing system (e.g. one inch thick glazing unit consisting of two ¼ inch thick glass panes separated by a ½ inch airspace). The exact window type and corresponding STC rating requirements would be determined during the design phase.

6. Recommendations

6.1. Guest rooms shall be designed to achieve an interior L_{dn} of 45 dBA or less as required by California Building Code (CBC 1207.4) . Detailed recommendations for window and exterior wall STC ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.

6.2. Non-guest rooms shall be designed to meet an hourly L_{eq} of 50 dBA as required by CalGreen (CalGreen 5.507.4.2). Detailed recommendations for window and exterior wall STC ratings needed to meet the interior sound level requirement must be determined during the architectural design phase. Any required ventilation system must not compromise the noise reduction provided by the windows and exterior wall assembly.

6.3. A report prepared by an acoustical consultant should be submitted prior to issuance of building permit confirming that the project has been designed to meet the required interior noise levels in CBC 1207.4 and CalGreen 5.507.4.2 as per recommendations 6.1 and 6.2.

* * *

Attachment G: Geotechnical Study

GEOTECHNICAL INVESTIGATION
PROPOSED MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

PROJECT No.: 20172194.001A

September 21, 2017

September 21, 2017
Project No: 20172194.001A

Mr. James Heilbronner
Architectural Dimensions
300 Frank Ogawa Plaza, Suite 375
Oakland, CA 94612

SUBJECT: **Geotechnical Investigation Report**
Proposed Mandela Parkway Hotel
Oakland, California

Dear Mr. Heilbronner:

Kleinfelder is pleased to submit our revised geotechnical investigation report for the proposed Mandela Parkway Hotel in Oakland, California. The enclosed report provides a description of the investigation performed, an evaluation and characterization of the site subsurface conditions, with general geotechnical recommendations for the design and construction of foundations, slabs-on-grade, retaining walls, and earthwork for this project as outlined in our proposal, dated August 29, 2016. The report also includes results and interpretation of environmental testing of soil and groundwater samples for potential contaminants of concern.

Based on the review of previous geotechnical studies and the results of our field investigation, we judge that the site may be developed as proposed, provided the recommendations presented in this report are incorporated into final design and construction. The proposed structure is anticipated to be supported on a deep foundation system.

The conclusions and recommendations presented in this report are based on data from limited subsurface exploration. Variations between anticipated and actual soil conditions may be encountered during construction. Kleinfelder should review the pre-final project plans and specifications prior to construction to confirm that they are in general compliance with the preliminary recommendations presented in this report.

We appreciate the opportunity of providing our services to you on this project and trust this report meets your needs at this time. If you have any questions concerning the information presented, please contact Brian O'Neill or Robert Fosse at (510) 628-9000.

Sincerely,

KLEINFELDER, INC.

Registered Professional Engineer
Robert Fosse, Jr.
No. GE 2330
Exp. 3/31/18
Geotechnical
State of California

Robert Fosse, PE, GE
Principal Geotechnical Engineer

Brian O'Neill

Registered Professional Engineer
Brian O'Neill
GE 2516
Exp. 6-30-19
Geotechnical
State of California

Brian O'Neill, PE, GE
Principal Geotechnical Engineer

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FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the results of the geotechnical investigation performed by Kleinfelder for the proposed Mandela Parkway Hotel project in Oakland, California. The proposed building is to be located northwest of Mandela Parkway and north of the Highway 580 overcrossing. A Vicinity Map showing the approximate location of the site is presented on Figure 1.

1.1 PROJECT DESCRIPTION

The project consists of constructing a 6-story T-shaped hotel building on the approximate 1.2 acre triangular shaped site that fronts along Mandela Parkway situated immediately south of the Target retail shopping center. The site is currently undeveloped, and was formerly owned by Caltrans. The final location and footprint area of the proposed building has not been determined at this time due to the early stage of development planning. The proposed 6-story tall structure could have high structural loads, and based on our experience with similar types of buildings in the area and with similar anticipated subsurface conditions it is anticipated that the new building will need to be supported on a deep foundation system. Based on the current development scheme, 2 basement levels extending approximately 28 feet below the existing ground surface are planned for below-grade parking.

Asphalt paved parking, minor landscaping, and concrete flatwork are also expected as part of the proposed hotel development concept. Specific structural building column and wall load information, and details regarding site grading are not available at the time we prepared this report. However, because the site is relatively flat, site grading will likely include fills and cuts up to about 2 feet thick to grade the building pad and construct the at-grade parking lot and driveway improvements.

The information listed above is our understanding of the project and design criteria. If this information is modified, we will need to review our conclusions and recommendations for applicability.

1.2 PURPOSE AND SCOPE

This geotechnical investigation was performed in accordance with our proposal of August 29, 2017.

This geotechnical investigation report provides an evaluation of the subsurface conditions at the project site and general geotechnical recommendations and guidelines for design and construction of the foundations and earthwork for the project. We evaluated the subsurface conditions by reviewing data from previous investigations, drilling test borings and conducting laboratory tests on samples recovered from the borings. Preliminary engineering analyses were then made to develop the following:

a) Conclusions pertaining to feasibility of the proposed development; impacts of geotechnical and geologic features on the proposed development and adjoining properties; foundation alternatives; and geologic hazards, including flooding, faults, seismicity and liquefaction potential;

b) Conclusions regarding the geologic and geotechnical aspects of the project;

c) Recommendations for site preparation, grading and compaction, material for engineered fill, temporary excavations and shoring, and utility trench backfilling;

d) Recommendations for deep foundation system design, including feasible types and sizes of foundation pile alternatives, anticipated embedment depths, constructability, and general guidelines for evaluating axial and lateral pile load capacities, including consideration of potential drag loads;

e) Estimated magnitudes and rates of site settlements, within and outside the building, depending on thicknesses of fills placed. Preliminary recommendations have been developed for methods of reducing the impacts of site settlements so that differential settlements between the exterior ground surface and the building are tolerable;

f) Recommendations for below grade retaining wall design and construction;

g) Hydrostatic uplift earth pressures for below grade structures and foundation elements;

h) Recommendations for site grading, subgrade preparation, earthwork, and fill placement and compaction specifications;

i) Recommendations for pile foundation installation, including an indicator pile program that will be developed to evaluate driving resistances across the building site and to obtain data for optimizing the production pile lengths;

j) Recommendations for concrete slab-on-grade and/or structurally supported basement floor design and construction;

k) Conclusions pertaining to the corrosivity of the subsurface soils including measurement of conductivity, chloride content, sulfate content, and other corrosion-related parameters;

l) Recommendations for site grading and flexible pavement design for the at-grade parking lots and driveways;

m) Recommendations for management of groundwater and construction dewatering, as applicable;

n) Additional construction considerations, as applicable; and

o) Seismic soil classification and design parameters in accordance with 2013 California Building Code (CBC).

1.3 PREVIOUS GEOTECHNICAL STUDIES

As part of this study, we have reviewed several previous geotechnical reports, available in our files, performed by other consultants which are pertinent to the site and its vicinity. A partial list of documents which we reviewed as a part of this study is as follows:

- Levine-Fricke, April 18, 2000, Geotechnical Engineering Study, Proposed Extended Stay America, Oakland, California.
- Levine-Fricke, October 26, 1993, Proposed Super K-Mart, East Baybridge Project, Catellus Development Corporation, Emeryville, California.

Pertinent information from these reports, including subsurface explorations and laboratory testing, were reviewed and evaluated during our engineering analyses and preparation of this report.

2.0 FIELD INVESTIGATION

Test Borings B-1 through B-3 were drilled within the proposed building footprint to depths ranging from approximately 31.5 to 71.5 feet below the ground surface (bgs) between November 10 and 11, 2016, by Pitcher Drilling Company of East Palo Alto, using a Fraste Multidrill XL 75 truck-mounted, rotary wash drill rig. Test Boring B-4 was also drilled with hand-auger equipment to obtain bulk subgrade soil samples in the proposed parking lot and entry driveway area. Our field engineer logged the borings and obtained samples of subsurface soils for visual classification and subsequent laboratory testing.

The approximate locations of these field exploration points are shown on the Site Plan, Figure 2. Plan locations and ground surface elevations at each test boring location were estimated approximately from the Topographic Survey Plan, prepared by Robert J. Long & Associates (RJL), dated September 27, 2016 and from measurements from existing site features.

The soil samples were classified in accordance with the Log Key, Soil Classification Chart and Soil Description Key as shown on Plates A-1, and A-2, Appendix A. The test boring logs are presented on Plate A-3 through A-6, Appendix A.

Relatively undisturbed samples of the subsurface materials were obtained using a California (Sprague and Henwood) Sampler, a Standard Penetration Split Spoon (SPT), and hydraulically-pushed Shelby tubes. The California Sampler has a 2.43-inch inside diameter and 3.0-inch outside diameter. Brass liners were placed inside the sampler. The SPT consists of an unlined 1.4-inch inside-diameter and 2-inch outside-diameter split-spoon sampler. The SPT and California samplers were driven 18 inches (or less if difficulty was encountered) using a 140-pound hammer falling 30 inches using an auto-trip hammer system, with blow counts recorded for successive 6-inch penetration intervals.

The thin-walled Shelby tubes have a 2.875-inch-inside-diameter and 3.0-inch-outside-diameter, and were used to obtain relatively undisturbed samples of soft to medium stiff cohesive soil. The hydraulic pressure, in pounds per square inch (psi), used to advance the Shelby tubes a distance of 36 inches were also recorded by our field engineer and are shown on the test boring logs.

The blowcounts recorded on the boring logs represent the raw field data and have not been corrected for the effects of overburden pressure, rod effects, borehole diameter, variation in sampler size, or hammer energy corrections.

After the samplers were withdrawn from the test borings, the samples were carefully removed, sealed to reduce moisture loss, and returned to our office for further examination and selection for laboratory testing. At the completion of drilling, all test borings were fully backfilled with cement grout in accordance with the requirements of our permit from the Alameda County Public Works Agency.

3.0 LABORATORY TESTING

Soil samples from the test borings were visually examined in Kleinfelder’s office and selected for geotechnical laboratory testing based on soil type, depth, and sample quality, to evaluate the desired engineering and soil properties. The laboratory testing was performed by Kleinfelder’s Hayward, California Laboratory. Samples were tested to measure moisture content and unit weight, sieve analyses and fines content, plasticity, consolidation, undrained shear strength, and R-Value.

The test results are summarized on the boring logs in Appendix A, and presented in the laboratory test reports in Appendix B. CERCO Analytical of Concord, California performed the soil corrosivity testing. The test results are presented in the laboratory test report in Appendix B.

4.0 SITE AND SUBSURFACE CONDITIONS

4.1 SITE AND SURFACE CONDITIONS

The approximately 1.2- acre triangular-shaped site is bordered to the south by the Highway 580 overcrossing, on the southeast by Mandela Parkway, and on the north by the East Bay Municipal Utility District's (EBMUD's) paved access roadway (to the sewage treatment plant), ramp and associated retaining walls. Adjacent developments include a Target retail store to the north, an Extended Stay America hotel to the east, and Beach Street to the west. The site is presently an undeveloped vacant lot with a sand and gravel surface, and overgrown weeds and grasses.

Historically, the site was part of the former Oakland Terminal Railway and contained railroad tracks and ties, which have been removed. The surrounding area was an industrial and transportation hub during the mid-20th Century. The transit hub of the Key System Commuter Railroad was located approximately 0.5 mile east of the project site, at San Pablo and Yerba Buena Avenues. Current site elevations range from about Elevation +4 to +9, sloping gently from southeast to northwest.

4.2 SUBSURFACE CONDITIONS

Based on the results of our field investigation program, the subsurface conditions at the location of the proposed building site generally consists of artificial fills overlying soft Bay Mud deposits and stiff alluvial clay soils. The surficial fill soils are approcimately 5 to 9 feet thick and consist of medium dense silty sand and gravel, and stiff sandy and silty clay. The fills are underlain by soft and wet silty clay Bay Mud deposits, approximtely 5 to 8 feet thick. The Bay Mud deposits are underlain by alluvial soils consisting of interbedded stiff sandy clay and medium dense to dense clayey sand and gravel.

4.3 GROUNDWATER

Groundwater was encountered at a depth of approximately 8 feet below the ground surface at Test Boring B-1 during drilling, but was not encountered at any other location. However the groundwater level may not have stabilized prior to backfilling the test borings with cement grout. Variations in groundwater levels are likely to occur seasonally, particularly during periods of prolonged rainfall or drought, and could vary as a function of other factors such as adjacent construction dewatering, landscape irrigation and leaking wet utility lines.

4.4 POTENTIAL FOR SOIL AND GROUNDWATER CONTAMINATION

The purpose of our separate environmental sampling and analytical laboratory testing program scope of work in the area of the proposed hotel development was for assessment of potential contaminants that may be present in near surface soil and groundwater, and to classify the material for handling, re-use and/or off-haul during construction. Further description of the environmental testing program and interpreted test results are presented in Appendix D.

5.0 GEOLOGY AND SEISMICITY

5.1 REGIONAL GEOLOGY

The San Francisco Bay Area lies within the Coast Range geomorphic province, a series of discontinuous northwest-trending mountain ranges, ridges, and intervening valleys characterized by complex folding and faulting. The general geologic framework of the San Francisco Bay Area is illustrated in studies by Schlocker (1970), Helley et al. (1979), Wagner et al. (1991), Graymer et al. (1994), Ellen and Wentworth (1995), Graymer et al. (1996), Helley and Graymer (1997), Graymer (2000), and Dibblee and Minch (2005).

Geologic and geomorphic structures within the San Francisco Bay Area are dominated by the San Andreas fault (SAF), a right-lateral strike-slip fault that extends from the Gulf of California in Mexico to Cape Mendocino on the Coast of Humboldt County in northern California. It forms a portion of the boundary between two independent tectonic plates on the surface of the earth. To the west of the SAF is the Pacific Plate, which moves north relative to the North American Plate, located east of the fault. In the San Francisco Bay Area, movement across this plate boundary is concentrated on the SAF; however, it is also distributed, to a lesser extent across a number of other faults that include the Hayward, Calaveras and Concord among others (Graymer et al., 2002) and Brown (1990). Together, these faults are referred to as the SAF System. Movement along the SAF system has been ongoing for about the last 25 million years. The northwest trend of the faults within this fault system is largely responsible for the strong northwest structural orientation of geologic and geomorphic features in the San Francisco Bay Area.

Basement rocks west of the SAF are generally granitic, while to the east they consist of a chaotic mixture of highly deformed marine sedimentary, submarine volcanic and metamorphic rocks of the Franciscan Complex. Both are typically Jurassic to Cretaceous in age (205 to 65 million years old). Overlying the basement rocks are Cretaceous (about 140 to 65 million years old) marine, as well as Tertiary (about 65 to 1.8 million years old) marine and non-marine sedimentary rocks with some continental volcanic rock. These Cretaceous and Tertiary rocks have been extensively folded and faulted as a result of late Tertiary and Quaternary regional compressional forces. The inland valleys, as well as the structural depression within which the San Francisco Bay is located, are filled with unconsolidated to semi-consolidated continental deposits of Quaternary age (about the last 1.8 million years [USGS, 2006]). Continental surficial deposits (alluvium, colluvium, and landslide deposits) consist of unconsolidated to semi-consolidated sand, silt, clay, and gravel while the Bay deposits typically consist of very soft organic-rich silt and clay (Bay mud) or sand.

5.2 FAULTS AND SEISMICITY

The project area is located in a seismically active region that has been subjected to several strong earthquakes during historic time. The closest significant faults include the Hayward-Rodgers Creek, the Calaveras, the San Andreas, and the San Gregorio faults, which are located approximately 5.6 kilometers (3.5 miles) northeast, 23 km (14 miles) east, 24 km southwest (15 miles), and 29 km (18 miles) west of the site, respectively. A major seismic event on these or other nearby faults may cause substantial ground shaking at the site.

A site-specific seismic hazard analysis to estimate ground motions at the site in terms of peak spectral ground accelerations has not been performed as part of this study.

5.3 GEOLOGIC HAZARDS

Geologic hazards commonly evaluated for projects located on the margins of San Francisco Bay include surface fault rupture, seismic shaking, liquefaction, lateral spreading, and dynamic compaction/seismic settlement. Of these hazards, seismic shaking is the greatest concern for this project. Descriptions of the impacts that these hazards may have on the site are described in the following sections.

5.3.1 Surface Fault Rupture

The project site is not situated within an Alquist-Priolo Earthquake Fault Zone established by the State and which surround active fault traces. The nearest active fault to the site is the Hayward-Rogers Creek, which is located approximately 5.6 kilometers (3.5 miles) northeast of the site. Based on our review of available geologic/seismologic reports and maps (see Section 9.0, References), no known active faults cross or project toward the site. Additionally, we did not observe any features associated with active faults during our site reconnaissance. Therefore, it is our opinion that the potential for fault-related surface rupture at the site is very low.

5.3.2 Liquefaction and Lateral Spreading

Soil liquefaction is a condition where saturated soils undergo a substantial loss of strength and deformation due to pore pressure increase resulting from cyclic stress application induced by earthquakes. In the process, the soil acquires mobility sufficient to permit both horizontal and vertical movements if the soil mass is not confined. Soils most susceptible to liquefaction are saturated, loose, clean, uniformly-graded, and fine-grained sand deposits. If liquefaction occurs, foundations resting on or within the liquefiable layer may undergo loss of support and settlements. This will result in reduction of foundation stiffness and capacities.

The site lies within the Oakland West quadrangle, which has been mapped by the California Division of Mines and Geology (2001) for landslide and liquefaction related hazards. This map indicates that portions of the site lie within an area identified as susceptible to seismically-induced liquefaction.

Based on the test borings performed at the site, although the predominant soil units are clay, the site is underlain at various depths by sandy fill materials at or below the groundwater level and above the Bay Mud deposits. Other fill soils include significant fractions of clays, and gravels. Only the loose sands at the site are considered to be potentially liquefiable during a strong earthquake. These potentially liquefiable soils appear to be relatively thin (less than about 1.5 feet), and are not continuous or of uniform thickness across the site.

Liquefaction of the sandy fill soils could result in some localized seismically-induced settlements. The amount of settlement will depend upon the local soil characteristics, topography, and the magnitude and duration of the earthquake. We estimate that ground settlements could be on the order of 1/4 to 1/2 inch during a strong earthquake as a result of liquefaction of the sandy fill soils. We expect that the ground settlements would be irregular around and below the building.

Because the proposed structure will be founded on a deep foundation system bearing on the older sediments below the Bay Mud, seismically-induced settlements of the fill, if any, could induce temporary drag load forces on the piles. However, the forces will be no greater than the drag load forces for the piles due to Bay Mud consolidation (see Section 7.2.1, Pile Axial Capacities).

Lateral spreading is a potential hazard commonly associated with liquefaction where extensional ground cracking and settlement occur as a response to lateral migration of subsurface liquefiable material. These phenomena typically occur adjacent to free faces such as slopes and creek channels. Because the site is relatively flat and is about 1500 feet from San Francisco Bay shoreline (the nearest open face), and liquefaction potential is low, the potential for lateral spreading to impact the site is also low. There are no reported incidents of lateral spreading in the vicinity of the project site from the 1906 San Francisco or 1989 Loma Prieta earthquakes.

5.3.3 Seismic Densification

Settlements can also occur during earthquakes in unsaturated loose cohesionless soils above the groundwater table. Dissipation of seismically-induced pore water pressure in saturated granular soils below the water table may also lead to settlements after the shaking has stopped.

Considering the moderately dense nature of the fill soils above the water table at the site, we judge that the potential for ground settlements due to seismic densification is low.

5.3.4 Tsunami and Flooding

Flood hazards are generally considered from three sources that include tsunami, seiche, and 100- to 500-year storm events. Tsunamis are ocean waves generated from underwater seismic events, volcanic eruptions or landslides. The site is located within the City of Oakland at an approximate 9 to 11 feet above mean sea level. A map of potential tsunami inundation areas recently published by the California Emergency Management Agency, California Geological Survey and the University of Southern California (2009) shows that the area susceptible to tsunami inundation extends inland from the shoreline of San Francisco Bay near the vicinity of the site but does not reach any portion of the site boundaries. Based on the above information, there is a low risk of tsunami inundation to affect the site.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the site is located outside of areas mapped within the 100- and 500-year flood boundaries. There are also no dams in the vicinity of the site that could fail and result in flooding due to acute erosion or seismically induced failure.

6.0 DISCUSSION AND CONCLUSIONS

Based on the results of our field investigation and preliminary geotechnical engineering analyses, it is our opinion that the development of the proposed hotel project is geotechnically feasible, provided the recommendations presented in this report are incorporated into the design and construction of the project. The major geotechnical concerns for this project include: seismic ground shaking, foundation support, static and seismic settlements, earthwork and grading including basement excavations below the groundwater level into weak alluvial clay soil, and soil corrosivity.

The pre-existing fills, soft Bay Mud and underlying alluvial clay are not suitable for the support of shallow spread footing foundations, which would be subject to large and unacceptable amounts of settlement. Therefore, the building (including basement floor slabs) should be supported on a deep foundation system founded in the stiff alluvial soils below the Bay Mud. Preliminary recommendations for deep foundation systems are given in Section 7.2, Foundations.

New fills placed within the building footprint or within adjacent parking lots, driveways, and landscape areas at the site will cause settlement of the underlying Bay Mud deposits. No grading plan was available at the time of this report, however some shallow fills will likely be needed at the northern portion of the site. Differential settlements between the adjacent ground surfaces and the building supported on a deep foundation system should be anticipated. Estimated settlements and possible mitigation measures are discussed in Section 7.5, Site Settlements.

The primary seismic hazard for the site is the potential for strong to very strong earthquake shaking within the lifetime of the structure.

The existing subgrade soils will be exposed and disturbed during stripping of the surface of the site. The disturbed soils will need to be properly scarified, moisture-conditioned, and recompacted, particularly where the disturbed zone extends below the depth for new foundation elements.

Based on laboratory corrosion tests, the near surface fill soils are considered to be slightly corrosive to corrosive, and the underlying Bay Mud deposits are typically severely corrosive to buried ferrous metals. Corrosion control methods to increase the lifetime of buried steel pipe and ductile iron pipe may be warranted at the site.

7.0 GEOTECHNICAL RECOMMENDATIONS

7.1 EARTHWORK

The extent of earthwork construction is currently unknown but is anticipated to include general site grading; excavations for basements, pilecaps, grade beams, and utilities; subgrade preparation for structures; and placement of engineered fill.

7.1.1 Site Preparation

Prior to general site grading, construction-related debris should be demolished and removed off-site. Existing or temporary underground utilities located within the proposed construction area should be relocated prior to excavation. Debris generated from the demolition of underground utilities should be removed from the site as construction proceeds. If pipes are abandoned in-place, they should be filled completely with lean cement grout, or other suitable material, to avoid collapse in the future.

Upon completion of surface cleanup and site stripping, the soil subgrade should be observed by the geotechnical engineer and proof-rolled with heavy vibratory equipment. Any loose or weak fill materials encountered should be compacted until firm and non-yielding.

Prior to placing site fill, the exposed ground surface should be scarified to a minimum depth of 6 inches, conditioned to a near-optimum moisture content, and compacted using mechanical compaction equipment to at least 90 percent of the maximum dry density[1].

7.1.2 Fills and Backfills

Site fills may be necessary to achieve the design grades and fill depressions generated from overexcavations and removal of existing structures. Utility trench backfills, backfill around pile caps, grade beams, and underground pit structures, and underslab granular base course materials are likely to be placed during construction of this project. *Note:* The following recommendations pertain to normal-weight fill soils. Requirements for lightweight and/or controlled density fill materials should be developed as needed.

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[1] Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same soil determined by ASTM D1557-00 laboratory test procedure. Optimum moisture content is the water content that corresponds to the maximum dry density.

Fills and backfills can either be structural or nonstructural. Structural fills and backfills are defined as those providing support to exterior slabs and pavements. Nonstructural fills and backfills include all other fills such as those placed for landscaping. Structural fills and backfills should be compacted to at least 90 percent relative compaction; nonstructural fills and backfills should be compacted to at least 85 percent relative compaction. In addition, the upper 6 inches of structural fills should be compacted to 95 percent relative compaction to form the slab or pavement subgrade.

Structural fill and backfill materials should be placed in lifts not exceeding approximately 8 inches in loose thickness, brought to near-optimum moisture content and compacted using mechanical compaction equipment. Nonstructural fills and backfills may be placed in lifts not exceeding 12 inches in loose thickness and compacted in a similar manner.

Material to be used as engineered fill and backfill should be predominantly granular, less than 3 inches in maximum dimension, free of organic and inorganic debris, and contain less than 20 percent of mostly non-plastic fines passing the No. 200 sieve. The fill and backfill soils should have a Liquid Limit less than 40 and Plasticity Index less than 15. Imported fill should be free of chemical contaminants, as demonstrated by appropriate sample analyses.

Pre-existing fill soils meeting the above geotechnical requirements can be used as fill and backfill provided they are covered by permanent buildings or pavements, or by 12 to 18 inches of clean import soil in landscape areas.

7.1.3 Excavation Dewatering

Based on available site data, we recommend that a static long-term groundwater level of Elevation +1 feet be considered for design of the basement levels and elevator pits (or other underground structures). Since these excavations will extend below the groundwater, the contractor should be responsible for providing an adequate dewatering system during construction.

During construction of the basement levels, we recommend that the groundwater level be maintained at least two feet below the bottom of the excavation until the structure is built and can resist buoyancy. Selection of the equipment and methods of temporary dewatering should be left up to the contractor, who should be responsible for modifications to the dewatering system as may be required during construction, depending on conditions encountered.

Where the sandy fill soils extend below the groundwater level, a relatively high infiltration rate should be anticipated. For preliminary design, a coefficient of permeability of between 1.0 x 10^{-3} and 1.0 x 10^{-4} centimeters per second (cm/sec) is estimated for the sand fills at the site. The estimated coefficient of permeability for the underlying, less permeable Bay Mud and clay alluvium is between 1.0 x 10^{-6} and 1.0 x 10^{-8} cm/sec.

7.1.4 Temporary Excavations

Temporary excavations must comply with the current requirements of Cal-OSHA. All cuts deeper than five feet should be sloped or shored. However, shallow excavations above the groundwater level could be sloped if space permits. It is our opinion that shallow temporary excavations may be sloped at 1:1 (horizontal to vertical) or flatter above the groundwater level. However, it is the responsibility of the contractor to maintain safe and stable slopes or to design and provide shoring during construction. Flatter slopes will be required if clean or loose sandy soils are encountered along the slope face. Steeper cuts may be utilized for excavations less than five feet deep depending on the strength and homogeneity of the soils as observed in the field, and the presence or proximity of the surface of the soft Bay Mud deposits.

Based on the results of our field exploration program and our review of available subsurface data, it is our opinion that the majority of the proposed excavations can be made using conventional equipment. However, in some locations obstructions may be encountered. The fill may include localized areas of rubble and debris.

7.1.5 Excavation Shoring

Shoring should be utilized where space or other restrictions do not allow a sloped excavation and for all excavation below the groundwater level. The proposed basement levels, and any other underground structures, utility or tank vaults that will extend significantly below the groundwater level will likely require internally-braced sheet piles or continuous soil-cement walls to support the excavations. The shoring should extend well below the excavation bottom as determined by the shoring designer to provide the required lateral support, including the effects of the soft Bay Mud deposits, and to act as cut-off walls to minimize seepage from the bottom of the excavation.

The design of the shoring system should consider the surcharge forces from construction equipment, building materials, excavated soil, and vehicle traffic adjacent to the excavation. Shoring design criteria should be developed, in consultation with the contractor and shoring designer, when the limits of proposed basement level excavations are more clearly defined. It should be noted that the method of installing shoring significantly affects the soil pressures that will occur and the ground deformations adjacent to the shoring system. The shoring installation program may require grouting of voids behind the shoring if such voids are created during installation or removal of shoring materials, to prevent ground movements at the time of, and long after, installation or removal of the shoring structure.

7.1.6 Excavation-Induced Settlements and Effects on Adjacent Facilities

In conjunction with the shoring installation, a monitoring program should be set up and carried out by the contractor to determine the effects of the excavation on the adjacent streets and utilities, as well as on adjacent pile foundations, pile caps and grade beams under construction. Reference points should be set and read prior to the start of construction and/or dewatering activities to establish the pre-existing conditions, and points should be set on the shoring as soon as initial installations are made. Surveys should be made periodically, but more often during construction activities. Additional shoring or other remedial measures may be required if large lateral or vertical movements are recorded by the survey data.

Caution should be exercised to minimize deflection of the shoring system and settlements of the ground surface surrounding the excavations as a result of construction activities such as excavation, dewatering, and shoring installation. The shoring designer should determine the allowable deflections and settlements. If measurements exceed the predetermined limits, we should be consulted regarding alternative construction techniques that may be proposed by the contractor.

The contractor should be required to install groundwater observation wells to monitor the effectiveness of the dewatering system and the maintenance of exterior groundwater levels. The contractor should also be required to take appropriate actions in the event that excessive groundwater lowering and surface settlements are detected. Possible mitigation measures might include changing the dewatering method, groundwater reinjection, or grouting.

7.1.7 Excavation Base Stability

Stability of the base of excavations will depend upon the success of the groundwater control system, the presence or proximity of the soft Bay Mud deposits to the excavation base, the strength of the Bay Mud and underlying alluvial clay, presence or absence of clean sandy soils in the fill, and the dimensions of the excavation. When the excavation for proposed underground structures or vaults will be in granular fill materials, it is recommended that the groundwater level be maintained a minimum of two feet beneath the bottom of the excavation throughout construction in order to minimize the chance of base failure due to high seepage gradients. Shored excavations should be designed and constructed with adequate factors of safety against base failure and significant base heave.

It is the responsibility of the shoring contractor to design and install an adequate shoring system to prevent excessive soil deformation and failure. However, in order to reduce the potential for base instability and to keep ground and support system movement to a minimum, the following should be considered:

- The excavation width should be kept to a minimum;
- The first level of the bracing system should be installed before the excavation reaches a depth of about five feet; and
- Surcharge loading should be minimized or avoided at the ground surface within 10 feet of the edge of the excavation.

Minor heave of the excavation bottom may occur and minor movements of the support system and adjacent ground can be expected. The actual magnitude of ground movement will depend on the support system stiffness, method of support installation, and soil stiffness.

7.1.8 Working Pad at Base of Excavations

Because the excavations for basement structures or underground vaults could extend through the soft Bay Mud deposits and into weak alluvial clay, we recommend that the base of the excavation be covered by a one-foot-thick layer of crushed rock (3/4-inch maximum particle size) placed over a soil stabilization geosynthetic fabric to act as a working pad. The working pad materials should be compacted by a minimum of two passes of a vibratory type compactor. The working pad will help prevent construction equipment from sinking into the weak soils and to facilitate temporary drainage of the excavation base.

7.1.9 Utility Trenches

All utility trenches should be excavated in accordance with Cal-OSHA excavation and trench safety standards. We recommend that utility line bedding material consist of sand with less than 10 percent fines (i.e., less than 10 percent passing the No. 200 sieve). The bedding should extend from the bottom of the trench to 1 foot above the top of the pipe. Sand bedding should be placed in a trench free of standing water and mechanically compacted to at least 90 percent relative compaction.

Trench backfill above the pipe bedding should meet the criteria for fill as described in Section 7.1.2, Fills and Backfills. Trench backfill should be placed in uniform layers not exceeding 8 inches in loose thickness, moisture-conditioned to near-optimum moisture content, and compacted. Backfill should be compacted to at least 90 percent relative compaction, except for the upper 6 inches below concrete slab or pavement subgrades, which should be compacted to at least 95 percent relative compaction. Jetting should not be permitted for any backfill compaction.

7.2 FOUNDATIONS

The pre-existing fills and underlying soft Bay Mud are not suitable for the support of shallow spread footing foundations, which would be subject to large and unacceptable amounts of settlement. Therefore, the hotel building should be founded on a deep foundation system in the older stiff alluvial soils below the Bay Mud deposits.

We have evaluated a number of deep foundation systems, including precast prestressed concrete piles, auger-cast pile systems, and other proprietary ground improvement systems. Auger-cast pile and ground improvement systems that we considered (such as soil-cement columns) would generate spoils that would require off-site disposal and more extensive testing during installation than a conventional foundation system based on driven piles.

We recommend that the loads for the proposed 6-story structure be supported on a deep foundation system using driven concrete piles designed to develop their capacity primarily with perimeter frictional resistance. End bearing deep foundations cannot be relied on at this site due to the absence of a continuous, thick, dense sand or gravel bearing layer. In addition to the column loads being supported by deep foundation systems, the basement floor slab may need to be structurally supported on grade beams tied into the deep foundations to support the floor loads.

A deep foundation system will be able to mitigate the effects of grading induced settlements, reduce the potential effects of liquefaction-induced settlement, and can reduce the risk of differential settlement between heavily loaded adjacent building columns.

If desired by the design and development team, other types of deep foundation solutions can be considered as alternatives to driven concrete piles, and Kleinfelder should be consulted to perform the evaluation and analyses for design. Several alternative types of deep foundations are also suitable for the subsurface conditions at the site, and have been used successfully on similar projects. Examples include augercast piles, such as auger pressure grouted, auger cast-in-place and auger pressure grouted displacement type piles; and hydraulically installed drilled displacement type pipe piles such as Tubex, Eddtex, and torque-down pile systems. Some of these systems are developed through design-build foundation sub-contractors.

Shallow foundations may be acceptable to support lightly loaded ancillary structures such as low retaining walls, utility box pads and utility vaults. These types of structures can be supported on shallow spread footings bearing on engineered fill. Updated geotechnical design input for these types of features can be provided for the final engineering design phase once their locations and elevations as well as site grading details are available.

7.2.1 Axial Pile Capacities

Due to the low strength and high compressibility of the Bay Mud deposits and the underlying week alluvial clay, the structure should be supported on driven piles. The basement floor slab may also need to be structurally-supported, depending on the final lower basement level finish floor elevation to be developed during the final design phase. For preliminary design considerations, the recommended primary foundation type for the proposed building is driven 14-inch-square precast, prestressed concrete piles.

Driven 14-inch square, precast, prestressed concrete piles are commonly used throughout the San Francisco Bay area. These piles are generally cost-effective, installation methods have been well developed, are suitable for the site subsurface conditions, and have been used successfully on other commercial projects.

Pile foundations should be designed to develop their axial compression capacity in a combination of skin friction and tip resistance in the stiff clays and dense sands below the Bay Mud deposits. Consideration for a reduction in individual axial pile capacity to account for group effects usually is not necessary for piles with center-to-center spacings of three or more pile diameters or widths. Group effects on deep foundations are dependent on a number of factors, including soil properties, pile size and group configuration. Additional axial and lateral pile analysis will be required if deep foundations are to be considered with center-to-center spacing of less than three pile diameters or widths.

Based on the site conditions encountered during our field exploration program and pile analyses for the current preliminary engineering phase, pile tip depths of approximately 75 to 80 feet below the planned ground surface elevation (and approximately 50 to 55 feet below the base of the proposed lower basement level) are anticipated to develop an allowable axial compression capacity of 200 kips (for dead loads plus live loads) per pile. A one-third increase to this value can be assumed for seismic and/or wind loading conditions.

The allowable uplift (tension) capacity will be developed solely by frictional resistance between the pile shaft and the surrounding soils. Piles driven or installed to the embedment below grade discussed herein will develop an allowable axial uplift capacity of 125 kips (for dead plus live loads). A one-third increase to this value can be assumed for seismic and/or wind loading conditions. Additional geotechnical analyses for pile capacity will be required for use in the final design phase once loading conditions and pile cap geometry and layouts are available from the structural engineer.

Pile embedments beneath finished subgrade at the lower basement level should be evaluated during the construction indicator pile program for the driven precast concrete piles (discussed below). Actual pile tip elevations and pile lengths may vary depending on driving conditions encountered during the indicator pile program.

Negative skin friction, or drag loads, as a result consolidation settlement of the Bay Mud deposits and overlying fill soils should also be considered in the final design of the deep foundation system. This settlement will result in additional loading on the pile foundations which should be considered, in addition to the long-term pile loads, for evaluating the structural capacity of the pile foundations. Small scale liquefaction-induced settlements may occur following a large seismic event; however, liquefaction-induced settlements are likely to occur above the neutral plane of the pile and thus will not have a large impact on the structural capacities of the pile foundations.

7.2.2 Lateral Pile Capacities

Resistance to lateral loads can be resisted by passive soil pressures acting on the piles and pile caps. The lateral resistance of a foundation pile is a function of the surrounding soil strength and stiffness, size and stiffness of the pile, pile top connection, and induced moments and forces at the top of the pile. Resistance to lateral loads on piles will be provided by passive soil pressure against the pile and by the bending strength of the pile itself. Lateral load resistance analyses should be performed by the design team's geotechnical and structural engineers when the deep foundation system geometry, structural loading conditions, and allowable deflections and moment capacities are more clearly defined.

7.2.3 Pile Cap Resistance to Lateral Loads

Resistance to lateral loads can be obtained by piles (see Section 7.2.2), by passive soil pressure against pile caps and grade beams, and by soil frictional resistance against the sides of pile caps and grade beams.

For pile caps and grade beams located within stiff clay soil underlying the Bay Mud, the maximum allowable passive pressure should be calculated using the following equivalent fluid pressures which are expressed in pounds per cubic foot (pcf).

- 150 pcf below groundwater
- 300 pcf above groundwater

Frictional resistance may also be assumed to act along only one or the other side of the pile caps or grade beams, but not both sides at the same time. The frictional resistance can be estimated by using a coefficient of friction of 0.35. The effective at-rest pressures normal to the sides of the structural elements should be used in estimating frictional resistance along the sides. For preliminary design, we recommend using equivalent fluid weights of 30 and 60 pcf for the effective at-rest earth pressures in soil below and above the groundwater level, respectively.

The resistance from the upper 12 inches of pile caps and grade beam should be neglected in lateral resistance calculations unless the adjacent soil surface is covered by a permanent pavement or floor slab. However, the pressure distribution for any case should be calculated from the soil surface.

Friction along the bottom of pile-supported structures (floor slabs, grade beams, pile caps) should not be used in lateral resistance calculations because of potential ground settlements that will occur over the life of the structure.

7.2.4 Foundation Settlements

Settlements of individual piles and pile groups should be evaluated further by the design team once building column loads, column spacing and the pile cap geometries are more clearly defined. However, we estimate that total settlement of pile groups will be less than about 1 inch for deep pile foundation systems bearing in the dense older sediments below the Bay Mud deposits.

Differential column settlements could occur as a result of variations in column loads, subsurface conditions and pile lengths. Differential settlement between adjacent columns should also be evaluated and considered in final design.

7.2.5 Construction Indicator Pile Program - Driven Precast Piles

Prior to construction, the pile driving contractor should submit a report of drivability study, using wave equation analyses, to confirm that the selected pile hammer, cushion, and cap block can be used to achieve the desired pile capacities without damage to the piles.

We recommend that prior to casting and driving production piles, an Indicator Pile Program be undertaken to evaluate driving resistances and developed capacities across the site and obtain data for the selection of production pile lengths. We recommend that indicator pile driving be monitored with a pile driving analyzer (PDA) to evaluate soil resistance and driving criteria and the stresses in the pile during driving.

Several of the indicator piles should be re-struck after at least 48 hours following initial driving to evaluate “set-up” or increase in load capacity with time. During initial driving, skin friction typically will be relatively low due to disturbance and excess pore water pressures that build up but then dissipate after driving stops. If the observed set-up is less than needed, it could be necessary to allow more time to pass, accept reduced pile capacities, or lengthen the piles.

The indicator pile driving program should be used to provide installation driving criteria for the production piles. Modifications to the pile design capacities may be required based on the results of the indicator pile program.

We recommend that the indicator pile program include at least 8 to 12 piles uniformly covering the site. The actual number of recommended indicator piles will depend on the final configuration of the foundation system and the number of production piles. For planning purposes, it can be assumed that indicator piles driven from the lower basement level elevation (base of excavation) will be on the order of 55 to 60 feet long (i.e., about 10 feet longer than expected for production piles). If these piles are to be used at production pile locations, and if additional reinforcing steel is placed in the upper portions of the piles for lateral load bending moments, then the reinforcing steel should be extended a minimum of 10 to 15 feet for the indicator piles in order to allow for variation and pile cut-off.

7.2.6 Pile Installation Criteria – Driven Precast Piles

The piles should be driven using a hammer capable of developing at least 80,000 foot-pounds of rated energy. We expect that piles driven to about 25 to 30 blows per foot, assuming the hammer delivers at least 80 percent of the rated energy, can develop the allowable axial capacity. All driving criteria should be developed using the PDA results from the indicator pile program. The same size and type of hammer should be used for both indicator and production pile driving.

Predrilling, if used, should include predrill hole diameters of less than the width (14 inches) of the concrete piles. Predrilling criteria may be developed during the indicator pile program.

7.2.7 Shallow Spread Footing Foundations

Shallow foundations may be acceptable to support lightly loaded ancillary structures, utility box pads and utility vaults. These types of structures can be supported on shallow spread footings bearing on engineered fill. Lightly loaded foundations are defined as isolated shallow spread footing foundations of less than 4 by 4 feet in plan dimension, or continuous spread footings less than 4 feet wide.

Isolated or continuous shallow spread footings should be at least 18 inches wide and should extend a minimum of 18 inches below finish grades. Foundations so established can be designed using an allowable soil bearing pressure of 1500 pounds per square foot (psf) for dead plus long-term live loads. This value can be temporarily increased by up to one-third for short-term loads such as those due to wind and seismic forces. These recommendations are for allowable stress design and include a factor of safety of 3.

All footings should be extended in depth as necessary so that existing or proposed utility trenches, excavations for planned improvements or other subsurface structures will not be below an imaginary plane having a downward slope of 45 degrees from the bottom edge of footing. In addition, no parallel utility trenches should be located within 18 inches from the closest edge of the footing.

The shallow foundations will resist lateral loads through passive earth pressure and base friction that is developed (mobilized) under lateral translation. This assumes the footing excavation sidewalls remain stable during construction, and the concrete is placed neat with the sides of the excavation. The coefficient of friction between the bottom of the footings and the prepared subgrade can be assumed as 0.3. For passive pressure design, an unfactored equivalent fluid pressure of 300 pounds per cubic foot (pcf) is recommended between the footing sides and surrounding engineered fill. The friction and passive pressure may be used concurrently.

The base of all foundation excavations should be cleaned of loose excavation spoils so that no loose soil or rock fragments remain in the excavation prior to placement of reinforcing steel and concrete. A representative from Kleinfelder should observe all footing excavations to confirm that the soils encountered are capable of carrying the design loads and to assess if the base conditions are satisfactory. If soft or loose materials are encountered at the bottom of the footing excavations, they should be removed and replaced with lean concrete or compacted fill. In addition, soils exposed in the footing excavations should not be allowed to dry prior to placement of concrete, as such drying could have an adverse impact on the performance of the foundation.

7.3 LATERAL EARTH PRESSURES

7.3.1 Retaining Walls and Below-Grade Walls

Retaining walls could include low perimeter walls to retain new site fills around the building, low loading dock walls and below-grade walls for basement levels, elevator pits and other utility vaults.

The retaining walls should be designed to resist the earth pressures exerted by the retained soils, hydrostatic forces where they extend below groundwater, and any additional lateral surcharge forces that will be applied to the walls due to surface loads placed at or near the walls. If no movement is allowed at the top of the walls, at-rest pressures need to be resisted. If the wall is allowed to deflect outward at the top at least 0.005 H, where H is the wall height, it may be designed to resist active pressures.

For preliminary engineering purposes, it is recommended that the walls be designed for lateral earth pressures as presented below, which are expressed as equivalent fluid pressures in pounds per cubic foot (pcf).

Table 7.3.1 Preliminary Earth Pressures for Retaining Walls

Earth Pressures	Above Groundwater Level	Below Groundwater Level
Active	40 pcf	80 pcf
At Rest	60 pcf	90 pcf

The design team should also consider designing retaining wall systems for a temporary increase in lateral earth pressures due to dynamic earth pressures during seismic events, which should be further analyzed when the foundation system geometry, structural loading conditions, and allowable deflections are more clearly defined.

Retaining walls should also be designed to resist an additional uniform surcharge pressure acting within the upper 5 feet of the wall, equivalent to one-half of any surcharge pressure applied at the surface. For light traffic loads (e.g., forklifts) applied within 2 feet of the walls, an additional design load of 100 pounds per linear foot applied 1 foot below top of wall, should be added to earth pressures.

Above grade retaining walls should be drained to prevent the buildup of short-term hydrostatic pressures against the walls. A typical drainage system could consist of a 12-inch wide zone of Caltrans Class 2 Permeable Material immediately adjacent to the wall with a perforated pipe at the base of the drain discharging by gravity flow. As an alternative, a prefabricated drainage board may be used in lieu of Class 2 Permeable Material. A 12-inch-thick clay soil cap should be placed on top of the permeable material to inhibit intrusion of surface water (where such a risk exists). Where migration of moisture through retaining walls would be detrimental or undesirable, retaining walls should be waterproofed.

7.4 RESISTANCE TO HYDROSTATIC UPLIFT

A long-term static groundwater level of Elevation +1 feet should be used for design. Short term rises in groundwater levels should also be considered during design. We suggest an extreme high water level of the finished exterior site grade if rare site flooding events are to be accommodated in design.

7.5 SITE SETTLEMENTS

The ground surface beneath project site and the surrounding areas will settle in the future as a result of consolidation of the compressible Bay Mud layer under the weight of the overlying preexisting fill soils, or from new fills for the currently proposed development. Current site grades within the proposed hotel building footprint range from approximately Elevation +5 to +8 feet. The planned final elevation for the ground floor level of the building is currently not fixed, and subject to change as design evolves.

The Bay Mud deposits at the northern side of the property are relatively thin, and are normally to slightly overconsolidated (OCR=1.0 to 1.2), indicating that primary consolidation of the Bay Mud due to the weight of the existing fills is complete. Therefore site settlements for existing fill conditions and site grades will be negligible, due to the longer term secondary compression effects.

Where new site fills are placed, additional settlements due to consolidation of the Bay Mud deposits will occur. The proposed site grading plans and first floor level elevation are currently unknown. For new site grading fills placed we estimate on the order of **1 to 1½ inches** of additional site settlement (over a 50-year period) for each foot of new fill placed above existing site grades. However, the thickness of the Bay Mud deposits is variable, ranging from about 5 to 9 feet thick.

The site settlements will occur most rapidly immediately after site fills are placed and gradually the rates of settlement will decrease. Approximately one-half of the 50-year settlements are likely to occur within 5 to 10 years after construction. Settlements will also continue beyond the nominal 50-year life of the building, but at a very slow rate.

It should be understood that the calculated amounts and rates of settlement are based on our experience, and with similar projects underlain by Bay Mud deposits. Variations of 50 percent or more from the predicted values of settlement could well occur.

Ground settlements will result in changing gradients (slopes) for surface water flows and gravity-flow sewer and storm drain pipes. Hydraulic flow calculations should consider both the “as-built” initial elevations and the “as-settled” 50-year elevations. Because of the variability in loading conditions, existing fill thicknesses, and Bay Mud layer thicknesses and consolidation properties, local depressions of the ground surface ("bird baths") and dips in buried pipes should be expected.

To accommodate differential settlement between the pile-supported building and surrounding areas, special considerations should be given to the design of utilities, walkways, and stair details. Flexible utility connections should be used to accommodate the anticipated differential settlement at the face of the building. All building utilities should be designed to be hung from the the base of the structural first floor level slab. Hinged slabs at walkways and pinned sidewalks at adjacent public streets should be considered to prevent tripping hazards at building entrances, arcades and driveways.

Maintenance of sidewalks, walkways and stairways adjacent to the building should be anticipated as the ground settles away from the pile-supported building. Hinged slabs and pinned sidewalks, if used, could help to reduce the frequency of maintenance, but will not eliminate it. A disadvantage of hinged slabs and pinned sidewalks is the potential for developing adverse cross slopes over time.

Building design options that can be considered to mitigate the impact of undesirable long-term site settlements adjacent to the building could include: (1) reducing the amount of "threshold" areas where pedestrians will cross from exterior walkways and sidewalks to building entrances and arcades without the use of steps; (2) locating exterior building walls adjacent to sidewalks that will settle excessively; (3) using long ramps or arcade pavements, fixed to the interior of the building but floating on ground at the building exterior, that can settle at one end without exceeding acceptable handicap access gradients; (4) providing for designated areas of handicap access, to reduce the number of locations where settlement problems must be faced; and (5) replacement of recent or new fills with lightweight fill material.

Additional geotechnical engineering analysis, settlement estimates and settlement reduction measures should be performed by the design team based on the proposed grading plans and design first floor level elevation once developed. In particular, future site settlements immediately adjacent to the building footprint should be evaluated further, and all underground utility systems should be designed to accommodate differential settlements.

7.6 CONCRETE SLABS-ON-GRADE

Building and exterior slab subgrades should be compacted to at least 90 percent relative compaction and should provide a uniform and non-yielding surface. For other, miscellaneous concrete slabs-on-grade, such as for utility vaults or elevator pits, subgrade should be rolled smooth prior to slab construction to provide a uniformly dense, non-yielding surface as described in Section 7.1.2, Site Preparation.

A minimum 4-inch-thick layer of clean open-graded ¾-inch maximum particle size rock or gravel should be placed beneath slabs-on-grade to provide a capillary moisture break. This material should be compacted with a vibratory plate or roller.

Due to shallow groundwater, waterproofing will be necessary for the lower basement floor slabs as well as basement sidewalls and should extend all the way to the ground surface. Moisture vapor is likely to condense on the underside of near surface slab-on-grade floors situated above the groundwater table. If such condensation would be undesirable, a continuous synthetic membrane should be placed beneath the slab. To help provide puncture protection and to aid in slab curing, the membrane, if overlying crushed rock, can be covered with about 2 inches of clean-washed sand. These protections against moisture vapor movement are deemed appropriate even though the building slab is fully pile-supported and with time, site settlement will cause a gap to develop below the structurally-supported first floor slab.

It should be emphasized that we are not waterproofing or floor moisture proofing experts. While the current industry standard is to place a vapor retarder over a compacted gravel layer as described above, this system may not be completely effective in preventing floor slab moisture problems. These systems typically will not necessarily assure that floor slab moisture transmission rates will meet floor-covering manufacturing standards and that indoor humidity levels be appropriate to inhibit mold growth. The design and construction of such systems are totally dependent on the proposed use and design of the proposed building. All elements of building design and function should be considered in the slab-on-grade floor design. Building design and construction may have a greater role in perceived moisture problems since sealed buildings/rooms or inadequate ventilation may produce excess moisture in a building and affect indoor air quality.

The exterior grading and site drainage will have an impact on the potential moisture beneath concrete slab-on-grades. In general, the elevation of exterior grades should not be higher than the elevation of the sand/gravel layer beneath any interior floor slabs situated near ground surface to help reduce water intrusion beneath slabs. Otherwise, waterproofing those types of slabs should be considered.

Where exterior flatwork will be subjected to vehicle traffic, we recommend that the upper 6-inches of engineered fill be Caltrans Class 2 aggregate base (AB) compacted to a minimum of 95 percent relative compaction. It is recommended that all exterior concrete flatwork be cast free from adjacent pilecaps, gradebeams or building slabs. This may be accomplished by using a strip of 30-pound felt divider material between the slab edges and adjacent structures.

7.7 FLEXIBLE PAVEMENT DESIGN

The parking lot and drive aisles will likely consist of flexible Asphalt Concrete (AC) pavement sections. Traffic Index (TI) design input parameters and site grading have not been provided to us, due to the preliminary and conceptual phase of design.

Resistance (R-Value) laboratory testing of the surface clayey fill soil was performed as part of this investigation. Preliminary flexible pavement sections have been analyzed for a subgrade with a minimum R-Value = 8. The final R-value for the actual subgrade soils will need to be verified by laboratory testing during rough grading.

AC Pavement Sections for
Subgrade R-Value = 8

Traffic Index	AC (inches)	AB (inches)
5	2.5	10.5
6	3.0	13.0
7	4.0	14.5

The top lift of subgrade soil and/or granular select engineered fill material as well as the AB layer underlying pavement sections should be compacted to at least 95 percent maximum dry density in accordance with ASTM D1557. Compacted pavement subgrade should be non-yielding. Subgrade preparation should extend a minimum of 3 feet beyond the edges of pavements.

If the subgrade cannot be compacted as recommended or is yielding excessively the area should be overexcavated and the excavation backfilled with AB. The depth of overexcavation would depend on the severity of the yielding. The AB should be spread in a single lift (not to exceed 12 inches) and compacted to a minimum of 95 percent of the maximum dry density per ASTM D 1557 at near optimum moisture content.

Asphalt-concrete should conform to the specifications presented in Section 39 of the Caltrans Standard Specifications, latest edition. Class 2 AB materials should conform to Section 26 of the Caltrans Standard Specifications, latest edition. ASTM test procedures should be used to assess the percent relative compaction of the pavement subgrade soils, aggregate base and asphalt-concrete.

Proper and sufficient surface drainage should be provided to allow flow into drainage inlets or lateral ditches. Water should not be allowed to pond on or adjacent to the pavement and cause the subgrade to become saturated. Periodic inspections and repair of cracks should be conducted as part of regular facility maintenance.

Typically the pavement surface should be sloped at a minimum of 2 percent and drainage gradients maintained to carry all surface water off the site due to the slightly porous or permeable nature of AC. Surface water ponding should not be allowed anywhere on the site during or after construction.

7.8 SEISMIC DESIGN PARAMETERS

The project is located in a highly active seismic region and can expect to be subjected to strong ground motions during its design life. It is our understanding that the foundation system for the proposed structure will be designed in accordance with the requirements of the 2013 edition of the California Building Code (CBC) and ASCE 07-10.

Based on our evaluation of the subsurface conditions, including soil shear strength, we recommend that for preliminary seismic site response and foundation design purposes, the site should be classified as **Site Class D** (for stiff soil). For preliminary seismic design purposes in accordance with the provisions of the 2013 California Building Code (CBC) and ASCE 7-10 we recommend the following.

Table 7.8: Preliminary Seismic Ground Motion Parameters Based on 2013 CBC

Parameter	Value	Reference
S_S	1.705g	Section 1613A.3.1, 2013 CBC
S_1	0.674	Section 1613A.3.1, 2013 CBC
PGA	0.659g	Sections 1803A.5.12, 2013 CBC & 11.8.3, ASCE 7-10
Site Class	D	Chapter 20, ASCE 7-10
F_a	1.0	Table 1613A.3.3(1), 2013 CBC
F_v	1.5	Table 1613A.3.3(2), 2013 CBC
F_{PGA}	1.00	Sections 1803A.5.12, 2013 CBC & 11.8.3, ASCE 7-10
S_{MS}	1.705g	Section 1613A.3.3, 2013 CBC
S_{M1}	1.011	Section 1613A.3.3, 2013 CBC
S_{DS}	1.136g	Section 1613A.3.4, 2013 CBC
S_{D1}	0.674	Section 1613A.3.4, 2013 CBC
PGA_M	0.659g	Sections 1803A.5.12, 2013 CBC & 11.8.3, ASCE 7-10

In recent years, many modern structures located near the seismic source have been severely damaged or collapsed. The severe damage and/or collapse is attributed to near fault motions that are characterized by energetic unidirectional velocity pulses (Singh, 1984 and 1985). What makes these motions particularly damaging is the impulse (area under the acceleration time history multiplied by the mass). A structural system that yields during a long duration pulse (impulse loading) may experience very large permanent deformations and/or collapse. The extent of these actions depends on the strength and natural period of the structure and the structure articulation, as well as the amplitude, duration, and shape of the pulse. The near fault pulse type motions can be particularly damaging because they can accumulate inelastic deformations in one direction and their considerations in the near fault conditions should be properly evaluated.

Due to potential near source motion resulting from activity on the nearby Hayward-Rodgers Creek fault, near source effects should be considered in the structural design of the proposed facility. Structures with strength discontinuities, soft stories, plan irregularities, discontinuous shear walls and ductile moment frames are particularly vulnerable to these types of motions and should either be avoided or properly evaluated.

Further consultation with the project structural engineer should be performed during final design, when the structural building system type and loading conditions are more defined, to evaluate seismic design requirements in more detail.

7.9 CORROSIVITY

A near surface soils sample was tested for potential corrosion to ferrous metals (i.e., steel pipe, ductile iron pipe and reinforcing steel) and chloride and sulfate attack to concrete. These tests are only an indicator of soil corrosivity for the sample and location tested. Other soils found on site may be more, less, or of a similar corrosive nature. The soil samples were sent to CERCO Analytical, Inc. for testing of pH, resistivity, soluble sulfates and chlorides. The soils were tested in general accordance with ASTM Test Methods for pH, resistivity, and for soluble sulfates and chlorides. The results of the laboratory tests are presented in Appendix B.

As indicated in the attached report by CERCO Analytical, Inc., the near surface fill soils are considered to be corrosive, and the Bay Mud deposits are known to typically be severely corrosive. As such, all buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion. The levels of chloride ion concentrations would be sufficient to attack steel embedded in a concrete mortar coating. This evaluation should be reviewed by the pile manufacturer to assess the impact to concrete piles, if used.

Kleinfelder has completed laboratory testing to provide data regarding corrosivity of on-site soils. Our scope of services does not include corrosion engineering and, therefore, a detailed analysis of the corrosion test results is not included in this report.

The above comments are general discussions only based on test results for one soil sample. We recommend that the design team retain a qualified corrosion engineer to: 1) evaluate the corrosion potential of the site soils to proposed improvements; 2) recommend further testing as required; and 3) provide specific methods for corrosion mitigation that are appropriate for the project. The corrosion potential for any imported fill and backfill should also be checked.

Corrosion allowances and added section thicknesses for steel foundation elements should be considered. Reinforced concrete for piles, pilecaps, gradebeams and floor slabs should consider using corrosion and sulfate resistant cement, with increased concrete cover over the steel rebar. The amount of corrosion allowance will be dependent on the type of pile foundation system selected and the design life of the structure.

8.0 ADDITIONAL SERVICES

8.1 PLANS AND SPECIFICATIONS REVIEW

We recommend Kleinfelder conduct a general review of pre-final plans and specifications to evaluate that our earthwork and foundation recommendations have been properly interpreted and implemented during design. In the event Kleinfelder is not retained to perform this recommended review, we will assume no responsibility for misinterpretation of our recommendations.

8.2 CONSTRUCTION OBSERVATION AND TESTING

We recommend that all earthwork during construction be monitored by a geotechnical engineer, including site preparation, placement of all engineered fill and trench backfill, construction of slab and roadway subgrades, and all foundation excavations. The purpose of these services would be to provide the engineer the opportunity to observe the soil conditions encountered during construction, evaluate the applicability of the recommendations presented in this report to the soil conditions encountered, and recommend appropriate changes in design or construction procedures if conditions differ from those described herein. Kleinfelder should also observe the pile indicator program and production pile installations, as described in Sections 7.2.5 and 7.2.6.

In addition, our recommendations as Geotechnical Engineer of Record are based on the understanding that a geotechnical engineering representative of our firm will be present during various construction activities that include such items as excavations for mass grading, preparation of subgrade, fill placement, and bearing material exposed in excavations for footings. Potential variations in subsurface conditions at the site could create changes in operations, approaches, cost and schedule. Knowing how to address the impact of this variation can be essential to the progress and cost of the project. We recommend that we provide these engineering construction services since we are familiar with the subsurface conditions, and we are familiar with the information that serves as the basis of the formulation of our design recommendations.

9.0 LIMITATIONS

The preliminary recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, previous reports, and our present knowledge of the proposed construction. It is possible that soil conditions could vary between or beyond the points explored. If soil conditions are encountered during construction which differ from those described herein, we should be notified immediately in order that a review may be made and any supplemental recommendations provided. If the scope of the proposed construction, including the proposed loads or structural locations, changes from that described in this report, our recommendations should also be reviewed.

We have prepared this report in accordance with the generally accepted geotechnical engineering practice as it exists in the site area at the time of our study. No warranty, either express or implied, is made. The preliminary recommendations provided in this report are based on the assumption that an adequate program of tests and observations will be conducted by the Geotechnical Engineer of Record during the construction phase in order to evaluate compliance with our recommendations. Other standards or documents referenced in any given standard cited in this report, or otherwise relied upon by the author of this report, are only mentioned in the given standard; they are not incorporated into it or “included by reference”, as that latter term is used relative to contracts or other matters of law.

This report may be used only by the Owner and Architectural Dimensions and their consultants and partners for this project, and only for the purposes stated within a reasonable time from its issuance, but in no event later than two years from the date of the report. Land or facility use, on and off-site conditions, regulations, or other factors may change over time, and additional work may be required with the passage of time. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

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FIGURES

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SITE VICINITY MAP

Mandela Parkway Hotel
Oakland, California

FIGURE
1

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APPROXIMATE SCALE: 1 inch = 100 feet

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LEGEND

⊕ Approximate Boring Location

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SITE PLAN

Mandela Parkway Hotel
Oakland, California

FIGURE
2

APPENDIX A

Logs of Test Borings

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SAMPLE/SAMPLER TYPE GRAPHICS

BULK / GRAB / BAG SAMPLE

MODIFIED CALIFORNIA SAMPLER
(2 or 2-1/2 in. (50.8 or 63.5 mm.) outer diameter)

CALIFORNIA SAMPLER
(3 in. (76.2 mm.) outer diameter)

STANDARD PENETRATION SPLIT SPOON SAMPLER
(2 in. (50.8 mm.) outer diameter and 1-3/8 in. (34.9 mm.) inner diameter)

SHELBY TUBE SAMPLER

HOLLOW STEM AUGER

SOLID STEM AUGER

WASH BORING

NQ CORE SAMPLE
(1.874 in. (47.6 mm.) core diameter)

TEXAS CONE PENETRATION

GROUND WATER GRAPHICS

∇ WATER LEVEL (level where first observed)

▼ WATER LEVEL (level after exploration completion)

▼ WATER LEVEL (additional levels after exploration)

≋ OBSERVED SEEPAGE

NOTES

- The report and graphics key are an integral part of these logs. All data and interpretations in this log are subject to the explanations and limitations stated in the report.
- Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual or differ from those shown.
- No warranty is provided as to the continuity of soil or rock conditions between individual sample locations.
- Logs represent general soil or rock conditions observed at the point of exploration on the date indicated.
- In general, Unified Soil Classification System designations presented on the logs were based on visual classification in the field and were modified where appropriate based on gradation and index property testing.
- Fine grained soils that plot within the hatched area on the Plasticity Chart, and coarse grained soils with between 5% and 12% passing the No. 200 sieve require dual USCS symbols, ie., GW-GM, GP-GM, GW-GC, GP-GC, GC-GM, SW-SM, SP-SM, SW-SC, SP-SC, SC-SM.
- If sampler is not able to be driven at least 6 inches then 50/X indicates number of blows required to drive the identified sampler X inches with a 140 pound hammer falling 30 inches.

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

COARSE GRAINED SOILS (More than half of material is larger than the #200 sieve)	**GRAVELS** (More than half of coarse fraction is larger than the #4 sieve)	CLEAN GRAVEL WITH <5% FINES	Cu≥4 and 1≤Cc≤3	**GW**	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
			Cu<4 and/ or 1>Cc>3	**GP**	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
		GRAVELS WITH 5% TO 12% FINES	Cu≥4 and 1≤Cc≤3	**GW-GM**	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
				GW-GC	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
			Cu<4 and/ or 1>Cc>3	**GP-GM**	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
				GP-GC	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
		GRAVELS WITH > 12% FINES		**GM**	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
				GC-GM	CLAYEY GRAVELS, GRAVEL-SAND-CLAY-SILT MIXTURES
	SANDS (More than half of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH <5% FINES	Cu≥6 and 1≤Cc≤3	**SW**	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
			Cu<6 and/ or 1>Cc>3	**SP**	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
		SANDS WITH 5% TO 12% FINES	Cu≥6 and 1≤Cc≤3	**SW-SM**	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
				SW-SC	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
			Cu<6 and/ or 1>Cc>3	**SP-SM**	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
				SP-SC	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
		SANDS WITH > 12% FINES		**SM**	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-GRAVEL-CLAY MIXTURES
				SC-SM	CLAYEY SANDS, SAND-SILT-CLAY MIXTURES

FINE GRAINED SOILS (More than half of material is smaller than the #200 sieve)	SILTS AND CLAYS (Liquid Limit less than 50)	**ML**	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		CL-ML	INORGANIC CLAYS-SILTS OF LOW PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (Liquid Limit greater than 50)	**MH**	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
		OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY

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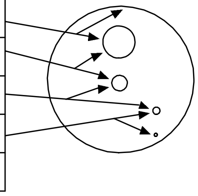
GRAPHICS KEY

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-1

GRAIN SIZE

DESCRIPTION		SIEVE SIZE	GRAIN SIZE	APPROXIMATE SIZE
Boulders		>12 in. (304.8 mm.)	>12 in. (304.8 mm.)	Larger than basketball-sized
Cobbles		3 - 12 in. (76.2 - 304.8 mm.)	3 - 12 in. (76.2 - 304.8 mm.)	Fist-sized to basketball-sized
Gravel	coarse	3/4 -3 in. (19 - 76.2 mm.)	3/4 -3 in. (19 - 76.2 mm.)	Thumb-sized to fist-sized
	fine	#4 - 3/4 in. (#4 - 19 mm.)	0.19 - 0.75 in. (4.8 - 19 mm.)	Pea-sized to thumb-sized
Sand	coarse	#10 - #4	0.079 - 0.19 in. (2 - 4.9 mm.)	Rock salt-sized to pea-sized
	medium	#40 - #10	0.017 - 0.079 in. (0.43 - 2 mm.)	Sugar-sized to rock salt-sized
	fine	#200 - #40	0.0029 - 0.017 in. (0.07 - 0.43 mm.)	Flour-sized to sugar-sized
Fines		Passing #200	<0.0029 in. (<0.07 mm.)	Flour-sized and smaller



SECONDARY CONSTITUENT

	AMOUNT	
Term of Use	Secondary Constituent is Fine Grained	Secondary Constituent is Coarse Grained
Trace	<5%	<15%
With	≥5 to <15%	≥15 to <30%
Modifier	≥15%	≥30%

MUNSELL COLOR

NAME	ABBR	NAME	ABBR
Red	R	Blue	B
Yellow Red	YR	Purple Blue	PB
Yellow	Y	Purple	P
Green Yellow	GY	Red Purple	RP
Green	G	Black	N
Blue Green	BG		

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure.
Moderately	Crumbles or breaks with considerable finger pressure.
Strongly	Will not crumble or break with finger pressure.

CONSISTENCY - FINE-GRAINED SOIL

CONSISTENCY	SPT - N$_{60}$ (# blows / ft)	UNCONFINED COMPRESSIVE STRENGTH (Q$_u$)(psf)	VISUAL / MANUAL CRITERIA
Very Soft	<2	<500	Thumb will penetrate more than 1 inch (25 mm). Extrudes between fingers when squeezed.
Soft	2 - 4	500 - 1000	Thumb will penetrate soil about 1 inch (25 mm). Remolded by light finger pressure.
Medium	4 - 8	1000 - 2000	Thumb will penetrate soil about 1/4 inch (6 mm). Remolded by strong finger pressure.
Stiff	8 - 15	2000 - 4000	Can be imprinted with considerable pressure from thumb.
Very Stiff	15 - 30	4000 - 8000	Thumb will not indent soil but readily indented with thumbnail.
Hard	>30	>8000	Thumbnail will not indent soil.

FROM TERZAGHI AND PECK, 1948; LAMBE AND WHITMAN, 1969; FHWA, 2002; AND ASTM D2488

REACTION WITH HYDROCHLORIC ACID

DESCRIPTION	FIELD TEST
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming immediately

APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT-N$_{60}$ (# blows/ft)	MODIFIED CA SAMPLER (# blows/ft)	CALIFORNIA SAMPLER (# blows/ft)	RELATIVE DENSITY (%)
Very Loose	<4	<4	<5	0 - 15
Loose	4 - 10	5 - 12	5 - 15	15 - 35
Medium Dense	10 - 30	12 - 35	15 - 40	35 - 65
Dense	30 - 50	35 - 60	40 - 70	65 - 85
Very Dense	>50	>60	>70	85 - 100

FROM TERZAGHI AND PECK, 1948

PLASTICITY

DESCRIPTION	LL	FIELD TEST
Non-plastic	NP	A 1/8-in. (3 mm.) thread cannot be rolled at any water content.
Low (L)	< 30	The thread can barely be rolled and the lump or thread cannot be formed when drier than the plastic limit.
Medium (M)	30 - 50	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump or thread crumbles when drier than the plastic limit.
High (H)	> 50	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump or thread can be formed without crumbling when drier than the plastic limit.

STRUCTURE

DESCRIPTION	CRITERIA
Stratified	Alternating layers of varying material or color with layers at least 1/4-in. thick, note thickness.
Laminated	Alternating layers of varying material or color with the layer less than 1/4-in. thick, note thickness.
Fissured	Breaks along definite planes of fracture with little resistance to fracturing.
Slickensided	Fracture planes appear polished or glossy, sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay; note thickness.

ANGULARITY

DESCRIPTION	CRITERIA
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces.
Subangular	Particles are similar to angular description but have rounded edges.
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges.
Rounded	Particles have smoothly curved sides and no edges.

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SOIL DESCRIPTION KEY

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-2

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PLOTTED: 11/15/2016 09:04 AM BY: JSala

BORING LOG B-1

Date Begin - End: 10/10/2016
Logged By: C. Riddle
Hor.-Vert. Datum: Not Available
Plunge: -90 degrees
Weather: Not Available

Drilling Company: Pitcher Drilling
Drill Crew: Eden
Drilling Equipment: Fraste Multidrill XL
Drilling Method: Mud Rotary
Exploration Diameter: 5 in. O.D.

Approximate Ground Surface Elevation (ft.): 8
Surface Condition: Aggregate Base Coarse

		FIELD EXPLORATION				LABORATORY RESULTS							
Approximate Elevation (feet)	Depth (feet)	Lithologic Description	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
		Silty SAND (SM): non-plastic, gray, moist, dense, fine to medium-grained sand, (Fill)											Hand Auger top 5' 5" concrete beneath AB
5		**Sandy Lean CLAY (CL)**: low plasticity, yellowish brown/gray, moist, hard, fine-grained sand, (Fill)		PP=4.5									hand-driven sample at 2 feet
	5	**Silty GRAVEL with Sand (GM)**: non-plastic, black/gray, moist, medium dense, angular gravel to 2"		BC=11 16 17			7.2	107.4					Fill with concrete and AC
0 ∇		**Sand (GM)**: non-plastic, black, wet, dense, angular gravel to 2", (Fill)		BC=19 28 21									Fill with concrete and AC
	10	**Fat CLAY (CH)**: high plasticity, black, wet, very soft, (Bay Mud)		BC=0 0 1 PP=0 TV=1.0							90	59	
-5		**Lean CLAY with Sand (CL)**: medium plasticity, bluish gray, wet, very stiff, fine to coarse-grained sand, fine gravel to 1/4", (Alluvium)											
	15												
-10		**Fat CLAY (CH)**: high plasticity, olive green/brown, wet, stiff, mottled color											
	20			BC=2 5 7 PP=1.5									
-15													
	25			BC=8 9 8 PP=1.75									
-20													
	30	very stiff		BC=5 9 11 PP=2.25			22.4	107.5					
-25													
	35			BC=4 10 18 PP=2.5, 4.5+									
		Lean CLAY with Sand (CL): low to medium plasticity, dark brown, wet, hard, subrounded fine to medium-grained sand											
-30													

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PROJECT NO.: 20172194
DRAWN BY: SC
CHECKED BY: MP
DATE: 10/24/2016
REVISED: 11/3/2016

BORING LOG B-1

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-3

gINT FILE: Klf_gint_master_2016
gINT TEMPLATE: PROJECTWISE: KLF_STANDARD_GINT_LIBRARY_2016.GLB [KLF_BORING/TEST PIT SOIL LOG]

PLOTTED: 11/15/2016 09:04 AM BY: JSala

Date Begin - End:	10/10/2016	**Drilling Company:**	Pitcher Drilling	**BORING LOG B-1**
Logged By:	C. Riddle	**Drill Crew:**	Eden	
Hor.-Vert. Datum:	Not Available	**Drilling Equipment:**	Fraste Multidrill XL	
Plunge:	-90 degrees	**Drilling Method:**	Mud Rotary	
Weather:	Not Available	**Exploration Diameter:**	5 in. O.D.	

Approximate Ground Surface Elevation (ft.): 8
Surface Condition: Aggregate Base Coarse

			FIELD EXPLORATION				LABORATORY RESULTS							
Approximate Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
			Clayey SAND with Gravel (SC): non-plastic, dark brown, wet, dense, fine to coarse-grained sand, subrounded fine to coarse gravel to 1"	◣	BC=10 19 25									
-35			**Fat CLAY (CH)**: high plasticity, olive gray/brown, moist, very stiff											
	45			▮	BC=2 8 12 PP=2.25			22.9	104.4					Su = 2.66 ksf (TXUU)
-40														
	50			▮	BC=9 14 19 PP=2.75									
-45														
	55			▮	BC=9 12 19 PP=3.0									
-50			**Poorly graded SAND with Silt (SP-SM)**: yellowish brown, wet, dense, fine-grained sand											
	60		**Clayey SAND with Gravel (SC)**: dark brown/yellowish brown, wet, dense, fine to coarse-grained sand, fine to coarse gravel to 1.5"	▮	BC=26 31 36									
-55														
			Fat CLAY (CH): olive brown/gray, moist, hard, trace fine gravel to .50", fine to coarse-grained sand											
	65			▮	BC=12 23 32 PP=4.5+									
-60														
	70		very stiff	◣	BC=6 10 16 PP=2.5									
-65														
	75													
-70														

The boring was terminated at approximately 71.5 ft. below ground surface. The boring was backfilled with cement grout on October 10, 2016.

GROUNDWATER LEVEL INFORMATION:
⊻ Groundwater was observed at approximately 8.5 ft. below ground surface during drilling.
GENERAL NOTES:
The exploration location and elevation are approximate and were estimated by Kleinfelder.

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PROJECT NO.: 20172194	BORING LOG B-1	FIGURE
DRAWN BY: SC		
CHECKED BY: MP	MANDELA PARKWAY HOTEL OAKLAND, CALIFORNIA	A-3
DATE: 10/24/2016		
REVISED: 11/3/2016		PAGE: 2 of 2

PLOTTED: 11/15/2016 09:05 AM BY: JSala

Date Begin - End: 10/11/2016
Logged By: C. Riddle
Hor.-Vert. Datum: Not Available
Plunge: -90 degrees
Weather: Not Available

Drilling Company: Pitcher Drilling
Drill Crew: Eden
Drilling Equipment: Fraste Multidrill XL
Drilling Method: Mud Rotary
Exploration Diameter: 5 in. O.D.

BORING LOG B-2

Approximate Ground Surface Elevation (ft.): 6
Surface Condition: Aggregate Base Coarse

FIELD EXPLORATION							LABORATORY RESULTS							
Approximate Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
		▨	**Clayey SAND with Gravel (SC)**: low plasticity, grayish brown, moist, medium, (Fill)	☒						76	41			
5		▨	**Fat CLAY with Sand (CH)**: high plasticity, dark gray to brown, moist, hard, trace fine to coarse gravel to 2.0" (Fill)	■	BC=16 16 14 PP=4.5+									
	5	▨	**Fat CLAY (CH)**: high plasticity, black, moist, medium, (Bay Mud)	■	BC=2 6 6 PP=1.0 PP=1.75			26.0	97.9					Su = 1.57 ksf (TXUU)
0		▨	**Fat CLAY (CH)**: high plasticity, olive gray to brown, moist, stiff											
	10	▨	**Fat CLAY (CH)**: high plasticity, dark gray, moist, soft	▥	PP=.5			41.9	84.2			59	41	consolidation test
-5		▨	**Fat CLAY (CH)**: high plasticity, bluish gray, moist, soft, subangular gravel to 0.5" (Alluvium)											
		▨	**Sandy Fat CLAY (CH)**: high plasticity, dark brown to gray, moist, very stiff, trace fine gravel, mottled color	■	BC=7 15 12 PP=3.5									
-10	15	▨	high plasticity, moist, hard, increase in gravel content	■	BC=9 18 25									
-15	20	▨	**Lean CLAY with Sand (CL)**: medium plasticity, olive gray to brown, wet, medium	■	BC=2 4 5 PP=.75							38	21	
-20	25	▨	olive brown to gray, moist, medium	◣	BC=4 3 4 PP=1.25									
-25	30	▨	**Fat CLAY (CH)**: high plasticity, blue to gray, moist, stiff	■	BC=9 11 14 PP=2.0									
-30	35	▨	high plasticity, olive gray and brown, moist, stiff	◣	BC=3 6 9 PP=1.5 PP=2.5									
		▨	**Sandy Fat CLAY (CH)**: high plasticity, brown, moist, very stiff, fine-grained											

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DATE: 10/24/2016
REVISED: 11/3/2016

BORING LOG B-2

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-4

BORING LOG B-2

Date Begin - End: 10/11/2016
Logged By: C. Riddle
Hor.-Vert. Datum: Not Available
Plunge: -90 degrees
Weather: Not Available
Drilling Company: Pitcher Drilling
Drill Crew: Eden
Drilling Equipment: Fraste Multidrill XL
Drilling Method: Mud Rotary
Exploration Diameter: 5 in. O.D.

			FIELD EXPLORATION				LABORATORY RESULTS							
Approximate Elevation (feet)	Depth (feet)	Graphical Log	Approximate Ground Surface Elevation (ft.): 6 Surface Condition: Aggregate Base Coarse Lithologic Description	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
-35		▨	**Fat CLAY (CH)**: high plasticity, olive gray to brown, moist, stiff to very stiff	■	BC=8 14 17 PP=2.75 PP=1.75									
-40	45	▨	high plasticity, olive brown to gray, moist, stiff	◣	BC=5 7 10 PP=1.75									
-45	50	▨		■	BC=7 9 12 PP=1.75									
-50	55													
-55	60													
-60	65													
-65	70													
-70	75													

The boring was terminated at approximately 51.5 ft. below ground surface. The boring was backfilled with cement grout on October 11, 2016.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.

GENERAL NOTES:
The exploration location and elevation are approximate and were estimated by Kleinfelder.

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DATE:	10/24/2016
REVISED:	11/3/2016

BORING LOG B-2

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-4

BORING LOG B-3

Date Begin - End: 10/10/2016
Logged By: C. Riddle
Hor.-Vert. Datum: Not Available
Plunge: -90 degrees
Weather: Not Available

Drilling Company: Pitcher Drilling
Drill Crew: Eden
Drilling Equipment: Fraste Multidrill XL
Drilling Method: Mud Rotary
Exploration Diameter: 5 in. O.D.

Approximate Ground Surface Elevation (ft.): 7
Surface Condition: Aggregate Base Coarse

FIELD EXPLORATION						LABORATORY RESULTS								
Approximate Elevation (feet)	Depth (feet)	Lithologic Description	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
		Aggregate Base 3"											
5		**Fat CLAY with Sand (CH)**: high plasticity, dark brown to gray, moist, stiff, trace fine to coarse-grained sand (Fill)		BC=6 6 7 PP=2.0							56	38	
0	5	**Fat CLAY (CH)**: high plasticity, dark gray, moist, medium, (Bay Mud)		BC=2 4 8 PP=1.25			35.2	79.4					
				PP=1.25									
	10	**Lean CLAY with Sand (CL)**: medium plasticity, blue to gray, moist, medium, (Alluvium)											
-5		**Clayey GRAVEL with Sand (GC)**: high plasticity, mottled color, moist, medium dense, fine to coarse-grained sand, fine to coarse gravel to 1.0"		BC=4 9 10						35			
-10	15	**Fat CLAY (CH)**: high plasticity, olive brown to gray, moist, stiff		BC=8 6 7 PP=1.25									
-15	20			BC=4 5 10 PP=2.5			28.1	97.8					Su = 1.06 ksf (TXUU)
-20	25	**Sandy Lean CLAY with Gravel (GC)**: low plasticity, moist, hard, fine to coarse-grained sand, fine to coarse gravel to 2.5"		BC=13 25 31									
	30			BC=7 11 20						58			
-25													
-30	35												

The boring was terminated at approximately 31.5 ft. below ground surface. The boring was backfilled with cement grout on October 10, 2016.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.

GENERAL NOTES:
The exploration location and elevation are approximate and were estimated by Kleinfelder.

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REVISED: 11/3/2016

BORING LOG B-3

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
A-5

PLOTTED: 11/15/2016 09:05 AM BY: JSala

Date Begin - End:	10/11/2016	**Drilling Company:**	Pitcher Drilling	**BORING LOG B-4**
Logged By:	C. Riddle	**Drill Crew:**	Eden	
Hor.-Vert. Datum:	Not Available	**Drilling Equipment:**		
Plunge:	-90 degrees	**Drilling Method:**	Hand Auger	
Weather:	Not Available	**Auger Diameter:**	6 in. O.D.	

Approximate Ground Surface Elevation (ft.): 9
Surface Condition: Aggregate Base Coarse

Approximate Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	FIELD EXPLORATION Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in.	Pocket Pen(PP)= tsf	Torvane(TV)= tsf	Recovery (NR=No Recovery)	LABORATORY RESULTS USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
			Aggregate Base													
5			**Sandy Lean CLAY with Gravel (CL)**: low plasticity, dark gray to black, moist, very hard, subrounded gravel, concrete and brick, mottled color (Fill) 2" layer of asphalt low plasticity, moist, hard	☒									61			R-Value (1-5 feet)
0	5		**Fat CLAY (CH)**: high plasticity, black, moist, soft, fine to coarse-grained sand, trace fine to coarse gravel (Bay Mud)													
	10															

Elevation scale: 5, 0, -5, -10, -15, -20, -25, -30
Depth scale: 5, 10, 15, 20, 25, 30, 35

The boring was terminated at approximately 10 ft. below ground surface. The boring was backfilled with cement grout on October 11, 2016.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not encountered during drilling or after completion.

GENERAL NOTES:
The exploration location and elevation are approximate and were estimated by Kleinfelder.

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PROJECT NO.: 20172194	BORING LOG B-4	FIGURE
DRAWN BY: AM		A-6
CHECKED BY: MP	MANDELA PARKWAY HOTEL OAKLAND, CALIFORNIA	
DATE: 10/24/2016		
REVISED: 11/3/2016		PAGE: 1 of 1

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APPENDIX B

Laboratory Test Results

Exploration ID	Depth (ft.)	Sample Description	Water Content (%)	Dry Unit Wt. (pcf)	Sieve Analysis (%)			Atterberg Limits			Additional Tests
					Passing 3/4"	Passing #4	Passing #200	Liquid Limit	Plastic Limit	Plasticity Index	
B-1	6.0	SILTY GRAVEL WITH SAND (GM)	7.2	107.4							
B-1	10.5	FAT CLAY (CH)						90	31	59	
B-1	31.0	FAT CLAY (CH)	22.4	107.5							
B-1	46.0	FAT CLAY (CH)	22.9	104.4							Su = 2.66 ksf (TXUU)
B-2	0.0 - 1.0	CLAYEY SAND WITH GRAVEL (SC)			95	76	41				
B-2	6.0	FAT CLAY (CH)	26.0	97.9							Su = 1.57 ksf (TXUU)
B-2	9.0	FAT CLAY (CH)	41.9	84.2				59	18	41	consolidation test
B-2	20.5	LEAN CLAY WITH SAND (CL)						38	17	21	
B-3	3.5	FAT CLAY WITH SAND (CH)						56	18	38	
B-3	6.0	FAT CLAY (CH)	35.2	79.4							
B-3	13.0	CLAYEY GRAVEL WITH SAND (GC)					35				
B-3	20.5	FAT CLAY (CH)	28.1	97.8							Su = 1.06 ksf (TXUU)
B-3	30.5	SANDY LEAN CLAY (CL)					58				
B-4	1.0 - 5.0	SANDY LEAN CLAY (CL)					61				R-Value (1-5 feet)

Refer to the Geotechnical Evaluation Report or the supplemental plates for the method used for the testing performed above.
NP = NonPlastic

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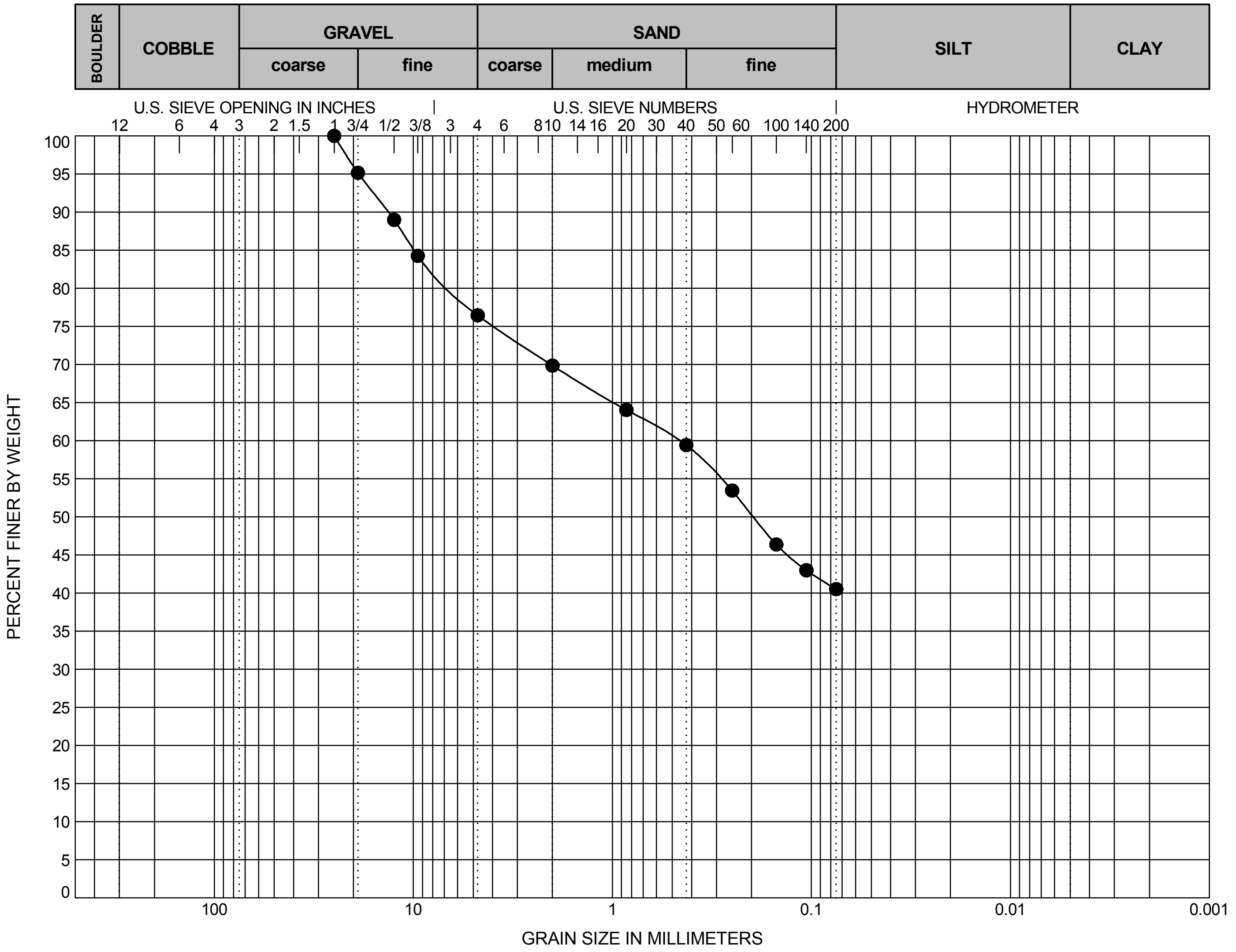
LABORATORY TEST
RESULT SUMMARY

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
B-1

PLOTTED: 11/15/2016 09:13 AM BY: JSala



Exploration ID	Depth (ft.)	Sample Description	LL	PL	PI
● B-2	0 - 1	CLAYEY SAND WITH GRAVEL (SC)	NM	NM	NM

Exploration ID	Depth (ft.)	D_{100}	D_{60}	D_{30}	D_{10}	Cc	Cu	Passing 3/4"	Passing #4	Passing #200	%Silt	%Clay
● B-2	0 - 1	25	0.464	NM	NM	NM	NM	95	76	41	NM	NM

Sieve Analysis and Hydrometer Analysis testing performed in general accordance with ASTM D422.
NP = Nonplastic
NM = Not Measured

Coefficients of Uniformity - $C_u = D_{60} / D_{10}$
Coefficients of Curvature - $C_C = (D_{30})^2 / D_{60}\ D_{10}$
D_{60} = Grain diameter at 60% passing
D_{30} = Grain diameter at 30% passing
D_{10} = Grain diameter at 10% passing

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SIEVE ANALYSIS

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE

B-2

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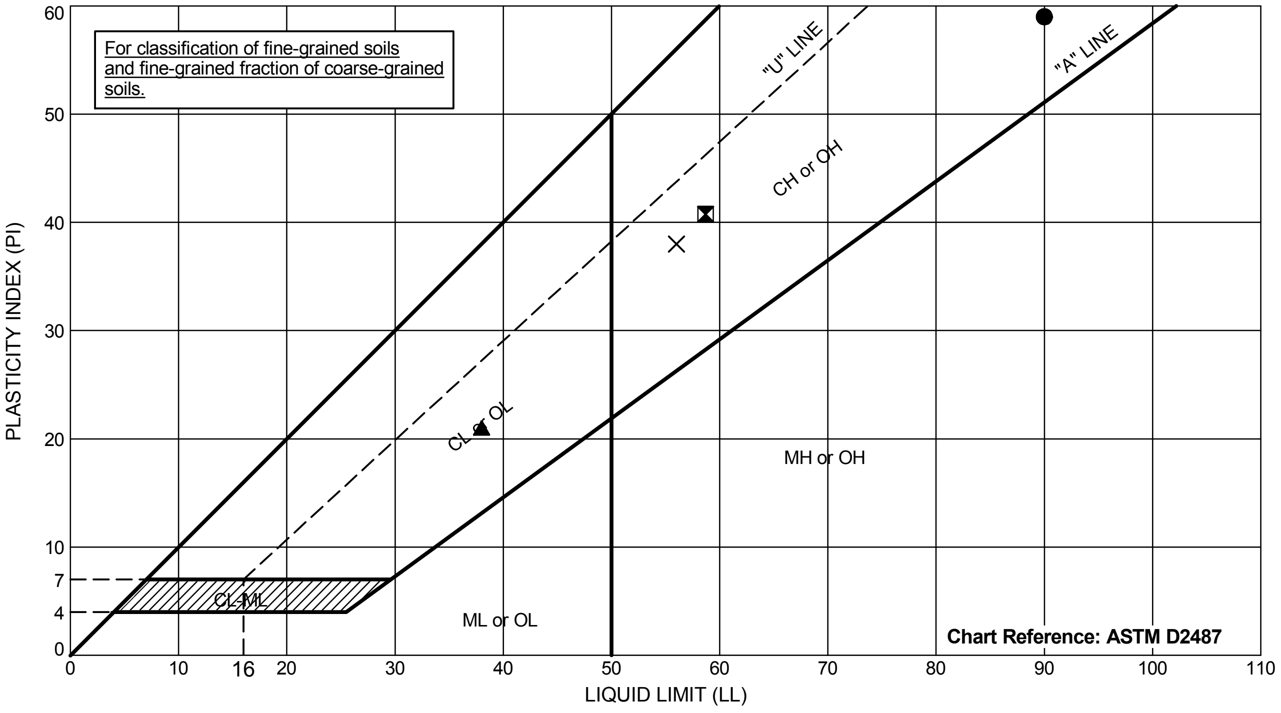

Exploration ID		Depth (ft.)	Sample Description	Passing #200	LL	PL	PI
●	B-1	10.5	FAT CLAY (CH)	NM	90	31	59
☒	B-2	9	FAT CLAY (CH)	NM	59	18	41
▲	B-2	20.5	LEAN CLAY WITH SAND (CL)	NM	38	17	21
×	B-3	3.5	FAT CLAY WITH SAND (CH)	NM	56	18	38

Testing perfomed in general accordance with ASTM D4318.
NP = Nonplastic
NM = Not Measured

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PROJECT NO.: 20172194
DRAWN BY: AM
CHECKED BY: MP
DATE: 10/24/2016
REVISED: 11/3/2016

ATTERBERG LIMITS

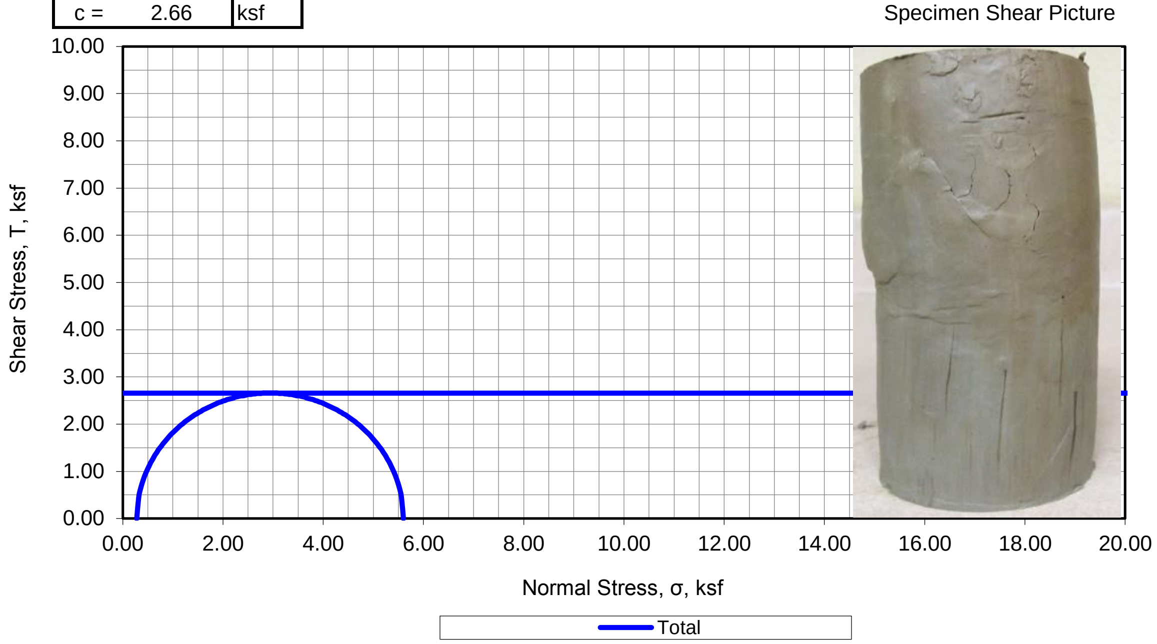
MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

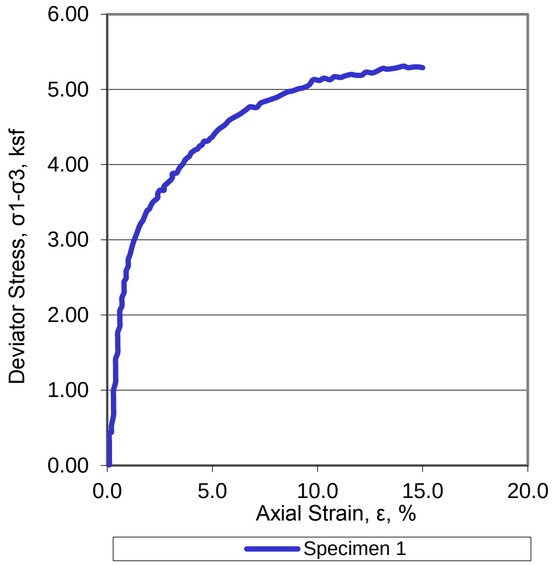
FIGURE

B-3

gINT FILE: Klf_gint_master_2016
gINT TEMPLATE: PROJECTWISE: KLF_STANDARD_GINT_LIBRARY_2016.GLB [KLF_ATTERBERG (ASTM)]

Total	
c = 2.66	ksf





Specimen No.			1
Initial	Diameter, in	D_O	2.41
	Height, in	H_O	5.51
	Water Content, %	ω_O	22.9
	Dry Density, lbs/ft^3	$^{\gamma}d_o$	104.4
	Saturation, %	S_O	104
	Void Ratio	e_O	0.584
Minor Principal Stress, ksf		σ_3	0.29
Maximum Deviator Stress, ksf		$(\sigma1-\sigma3)_{max}$	5.31
Time to $(\sigma_1\text{-}\sigma_3)_{max}$, min		t_f	14.08
Deviator Stress @ 15% Axial Strain, ksf		$(\sigma_1-\sigma_3)_{15\%}$	5.29
Ultimate Deviator Stress, ksf		$(\sigma_1-\sigma_3)_{ult}$	na
Rate of strain, %/min		'ε	1.00
Axial Strain at Failure, %		ε_f	14.08

Description of Specimen: Fat Clay (CH)

Amount of Material Finer than the No. 200, %: nm

LL: nm | PL: nm | PI: nm | G_S: 2.65 Assumed | Specimen Type: Undisturbed | Test Method: ASTM D2850

Membrane correction applied

Boring:	B-1
Sample:	11A
Depth, ft:	46.0
Test Date:	10/14/16

Remarks: nm= not measured, na = not applicable

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2601 Barrington Ct, Hayward, CA 94545

Project No.:	20172194
Date:	10/26/16
Entry By:	CP
Checked By:	CP
File Name:	HL9533

TRIAXIAL COMPRESSION TEST (UU)

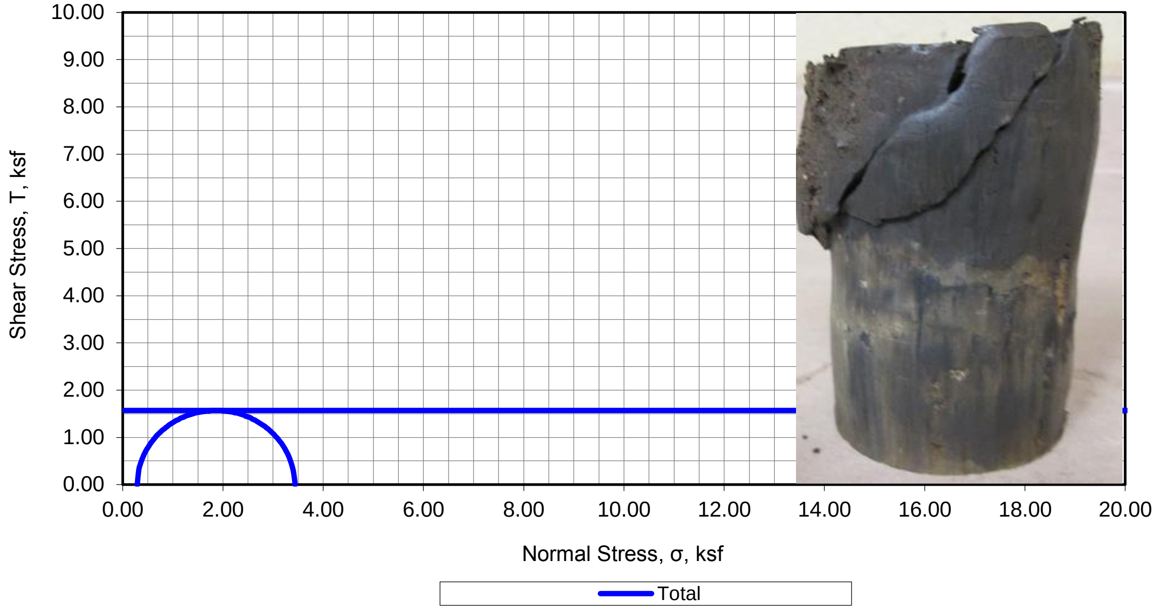
MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

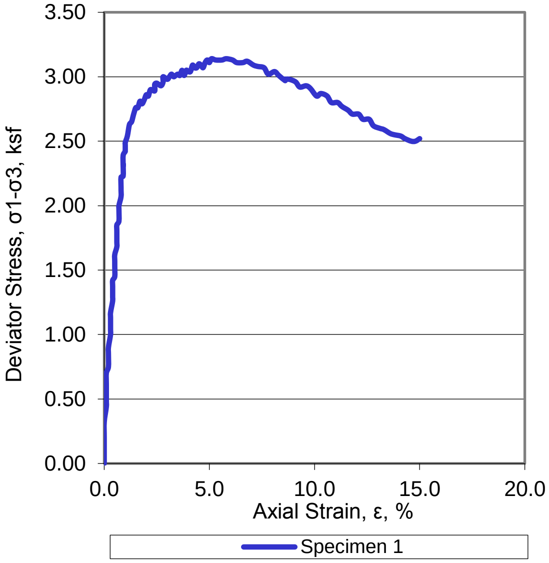
FIGURE

B-4

Total	
c = 1.57	ksf

Specimen Shear Picture





Specimen No.			1
Initial	Diameter, in	D_O	2.38
	Height, in	H_O	4.82
	Water Content, %	ω_O	26.0
	Dry Density, lbs/ft^3	$^{\gamma}d_o$	97.9
	Saturation, %	S_O	100
	Void Ratio	e_O	0.689
Minor Principal Stress, ksf		σ_3	0.29
Maximum Deviator Stress, ksf		$(\sigma1-\sigma3)_{max}$	3.14
Time to $(\sigma_1-\sigma_3)_{max}$, min		t_f	5.82
Deviator Stress @ 15% Axial Strain, ksf		$(\sigma_1-\sigma_3)_{15\%}$	2.52
Ultimate Deviator Stress, ksf		$(\sigma_1-\sigma_3)_{ult}$	na
Rate of strain, %/min		'ε	1.00
Axial Strain at Failure, %		ε_f	5.82

Description of Specimen: Fat Clay (CH)

Amount of Material Finer than the No. 200, %: nm

LL: nm	PL: nm	PI: nm	G_S: 2.65 Assumed	Specimen Type: Undisturbed	Test Method: ASTM D2850

Membrane correction applied

Boring:	B-2
Sample:	3A
Depth, ft:	6.0
Test Date:	10/14/16

Remarks: nm= not measured, na = not applicable

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Project No.:	20172194
Date:	10/26/16
Entry By:	CP
Checked By:	CP
File Name:	HL9533

TRIAXIAL COMPRESSION TEST (UU)

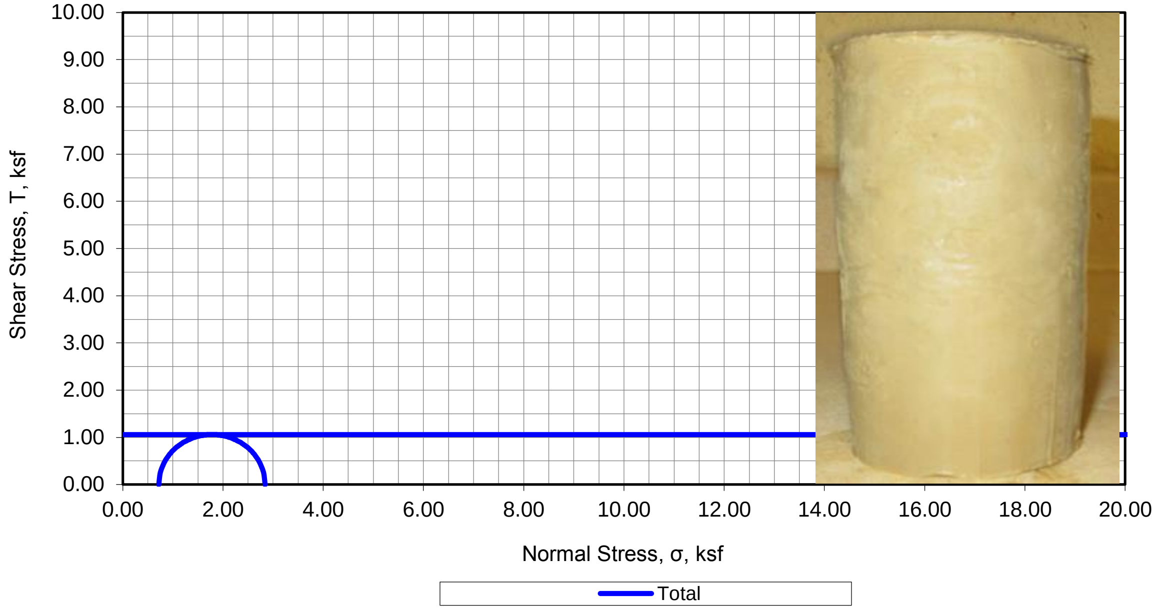
MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

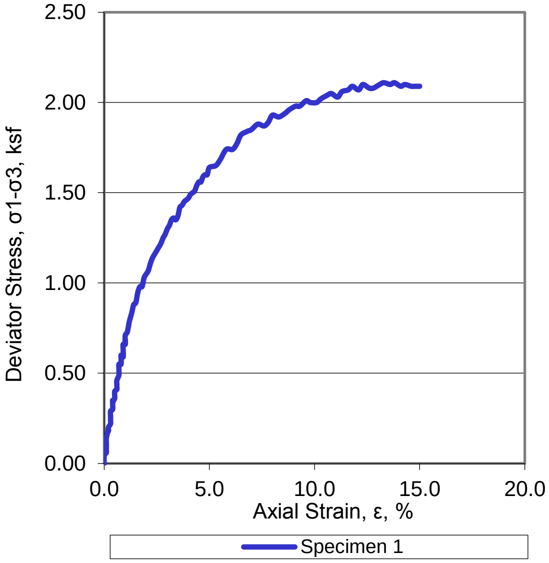
FIGURE

B-5

Total	
c = 1.06	ksf

Specimen Shear Picture





Specimen No.			1
Initial	Diameter, in	D_O	2.38
	Height, in	H_O	5.06
	Water Content, %	ω_O	28.1
	Dry Density, lbs/ft^3	$^{\gamma}d_o$	97.8
	Saturation, %	S_O	108
	Void Ratio	e_O	0.691
Minor Principal Stress, ksf		σ_3	0.72
Maximum Deviator Stress, ksf		$(\sigma1-\sigma3)_{max}$	2.11
Time to $(\sigma_1\text{-}\sigma_3)_{max}$, min		t_f	13.83
Deviator Stress @ 15% Axial Strain, ksf		$(\sigma_1-\sigma_3)_{15\%}$	2.09
Ultimate Deviator Stress, ksf		$(\sigma_1-\sigma_3)_{ult}$	na
Rate of strain, %/min		'ε	1.00
Axial Strain at Failure, %		ε_f	13.83

Description of Specimen: Fat Clay (CH)

Amount of Material Finer than the No. 200, %: nm

LL: nm | PL: nm | PI: nm | G_S: 2.65 Assumed | Specimen Type: Undisturbed | Test Method: ASTM D2850

Membrane correction applied

Boring:	B-3
Sample:	6B
Depth, ft:	20.5
Test Date:	10/14/16

Remarks: nm= not measured, na = not applicable

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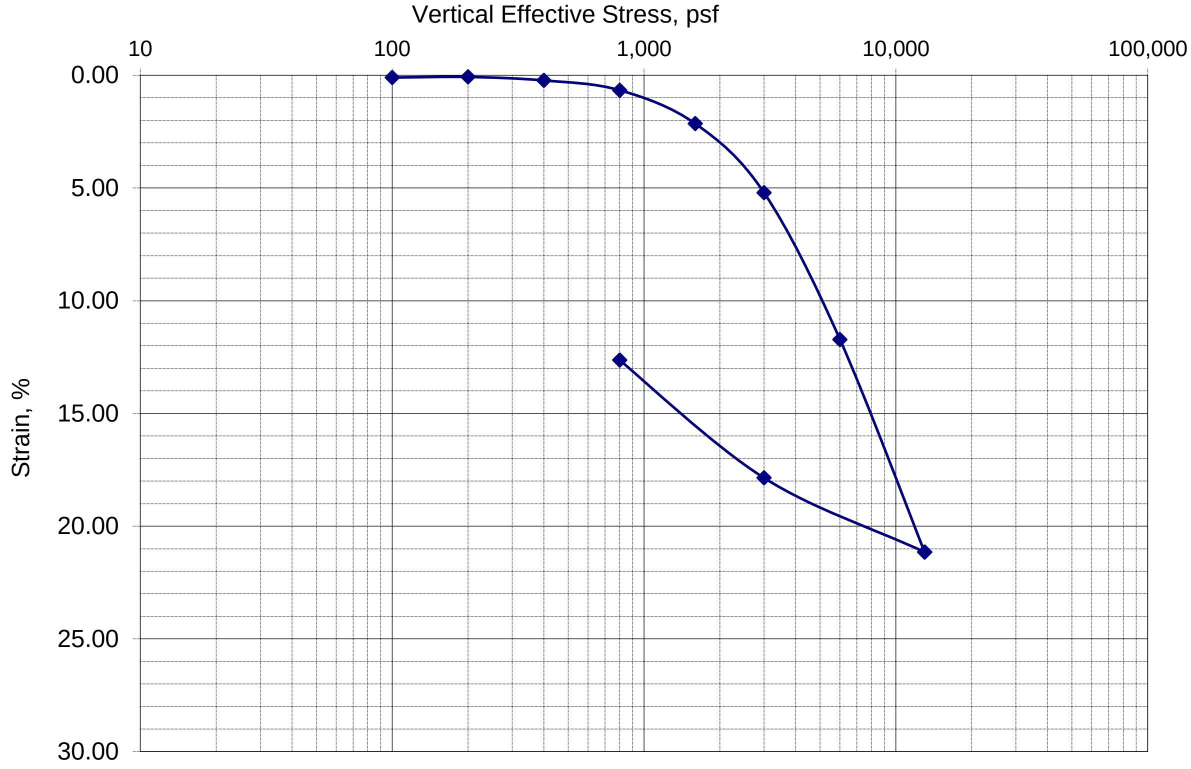
2601 Barrington Ct, Hayward, CA 94545

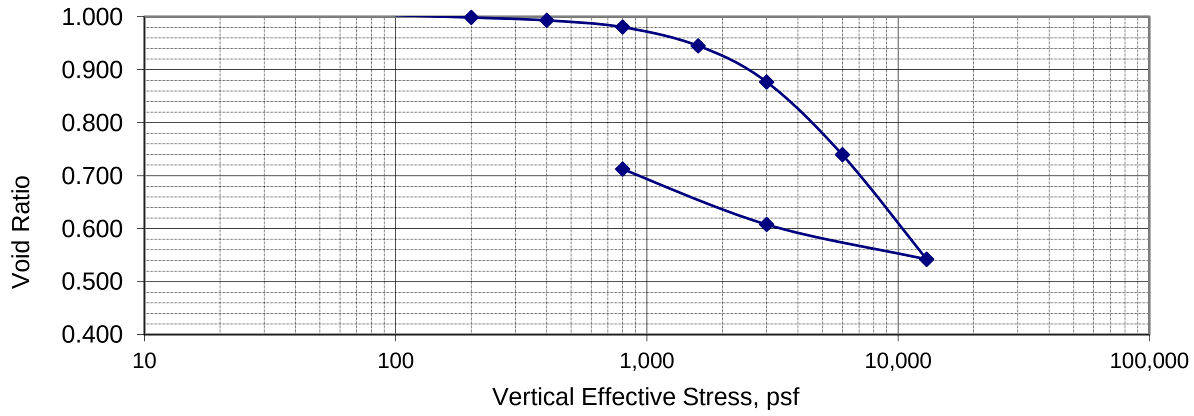
Project No.:	20172194
Date:	10/26/16
Entry By:	CP
Checked By:	CP
File Name:	HL9533

TRIAXIAL COMPRESSION TEST (UU)

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

FIGURE
B-6





Test Method: ASTM D2435, Method A	Sample Type: Intact	Sample Description: Fat Clay (CH)	
Gs: 2.70 Assumed	LL: 59	PI: 41	Amount of Material Finer than the No. 200, %: nm

	Height, in.	Diameter, in.	Water Content, %	Wet Density, lb/f^3	Dry Density, lb/f^3	Saturation, %	Void Ratio
Initial	0.786	2.504	41.9	119.4	84.2	113.0	1.003
Final	0.673	2.504	29.9	135.6	104.3	120.0	0.715

Boring:	B-2
Sample:	4
Depth, ft:	9.0
Test Date:	10/18/16

Remarks:

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2601 Barrington Ct, Hayward, CA, 94545

Project Number:	20172194
Date:	11/1/16
Entry By:	CP
Checked By:	CP
File Name:	HL9533

ONE DIMENSIONAL CONSOLIDATION TEST

MANDELA PARKWAY HOTEL
OAKLAND, CALIFORNIA

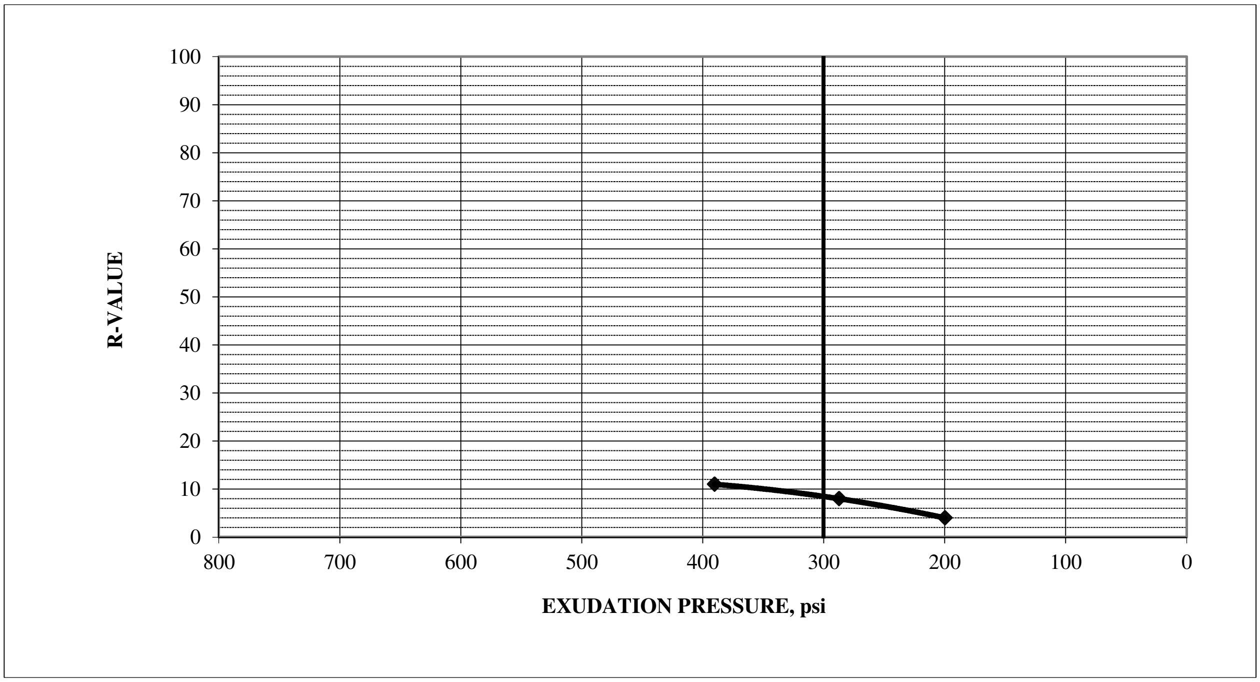
FIGURE

B-7

Laboratory Test Report

Project Name: Mandela Parkway Hotel
Project No.: 20172194
Lab No.: HL9533
Sample Date: October 10, 2016
Sample No.: Bulk #4
Sample Location: B-4 @ 0-5'
Material Description: Sandy Clay
Report Date: October 26, 2016

Resistance R-Value and Expansion Pressure of Compacted Soils (ASTM D2844, CTM 301)



Briquette No.	A	B	C
Moisture at Test, %	14.3	13.4	12.5
Dry Unit Weight at Test, pcf	122.2	120.8	119.8
Expansion Pressure, psf	0	35	82
Exudation Pressure, psi	200	287	390
Resistance Value	4	8	11
R - Value at 300 psi Exudation Pressure:			**8**

Reviewed By on 10/26/2016:

for **Aaron Kidd**
Laboratory Manager

Limitations: Pursuant to applicable building codes, the results presented in this report are for the exclusive use of the client and the registered design professional in responsible charge. The results apply only to the samples tested. If changes to the specifications were made and not communicated to Kleinfelder, Kleinfelder assumes no responsibility for pass/fail statements (meets/did not meet), if provided.

APPENDIX C

GBA Information Sheet

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL
BUSINESS
ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

APPENDIX D

Environmental Testing Results and Interpretation

ENVIRONMENTAL SITE INVESTIGATION REPORT
FUTURE HOTEL DEVELOPMENT
MANDELA PARKWAY
OAKLAND, CALIFORNIA
KLEINFELDER PROJECT # 20172194.001A

NOVEMBER 15, 2016

A Report Prepared for:

Mr. James Heilbronner
Architectural Dimensions
300 Frank Ogawa Plaza, Suite 375
Oakland, CA 94612

ENVIRONMENTAL SITE INVESTIGATION REPORT FUTURE HOTEL DEVELOPMENT ON MANDELA PARKWAY OAKLAND, CALIFORNIA

Kleinfelder Project No. 20172194.001A

Prepared by:

Michael van den Enden, PG 9286
Senior Geologist

Reviewed by:

Susan E. Gardner, PG 8183
Principal Geologist

KLEINFELDER INC.
2882 Prospect Park Dr., Ste. 200
Rancho Cordova, California 95670
(916) 366-1701

November 15, 2016

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1 INTRODUCTION

This Environmental Site Assessment describes activities performed on October 10th and 11th, 2016, at the proposed hotel development site on Mandela Parkway, located in Oakland, CA (Figure 1). The proposed project consists of constructing a 6-story T-shaped hotel on an approximate 1.2 acre triangular shaped site that fronts along Mandela Parkway situated immediately south of the Target retail shopping center. The site is currently undeveloped with low vegetation, and was formerly owned by Caltrans.

The purpose of the environmental assessment was to evaluate the area of the Site where the proposed hotel development would be for potential contaminants that may be present in near surface soil and groundwater, and to classify the material for handling, re-use and/or off-haul during construction. The scope of work was based on Kleinfelder's *Proposal for Geotechnical Investigation and Design Report, plus Environmental Sampling and Testing for the Proposed Hotel Development on Mandela Parkway*, dated August 29, 2016.

Investigation activities included collection of soil samples within four geotechnical borings (Figure 2) at the discrete depths of approximately 2, 5, 8, and 10-feet below ground surface (bgs). A groundwater water sample was collected from boring B-1. Samples were submitted to Curtis and Tompkins, a certified laboratory, for analytical testing. The following report details the pre-field and field activities, sampling, analytical results and conclusions/recommendations based the analytical results.

2 SITE INVESTIGATION

On October 10th and 11th, 2016, Kleinfelder implemented the environmental assessment scope of work.

Prior to field activities, Kleinfelder and a California C-57 licensed drilling subcontractor (Pitcher Drilling of East Palo Alto, California) submitted an application and fees to Alameda County Environmental Health for permits to perform subsurface exploration and collect samples (See Appendix A for a copy of the approved permit). To locate potential sub-surface utilities or other interferences, Kleinfelder and Pitcher Drilling contacted Underground Services Alert (USA). USA in turn notified local utility member companies of the proposed exploration. Prior to executing sub-surface work Kleinfelder also retained the services of a private underground utility locator, Geo Tech Utility Locating of Moraga, California, to clear for potential subsurface utilities and interferences.

2.1 FIELD ACTIVITIES

On October 10th and 11th, 2016 three boring locations were advanced using 8-inch hollow stem augers to a depth of 50 feet bgs each for the collection of soil and groundwater samples (Figure 2). Prior to initiating the field investigation, the proposed boring locations were checked for USA markings and a Health and Safety Meeting was conducted with the drilling subcontractor.

Surface conditions consisted of crushed rock with low vegetation. The borings were advanced to 5 feet bgs using a hand auger (for additional utility clearance), after which a dry punch core system was used to advance the boring to a depth of 10 feet bgs. Soil samples were collected at approximate 5 foot intervals in stainless steel sleeves inside a California Sampler. Following the collection of environmental soil samples, a mud rotary drilling system was used to complete the borings from 10 feet to total depth. Soils were logged by a Kleinfelder field geologist. A photoionization detector (PID) was used to provide a qualitative screening of each soil sample for aid in selecting samples for laboratory analysis and results noted on a field data sheet. Soil samples were labeled and placed in a cooler with ice pending transportation under chain-of-custody protocols to Curtis and Tompkins Ltd., of Berkeley, California.

Groundwater was encountered in boring B-1 at a depth of approximately 9 feet bgs. Groundwater was not encountered during drilling in any other boring location. A grab groundwater sample was collected at first encountered water in boring B-1 using a low-flow peristaltic pump with new, disposable tubing. The samples were placed directly into laboratory prepared bottles. The bottles were labeled and placed in a cooler with ice pending transportation under chain-of-custody protocols to Curtis and Tompkins.

To reduce the potential for cross-contamination between borings, the drill rods and sampling equipment were steam cleaned before advancing the boring at each location. After the collection of soil and groundwater samples, the borings were backfilled to the surface with neat cement grout under the supervision of an Alameda County Environmental Department inspector. Decontamination rinse water and soil cuttings were contained in 55-gallon steel drums and removed from the site by Pitcher Drilling for temporary storage in their yard. The soil and groundwater analytical results were provided to Pitcher Drilling for classification and transportation to an appropriate waste facility.

A copy of Kleinfelder's field data sheet and chain-of-custody is included in Appendix B.

2.2 LABORATORY ANALYSIS AND FINDINGS

A total of 10 soil samples were collected from borings B-1, B-2 and B-3. No samples for environmental analysis were collected from boring B-4. One groundwater sample was collected from first encountered water in boring B-1. The samples were selected for one or more of the following analyses by the noted methods:

- Total Petroleum Hydrocarbons (TPH) gasoline (purgeable), diesel (extractable with silica gel cleanup) and motor oil (Environmental Protection Agency [EPA] Method 8015M)
- Volatile Organic Compounds (VOCs) by EPA 8260B
- Semi-Volatile Organic Compounds (SVOCs) and Polyaromatic hydrocarbons (PAHs) by EPA Method 8270C
- Organochlorine pesticides (OCPs) and Polychlorinated biphenyls (PCBs) by EPA Method 8081A/8082

- California Administrative Manual (CAM) 17 Metals (Total [unfiltered] and Dissolved [filtered, in the field] in groundwater), by EPA Method 6000/7000 series

No sheen or odor was observed in the groundwater sample collected, though it was noted to have a high sediment content. The PID used to screen soil samples did not record any detectable levels of VOCs in any soil samples. No obvious staining, discoloration or odor was observed in any of the soil samples.

The soil and groundwater analytical results were summarized and tabulated in Tables 1, 2, and 3. Analytical results were compared to San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs), Tier 1 February 2016 Revision 3. The State Water Board ESLs are not regulatory thresholds but guidance levels for determining appropriate levels of risk to human health and the environment based on analytical data.

In addition, metals in soils were compared to California Title 22 hazardous waste characteristics for toxicity. Detection results were compared to Total Threshold Limit Concentration (TTLC) values and Soluble Threshold Limit Concentration (STLC) values.

The following summarizes the reported laboratory analytical results above ESL and or TTLC/STLC values as stated:

Soil

- TPH diesel was detected above the ESL (230 mg/kg) in sample B-1-4C at a concentration of 530 mg/kg, though the laboratory noted the chromatographic pattern did not resemble the standard.

- Arsenic was detected in each sample analyzed above the ESL of 0.067 mg/kg. The lowest detected value was 3.9 mg/kg in sample B-1-1 and the highest detection value was 14 mg/kg in sample B-2-2B.

- Cobalt was detected above the ESL (23 mg/kg) in sample B-1-4C at a concentration of 34 mg/kg.

- Lead was detected above the ESL (80 mg/kg) in samples B-2-2B (250 mg/kg) and B-3-1B (110 mg/kg). The samples B-2-2B, B-3-1B, and B-1-4C (56 mg/kg) exceeded STLC x 10 (STLC-5.0 x 10= 50).

- Mercury exceeded the STLC x 10 (STLC-0.2 x 10= 2.0) in sample B-3-1B (2.1 mg/kg).

- Benzo (a) pyrene, a PAH, was detected above the ESL (16 µg/kg) in samples B-1-1 (25 µg/kg) and B-2-2B (110 µg/kg).

- Dibenz (a,h) anthracene, a PAH, was detected above the ESL (16 µg/kg) in sample B-2-2B at a laboratory estimate value of 23 µg/kg.

Groundwater in boring B-1

- TPH diesel was detected above the ESL (100 µg/L) at a concentration of 800 µg/L, though the laboratory noted the chromatographic pattern did not resemble the standard.

- TPH motor oil was detected above the ESL (100 µg/L) at a concentration of 3,600 µg/L. Because motor oil is not soluble, it is likely that the detections are petroleum degradates. The ESL User's Guide recommends the detections of motor oil in water be added with any detections of diesel in water and be considered as one. The sum of the detections of TPH diesel and TPH motor oil is 4,400 µg/L.

- Metals in groundwater were analyzed in both unfiltered (total metals) samples and filtered (dissolved metals) samples. The detections that exceeded their respective ESLs in unfiltered (total metals) are: Cobalt (15 µg/L), Copper (120 µg/L), Lead (340 µg/L), Nickel (41 µg/L), Vanadium (52 µg/L), and Zinc (390 µg/L).

Copies of the complete laboratory analytical reports are included in Appendix C.

3 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the environmental assessment was to evaluate the Site for potential contaminants that may be present in near surface soil and groundwater, and to classify the material for potential handling, re-use and/or off-haul during construction.

Soil

Select soil samples were analyzed from borings B-1, B-2 and B-3 at depths ranging from 1 foot to 16 feet bgs. TPH diesel, arsenic, cobalt, lead, benzo (a) pyrene, and dibenz (a,h) anthracene were detected above their respective ESLs.

TPH gasoline, TPH motor oil, OCPs, VOCs, SVOCs, and PCBs were all either not detected above laboratory reporting limits or detected at concentrations below respective ESLs.

Metals concentrations did not exceed hazardous waste threshold concentrations. However, lead and mercury were detected above the STLC x 10 in some samples. The STLC is a numerical solubility value that is used by waste disposal facilities as an indicator for the potential for metals to leach from soils into groundwater. If any soil is to be removed from the site, solubility testing (using citrate buffer-Waste Extraction Test) should be performed prior to disposal.

Groundwater in boring B-1

A sample of first encountered groundwater was collected at boring B-1. TPH diesel (and other petroleum degradates) were detected above the ESL. Total metals in unfiltered groundwater that exceed their ESLs are as follows: cobalt, copper, lead, nickel, vanadium and zinc.

TPH gasoline, OCPs, VOCs, SVOCs, PCBs, PAHs, and dissolved metals in filtered groundwater were all either not detected above laboratory reporting limits or detected at concentrations below respective ESLs.

Recommendations

Soil and groundwater on the site, while not exceeding hazardous levels, have detectable concentrations of select contaminants of concern that may pose a risk to human health and the environment. Contractors performing work on the site should incorporate the constituents detected and their concentrations described herein into their site-specific health and safety protocols and potentially into a Soil and Groundwater Management Plan in order to take the appropriate cautions to protect their workers.

Soils on site may be re-used with discretion. Soils observed during construction with signs of obvious discoloration, sheen or odor should be segregated, protected by plastic sheeting and re-sampled. Soils designated for off-site disposal should receive analytical testing for solubility potential for landfill waste characterization acceptance criteria. Finished landscape areas should utilized imported topsoil.

If groundwater is pumped for de-watering purposes, it should be contained and analyzed for constituents of concern before off-site disposal.

The site should be secured from public access and measures taken to minimize the generation of dust during construction. Storm drains and off-site drainage pathways should be protected to prevent unauthorized discharge from the site.

4 LIMITATIONS

Kleinfelder has prepared this report in accordance with the generally accepted standards of care which exist in the area at the time of writing. It should be recognized that definition and evaluation of geologic and chemical subsurface conditions are difficult. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and/or historical conditions applicable to the site. The conclusions of this assessment are based on site conditions and design guidelines described by others. More extensive studies may further reduce the uncertainties associated with this assessment. Kleinfelder should be notified for additional consultation if the client wishes to reduce the uncertainties beyond the level associated with this report. No warranty, expressed or implied, is made.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service which provide adequate information for their purposes at acceptable levels of risk.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. Therefore, no warranty or guarantee, expressed or implied, will be included in Kleinfelder's scope of service.

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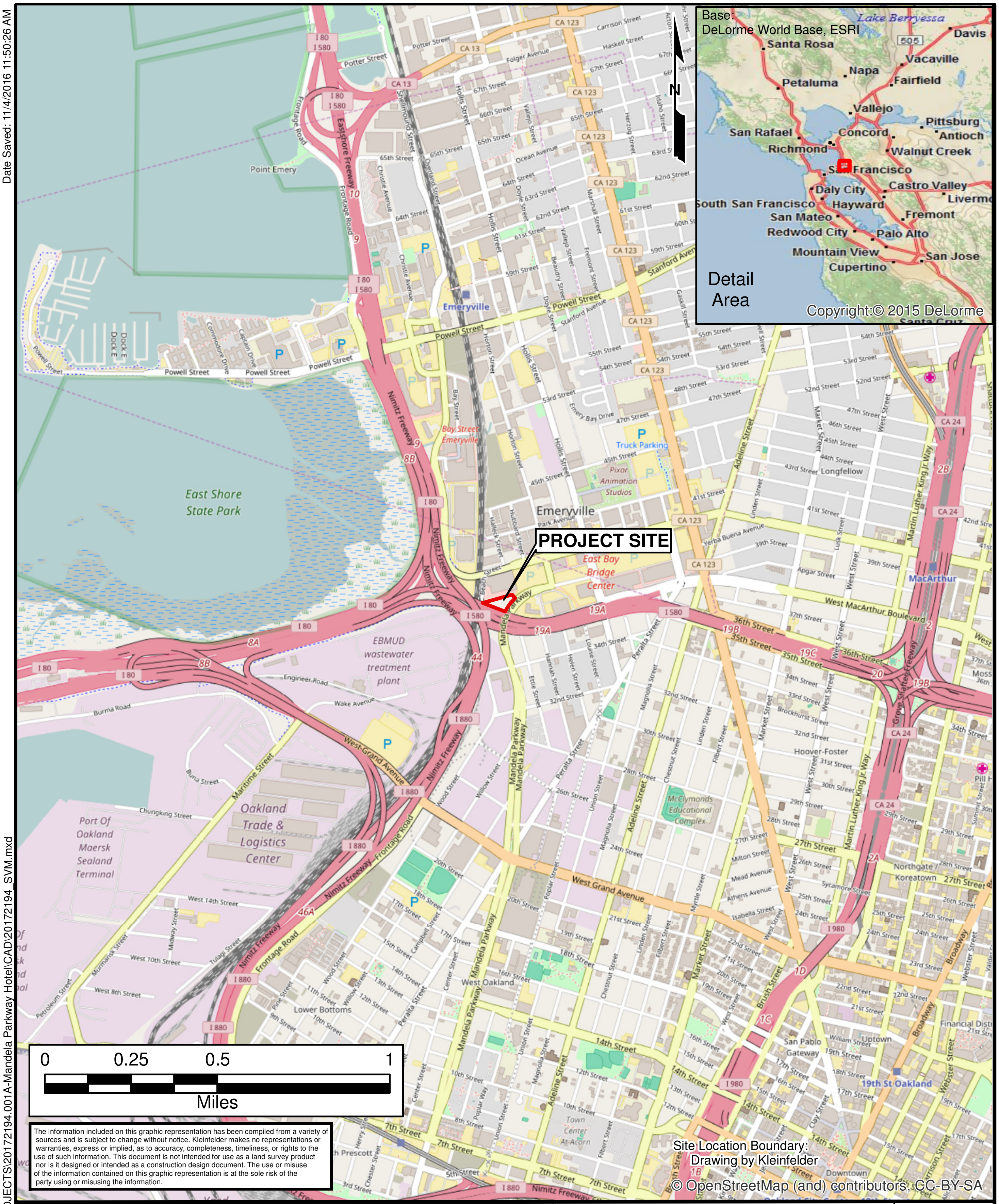
FIGURES

Date Saved: 11/4/2016 11:50:26 AM

Document Path: K:\2016_PROJECTS\20172194.001A-Mandela Parkway Hotel\CAD\20172194_SVM.mxd



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DRAWN BY: D. Ross
CHECKED BY: B. O'Neill
FILE NAME:
20172194_SVM.mxd

SITE VICINITY MAP

Mandela Parkway Hotel
Oakland, California

FIGURE
1

CAD FILE: K:\2016_PROJECTS\20172194.001A-Mandela Parkway Hotel\CAD\ LAYOUT: Layout1 PLOTTED: 04 Nov 2016, 12:23pm, dross

APPROXIMATE SCALE: 1 inch = 100 feet

Image courtesy of USGS © 2016 Microsoft Corporation © 2010 NAVTEQ © AND bing

LEGEND

⊕ Approximate Boring Location

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DRAWN BY: D. Ross
CHECKED BY: B. O'Neill
FILE NAME: 20172194_2.dwg

SITE PLAN

Mandela Parkway Hotel
Oakland, California

FIGURE
2

TABLES

Table 1
Summary of Analytical Results - TPHs, OCPs, VOCs, SVOCs and PCBs
Mandela Parkway Hotel
Oakland, California
Kleinfelder Project Number: 20172194

Sample I.D.	Sample Date	Sample Type	Sample Interval (feet)	Total Petroleum Hydrocarbons (mg/kg)			Organochlorine Pesticides *** (mg/kg)	Volatile Organic Compounds (VOCs)-limited *** (mg/kg)				Semi-Volatile Organic Compounds (SVOCs)-limited *** (mg/kg)				Polychlorinated biphenyls (PCBs)-limited *** (mg/kg)
				TPH-Gasoline	TPH-Diesel (with Silica Gel Clean-Up)	TPH-Motor Oil		Acetone	Carbon Disulfide	2-Butanone	Toluene	Benzo (b) fluoranthene	Fluoranthene	Fluorene	Pyrene	Aroclor-1260
San Francisco Bay RWQCB ESL (mg/kg)				**100**	**230**	**5100**	**Varies**	**0.5**	**---**	**---**	**2.9**	**0.16**	**60**	**8.9**	**85**	**0.25**
B-1-1	10/10/2016	Soil	2-2.5	0.17J	5.5Y	100	ND	0.0045J	ND (<0.005)	ND (<0.0099)	ND (<0.005)	ND <(0.33)	ND <(0.33)	ND <(0.33)	ND <(0.33)	0.0092
B-1-2B	10/10/2016	Soil	5.5-6	0.16J	89Y	3300		0.014J	ND (<0.005)	0.0034J	ND (<0.005)	ND <(130)	ND <(130)	ND <(130)	ND <(130)	ND <(0.066)
B-1-3B	10/10/2016	Soil	8.5-9	0.20J	22Y	1300		0.053	0.0005J	0.011	ND (<0.0048)	ND <(33)	ND <(33)	ND <(33)	ND <(33)	ND <(0.067)
B-1-4C	10/10/2016	Soil	10-10.5	0.19J	530Y	1500		0.051	0.0008J	0.011	ND (<0.0048)	ND <(6.7)	ND <(6.7)	ND <(0.067)	ND <(6.7)	ND <(0.067)
B-2-2B	10/11/2016	Soil	1.5-2	0.14J	6.5Y	75		ND (<0.0019)	ND (<0.0048)	ND (<0.0097)	ND (<0.0048)	ND <(3.3)	ND <(3.3)	ND <(3.3)	ND <(3.3)	0.025
B-2-5B	10/11/2016	Soil	12.5-13	0.17J	ND (<1.0)	ND (<5.0)		0.0094J	0.0008J	ND (<0.0094)	ND (<0.0047)	ND <(0.066)	ND <(0.066)	ND <(0.066)	ND <(0.066)	ND <(0.0048)
B-3-1B	10/10/2016	Soil	3-3.5	0.12J	19Y	130		ND (<0.0019)	ND (<0.0047)	ND (<0.0094)	ND (<0.0047)	ND <(2.2)	ND <(2.2)	ND <(2.2)	ND <(2.2)	ND <(0.0048)
B-3-2B	10/10/2016	Soil	5.5-6	0.13J	0.37J	ND (<5.0)		0.0096J	ND (<0.0049)	ND (<0.0097)	ND (<0.0049)	0.011J	0.016J	ND <(0.067)	0.016J	ND <(0.0048)
B-3-4B	10/10/2016	Soil	12.5-13	0.14J	0.50J	ND (<5.0)		0.0049J	ND (<0.0045)	ND (<0.0090)	ND (<0.0045)	ND <(0.066)	ND <(0.066)	ND <(0.066)	ND <(0.066)	ND <(0.0048)
B-3-5B	10/10/2016	Soil	15.5-16	0.16J	ND (<1.0)	ND (<5.0)		0.004J	ND (<0.0049)	ND (<0.0097)	ND (<0.0049)	ND <(0.067)	ND <(0.067)	ND <(0.067)	ND <(0.067)	ND <(0.0048)
San Francisco Bay RWQCB ESL (µg/L)				**100**	**100**	**100 ***	**Varies**	**1500**	**---**	**---**	**40**	**0.012**	**8**	**3.9**	**2.0**	**0.00017**
B-1-W	10/11/2016	Water	9	67J	**800Y**	**3600 mo + 800 d = 4400 ***	ND	40	0.5J	ND (<20)	0.4J	ND <(470)[1]	ND <(470)[1]	ND <(470)[1]	ND <(470)[1]	ND <(0.50)[1]

Explanations

mg/kg: Milligrams per kilogram (roughly parts per million)
µg/kg: Micrograms per kilogram (roughly parts per billion)
µg/L: Micrograms per Liter (roughly parts per billion)
ESL San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs), February 2016 Revision.
ND(RL): Not detected at or above laboratory reporting limit. Reporting Limit (RL) shown in parentheses.
RL: Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration).
******* See analytical report for full list of individual constituents and reporting limits
BOLD shaded: Indicates that concentration exceeded ESLs
J: Laboratory Estimated Value
Y: Sample exhibits chromatographic pattern which does not resemble standard
--- Not established
* TPH- motor oil is not soluble. Detections are most likely petroleum degradates. Per SFBRWQCB ESL Note 3 and User's Guide Chapter 9, TPH-mo and TPH-d results are summed and compared to TPH-d criterion.
[1] The reporting limit was unable to achieve the detection level of the ESL criteria

Table 2
Summary of Analytical Results - CAM-17 Metals
Mandela Parkway Hotel
Oakland, California
Kleinfelder Project Number: 20172194

Sample ID	Sample Date	Type of Sample	Sample Depth (ft)	CAM 17 Metals (mg/kg)																
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
B-1-1	10/10/2016	Soil	2-2.5	0.25J	**3.9**	76	0.15J	0.13J	21	4.3	13	28	0.083	0.29J	24	0.40J	0.066J	0.099J	17	67
B-1-2B	10/10/2016	Soil	5.5-6	0.23J	**4.6**	57	0.24J	0.21J	15	5.3	31	34	0.35	0.39J	31	0.39J	0.060J	0.059J	22	91
B-1-3B	10/10/2016	Soil	8.5-9	0.23J	**6.0**	58	0.34	0.18J	29	18	24	12	0.36	0.49	41	0.24J	0.061J	0.067J	32	76
B-1-4C	10/10/2016	Soil	10-10.5	0.36J	**7.2**	60	0.28	0.56	20	**34**	71	56	0.73	1.2	38	0.30J	0.22J	0.058J	22	230
B-2-2B	10/11/2016	Soil	1.5-2	1.9J	**14**	220	0.56	0.65	47	14	110	**250***	0.43	2.8	72	0.43J	0.20J	0.097J	34	270
B-2-5B	10/11/2016	Soil	12.5-13	0.13J	**4.8**	91	0.38	2.2	29	9.9	17	4.5	0.042	0.58	55	1.2J	0.34	0.16J	41	40
B-3-1B	10/10/2016	Soil	3-3.5	0.59J	**5.6**	130	0.49	0.23J	37	16	37	**110***	2.1	0.74	59	0.16J	0.11J	0.11J	30	61
B-3-2B	10/10/2016	Soil	5.5-6	0.20J	**8.4**	180	0.70	0.21J	39	12	24	7.8	0.045	0.67	48	0.85J	0.20J	0.13J	35	60
B-3-4B	10/10/2016	Soil	12.5-13	0.095J	**4.5**	61	0.43	ND (<0.25)	31	12	14	5.2	0.027	0.30J	47	0.074J	0.044J	0.079J	22	33
B-3-5B	10/10/2016	Soil	15.5-16	0.13J	**7.3**	110	0.49	0.31	32	4.3	15	4.0	0.065	0.57	40	0.25J	0.094J	0.073J	26	40
TTLC (mg/kg)				**500**	**500**	**10,000**	**75**	**100**	**2,500**	**8,000**	**2,500**	**1,000**	**20**	**3,500**	**2,000**	**100**	**500**	**700**	**2,400**	**5,000**
STLC (mg/L)				**15**	**5.0**	**100**	**0.75**	**1.0**	**5.0**	**80**	**25**	**5.0**	**0.2**	**350**	**20**	**1.0**	**5**	**7.0**	**24**	**250**
San Francisco Bay RWQCB ESLs (mg/kg)				**31**	**0.067**	**3,000**	**42**	**39**	**---**	**23**	**3,100**	**80**	**13**	**390**	**86**	**390**	**390**	**0.78**	**390**	**23,000**
B-1-W (unfiltered)	10/11/2016	Water (total)	9	4.5	7.1	390	0.53J	0.82J	49	**15**	**120**	**340**	ND (<0.20)	1.8	**41**	ND (<1.0)	0.18J	ND (<1.0)	**52**	**390**
B-1-W (filtered)	10/11/2016	Water (dissolved)	9	1.1	4.0	200	ND <(1.0)	ND <(1.0)	0.52J	1.2	ND <(2.5)	1.3	ND <(0.20)	2.4	4.3	ND <(1.0)	ND <(1.0)	ND <(1.0)	3.3J	12J
San Francisco Bay RWQCB ESLs (µg/L)				**6**	**10**	**1,000**	**2.7**	**0.25**	**50**	**3**	**3.1**	**2.5**	**0.051**	**100**	**8.2**	**5.0**	**0.19**	**2.0**	**19**	**81**

Explanations:

mg/kg: Milligrams per kilogram (roughly parts per million)
µg/kg: Micrograms per kilogram (roughly parts per billion)
µg/L: Micrograms per Liter (roughly parts per billion)
ESL San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs), February 2016 Revision.
ND(RL): Not detected at or above laboratory reporting limit. Reporting Limit (RL) shown in parentheses.
RL: Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration).
BOLD shaded: Indicates that concentration exceeded ESLs
shaded: Detected concentrations exceed the STLC x 10
***** Detected concentrations exceed both the ESL and STLC x 10
J: Laboratory Estimated Value
--- Not established
CAM: California Administrative Manual (California Title 22)
TTLC: Total Threshold Limit Concentration (California Title 22)
STLC: Soluble Threshold Limit Concentration (California Title 22)

Table 3
Summary of Analytical Results - Polycyclic Aromatic Hydrocarbons
Mandela Parkway Hotel
Oakland, California
Kleinfelder Project Number: 20172194

Sample ID	Sample Date	Type of Sample	Sample Depth (ft)	Polycyclic Aromatic Hydrocarbons (PAHs)-limited *** (µg/kg)													
				Acenaphthylene	Flourene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
San Francisco Bay RWQCB ESLs (µg/kg)				**13000**	**8900**	**11000**	**2800**	**60000**	**85000**	**160**	**3800**	**160**	**1600**	**16**	**160**	**16**	**2500**
B-1-1	10/10/2016	Soil	2-2.5	3.7J	ND (<5.0)	6.6	2.5J	18	33	13	18	26	7.7	**25**	15	4.7J	23
B-1-2B	10/10/2016	Soil	5.5-6	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)
B-1-3B	10/10/2016	Soil	8.5-9	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	270J	ND (<2500)	390J	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)	ND (<2500)
B-1-4C	10/10/2016	Soil	10-10.5	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	350J	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)	ND (<1000)
B-2-2B	10/11/2016	Soil	1.5-2	ND (<62)	ND (<62)	25J	ND (<62)	70	85	62J	86	120	31J	**110**	59J	**23J**	75
B-2-5B	10/11/2016	Soil	12.5-13	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
B-3-1B	10/10/2016	Soil	3-3.5	ND (<50)	ND (<50)	10J	ND (<50)	14J	14J	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
B-3-2B	10/10/2016	Soil	5.5-6	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)
B-3-4B	10/10/2016	Soil	12.5-13	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
B-3-5B	10/10/2016	Soil	15.5-16	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
San Francisco Bay RWQCB ESLs (µg/L)				**30**	**3.9**	**4.6**	**0.73**	**8**	**2**	**0.027**	**0.049**	**0.012**	**0.017**	**0.014**	**0.034**	**0.0034**	**0.1**
B-1-W	10/11/2016	Water	9	ND (<0.6)	0.2J	ND (<0.6)	ND (<0.6)	ND (<0.6)	0.1J	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]	ND (<0.6)[1]

Explanations

µg/kg: Micrograms per kilogram (roughly parts per billion)
µg/L: Micrograms per Liter (roughly parts per billion)
ESL San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (ESLs), February 2016 Revision.
ND(RL): Not detected at or above laboratory reporting limit. Reporting Limit (RL) shown in parentheses.
RL: Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration).
******* See analytical report for full list of individual constituents and reporting limits
BOLD shaded: Indicates that concentration exceeded ESLs
J: Laboratory Estimated Value

[1] The reporting limit was unable to achieve the detection level of the ESL criteria

APPENDIX A

APPROVED ALAMEDA COUNTY WATER RESOURCES PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 09/27/2016 By jamesy

Permit Numbers: W2016-0713
Permits Valid from 10/03/2016 to 11/04/2016

Application Id: 1474408247043 **City of Project Site:** Oakland
Site Location: Undeveloped 1.2-acre triangular site located near MacArthur Maze, south of Target and west of Extended Stay America. Approx. address for site access: 3484 Wood St, Oakland.
Project Start Date: 10/03/2016 **Completion Date:** 11/04/2016
Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Applicant: Kleinfelder - Renie Yuen **Phone:** 510-628-9000 x8129
1330 Broadway, Suite 1200, Oakland, CA 94612
Property Owner: Caltrans District 4 **Phone:** --
111 Grand Ave, Oakland, CA 94612
Client: RAHM Investments **Phone:** --
P.O. Box 52098, Amarillo, TX 79159

Total Due: $265.00
Receipt Number: WR2016-0481 **Total Amount Paid:** $265.00
Payer Name : OAKLAND KLEINFELDER Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 3 Boreholes
Driller: Pitcher Drilling Co - Lic #: 263085 - Method: mud **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0713	09/27/2016	01/01/2017	3	6.00 in.	70.00 ft

Specific Work Permit Conditions

1. Backfill borehole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with bentonite compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or

waterways or be allowed to move off the property where work is being completed.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX B

2016 FIELD DATA SHEET AND CHAIN OF CUSTODY

KLEINFELDER
Bright People. Right Solutions.

SAMPLE DATA SHEET

Page 1/1

Project Name Mandela Pkwy Hotel
Project No. 20172194
Sampler Name/No. CRAIG RIDDLE

	Sample ID #	Date	Time	Container(s)	Sample Interval (feet)	PID (ppm)	Receiving Lab	Analysis	Matrix
1	B-1-1	10-10-16	916	2" SS	2-2.5	0	C+T	see CoC	soil
2	B-1-2B	↓	932	2.5" SS	5.5-6	0	↓	↓	↓
3	B-1-3B		947	2.5" SS	8.5-9	0			
4	B-1-4C		1050	2.5" SS	10-10.5	0			
5	B-3-1B		1557	2.5" SS	3-3.5	0			
6	B-3-2B		1609	2.5" SS	5.5-6	0			
7	B-3-4B		1638	2.5" SS	12.5-13	0			
8	B-3-5B		1659	2.5" SS	15.5-16	0			
9	B-2-2B	10-11-16	940	2.5" SS	1.5-2	0			
10	B-2-5B		1027	2.5" SS	12.5-13	0			
11	B-1-W	10-11-16	1520	see CoC	@9 ft	NA	↓	↓	water

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO. 20172194

PROJECT NAME Mandela Pkwy. Hotel

L.P. NO. (P.O. NO.)

SAMPLERS: (Signature/Number) CRAIG RIDDLE

RECEIVING LAB: Curtis & Thompkins

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS TPH-g purgeable 8015M	TPH-d w/ extract 8015M	w/ silica gel cleanup	VOCs 8260B	SVOCs 8270C	PAHs 8270C SIM	OCPs-LL	PCBs-LL 8081A/8082	CAM17 6020			INSTRUCTIONS/REMARKS
1	10/10/16	916	B-1-1	soil	1	2"SS	X	X		X	X	X	X	X	X			
2	|	932	B-1-2B	|	|	2.5'SS	|	|		|	|	|	|	|	|			
3	|	947	B-1-3B	|	|	2.5'SS	|	|		|	|	|	|	|	|			
4	↓	1050	B-1-4C	|	|	2.5'SS	|	|		|	|	|	|	|	|			
5	10/11/16	940	B-2-2B	|	|	|	|	|		|	|	|	|	|	|			
6	10/11/16	1027	B-2-5B	|	|	|	|	|		|	|	|	|	|	|			
7	10/10/16	1557	B-3-1B	|	|	|	|	|		|	|	|	|	|	|			
8	|	1604	B-3-2B	|	|	|	|	|		|	|	|	|	|	|			
9	|	1638	B-3-4B	|	|	|	|	|		|	|	|	|	|	|			
10	↓	1659	B-3-5B	↓	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓			
11	10/11/16	1520	B-1-W	water	15	*	X	X		X	X	X	X	X	X			Total Metals (500mL)
12																		Total dissolved metals (1L Poly) LAB FILTER
13																* Water		3 VOA's
14																sample		10 - 1L Ambers
15																		
16																		* Please HOLD all remaining
17																	soil	sample for possible STLC &
18																		TCLP analysis
19																		
20																		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	10/11/16 1615	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:
Standard turn around time

Send Results To:
mvandenende@kleinfelder.com
criddle@kleinfelder.com

Attn:

ENV-02 REV 05/08)

White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

COC No. 32220

APPENDIX C

LABORATORY ANALYTICAL REPORT

Curtis & Tompkins, Ltd.

Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 282049
ANALYTICAL REPORT

Kleinfelder
9969 Horn Road
Sacramento, CA 95827

Project : 20172194
Location : Mandela Pkwy. Hotel
Level : II

Sample ID	Lab ID
B-1-1	282049-001
B-1-2B	282049-002
B-1-3B	282049-003
B-1-4C	282049-004
B-2-2B	282049-005
B-2-5B	282049-006
B-3-1B	282049-007
B-3-2B	282049-008
B-3-4B	282049-009
B-3-5B	282049-010
B-1-W	282049-011

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar

Date: 11/08/2016

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number:	**282049**
Client:	**Kleinfelder**
Project:	**20172194**
Location:	**Mandela Pkwy. Hotel**
Request Date:	**10/11/16**
Samples Received:	**10/11/16**

This data package contains sample and QC results for ten soil samples and one water sample, requested for the above referenced project on 10/11/16. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B) Water:
Gasoline C7-C12 was detected between the MDL and the RL in the method blank for batch 240077; this analyte was not detected in the sample at or above the RL. B-1-W (lab # 282049-011) was diluted due to foaming. No other analytical problems were encountered.

TPH-Purgeables and/or BTXE by GC (EPA 8015B) Soil:
Gasoline C7-C12 was detected between the MDL and the RL in the method blank for batch 240084; this analyte was not detected in samples at or above the RL. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Water:
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Soil:
High recoveries were observed for diesel C10-C24 in the MS/MSD for batch 240190; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. A number of samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B) Water:
B-1-W (lab # 282049-011) was diluted due to foaming. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B) Soil:
No analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C) Water:
B-1-W (lab # 282049-011) was diluted due to the dark and viscous nature of the sample extract. No other analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C) Soil:
Matrix spikes QC855599,QC855600 (batch 240134) were not reported because the parent sample required a dilution that would have diluted out the spikes. High surrogate recovery was observed for phenol-d5 in B-2-5B (lab # 282049-006); no target analytes were detected in the sample. High surrogate

CASE NARRATIVE

Laboratory number: **282049**
Client: **Kleinfelder**
Project: **20172194**
Location: **Mandela Pkwy. Hotel**
Request Date: **10/11/16**
Samples Received: **10/11/16**

Semivolatile Organics by GC/MS (EPA 8270C) Soil:
recoveries were observed for 2-fluorophenol in B-2-5B (lab # 282049-006), B-3-4B (lab # 282049-009), and the method blank for batch 240134; no target analytes were detected in these samples. Many samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM) Water:
Many analytes were detected between the MDL and the RL in the method blank for batch 240231; these analytes were not detected in the sample at or above the RL. B-1-W (lab # 282049-011) was diluted due to the dark and viscous nature of the sample extract. No other analytical problems were encountered.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM) Soil:
Matrix spikes QC855996,QC855997 (batch 240235) were not analyzed because the parent sample required a dilution that would have diluted out the spikes. High surrogate recoveries were observed for terphenyl-d14 in a number of samples; no target analytes were detected in these samples. Many analytes were detected between the MDL and the RL in the method blank for batch 240235; these analytes were either not detected in the sample at or above the RL, or detected at a level at least 10 times that of the blank. A number of samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

Pesticides (EPA 8081A) Water:
All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. High responses were observed for many analytes in the CCV analyzed 10/14/16 16:36; affected data was qualified with "b". High responses were observed for dieldrin and endrin in the CCV analyzed 10/14/16 10:17; affected data was qualified with "b". High response was observed for gamma-BHC in the CCV analyzed 10/14/16 10:17; affected data was qualified with "b". High response was observed for heptachlor in the CCV analyzed 10/14/16 10:17; affected data was qualified with "b". High response was observed for aldrin in the CCV analyzed 10/14/16 10:17; affected data was qualified with "b". High response was observed for 4,4'-DDT in the CCV analyzed 10/14/16 10:17; affected data was qualified with "b". B-1-W (lab # 282049-011) was diluted due to the color of the sample extract. No other analytical problems were encountered.

Pesticides (EPA 8081A) Soil:
All samples underwent sulfur cleanup using the copper option in EPA Method

CASE NARRATIVE

Laboratory number:	**282049**
Client:	**Kleinfelder**
Project:	**20172194**
Location:	**Mandela Pkwy. Hotel**
Request Date:	**10/11/16**
Samples Received:	**10/11/16**

Pesticides (EPA 8081A) Soil:
3660B. All samples underwent florisil cleanup using EPA Method 3620C. Matrix spikes QC855570,QC855571 (batch 240127) were not reported because the parent sample required a dilution that would have diluted out the spikes. Many samples were diluted due to the color of the sample extracts. No other analytical problems were encountered.

PCBs (EPA 8082) Water:
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. No analytical problems were encountered.

PCBs (EPA 8082) Soil:
All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. B-1-2B (lab # 282049-002), B-1-3B (lab # 282049-003), and B-1-4C (lab # 282049-004) were diluted due to foaming. No other analytical problems were encountered.

Metals (EPA 6020 and EPA 7470A) Water:
Copper was detected between the MDL and the RL in the method blank for batch 240082; this analyte was detected in the sample at a level at least 10 times that of the blank. No other analytical problems were encountered.

Metals (EPA 6020 and EPA 7471A) Soil:
Low recoveries were observed for barium and zinc in the MSD of B-1-1 (lab # 282049-001); the BS/BSD were within limits. High recovery was observed for barium in the MS of B-1-1 (lab # 282049-001); the BS/BSD were within limits. High RPD was also observed for barium in the MS/MSD of B-1-1 (lab # 282049-001); the RPD was acceptable in the BS/BSD. Zinc was detected between the MDL and the RL in the method blank for batch 240337; this analyte was detected in samples at a level at least 10 times that of the blank. No other analytical problems were encountered.

Metals (EPA 6010B, EPA 6020, and EPA 7470A) Filtrate:
Copper was detected at or above the RL in the CCB analyzed 11/07/16 15:47; this analyte was detected in samples at least 10 times the blank level, and affected data was qualified with "b". Zinc was detected between the MDL and the RL in the method blank for batch 241017; this analyte was not detected in the sample at or above the RL. No other analytical problems were encountered.

KLEINFELDER
Bright People. Right Solutions.

282049

PROJECT NO. 20172194	PROJECT NAME Mandela Pkwy. Hotel																RECEIVING LAB: Curtis & Thompkins
L.P. NO. (PO. NO.)	SAMPLERS: (Signature/Number) CRAIG RIDDLE																
	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS TPH-g purgeable 8015M	TPH-d,mo extract 8015M	w/ silica gel cleanup	VOC's 8260B	SVOC's 8270C	PAHs 8270C SIM	OCP's-LL	PCB's-LL → 8081A/8082	CAM 17 6020		INSTRUCTIONS/REMARKS
1	10/10/16	916	B-1-1	soil	1	2"SS	X	X		X	X	X	X	X	X		
2		932	B-1-2B			2.5"SS											
3		947	B-1-3B			2.5"SS											
4		1050	B-1-4C			2.5"SS											
5	10/11/16	940	B-2-2B														
6	10/11/16	1027	B-2-5B														
7	10/10/16	1557	B-3-1B														
8		1609	B-3-2B														
9		1638	B-3-4B														
10		1659	B-3-5B														
11	10/11/16	1520	B-1-W	water	15	*	X	X		X	X	X	X	X	X		Total Metals (500mL)
12																	Total dissolved metals (1L Poly) LAB FILTER
13																* water	3 VOA's
14																sample	10-1L Ambers
15																	
16																	* Please HOLD all remaining
17																soil	sample for possible STLC &
18																	TCLP analysis
19																	
20																	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Instructions/Remarks:	Send Results To:
	10/11/16 1615		Standard turn-around time	mvandenenden@kleinfelder.com criddle@kleinfelder.com
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		
	10/11 1750			
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		Attn:

ENV-02 REV 05/08)

White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

COC No. 32220

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 282049 Date Received 10/11/16 Number of coolers 2
Client Klein Project Mandela Pkwy. Hotel

Date Opened 10/11 By (print) CB (sign) Charles Barr
Date Logged in ↓ By (print) (sign)
Date Labeled ↓ By (print) CB (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO [✓ N/A]

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.4

☐ Temperature blank(s) included? ☐ Thermometer# ☒ IR Gun# A

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are there any missing / extra samples? YES [✓ NO]

11. Are samples in the appropriate containers for indicated tests? [✓ YES] NO

12. Are sample labels present, in good condition and complete? [✓ YES] NO

13. Do the sample labels agree with custody papers? [✓ YES] NO

14. Was sufficient amount of sample sent for tests requested? [✓ YES] NO

15. Are the samples appropriately preserved? YES [✓ NO] N/A

16. Did you check preservatives for all bottles for each sample? [✓ YES] NO N/A

17. Did you document your preservative check? (pH strip lot# 80BDH1461) [✓ YES] NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO [✓ N/A]

19. Did you change the hold time in LIMS for preserved terracores? YES NO [✓ N/A]

20. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A

21. Was the client contacted concerning this sample delivery? YES [✓ NO]
If YES, Who was called? By Date:

COMMENTS

15.) Added HNO_3 (140712) to pH < 2 for sample 11 on 10/11/16 @ 1730

Curtis & Tompkins Sample Preservation for 282049

Sample	pH: <2	>9	>12	Other
-011a	☐	☐	☐	
b	☐	☐	☐	
c	☐	☐	☐	
d	☑	☐	☐	
e	☐	☐	☐	
f	☐	☐	☐	
g	☐	☐	☐	
h	☐	☐	☐	
i	☐	☐	☐	
j	☐	☐	☐	
k	☐	☐	☐	
l	☐	☐	☐	
m	☐	☐	☐	
n	☐	☐	☐	
o	☐	☐	☐	

Analyst: CB
Date: 10/11/16

Detections Summary for 282049

Results for any subcontracted analyses are not included in this summary.

Client   : Kleinfelder
Project : 20172194
Location : Mandela Pkwy. Hotel

Client Sample ID : B-1-1 Laboratory Sample ID : 282049-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.17	J	1.0	0.049	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	5.5	Y	2.0	0.62	mg/Kg	As Recd	2.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	100		10	3.1	mg/Kg	As Recd	2.000	EPA 8015B	EPA 3550B
Acetone	4.5	J	20	3.8	ug/Kg	As Recd	0.9901	EPA 8260B	EPA 5030B
Acenaphthylene	3.7	J	5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Phenanthrene	6.6		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Anthracene	2.5	J	5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Fluoranthene	18		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Pyrene	33		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Benzo(a)anthracene	13		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Chrysene	18		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Benzo(b)fluoranthene	26		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Benzo(k)fluoranthene	7.7		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Benzo(a)pyrene	25		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Indeno(1,2,3-cd)pyrene	15		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Dibenz(a,h)anthracene	4.7	J	5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Benzo(g,h,i)perylene	23		5.0	0.99	ug/Kg	As Recd	1.000	EPA 8270C-SIM	EPA 3550B
Aroclor-1260	9.2		4.7	0.76	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	0.25	J	1.9	0.047	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	3.9		0.24	0.066	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	76		0.24	0.064	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.15	J	0.24	0.034	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.13	J	0.24	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	21		0.24	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	4.3		0.24	0.057	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	13		0.60	0.096	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	28		0.24	0.035	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.083		0.017	0.0031	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.29	J	0.39	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	24		0.37	0.12	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.40	J	1.9	0.067	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.066	J	0.24	0.024	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.099	J	0.24	0.032	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	17		0.42	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	67		0.96	0.23	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-1-2B Laboratory Sample ID : 282049-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.16	J	0.98	0.048	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	89	Y	20	6.2	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	3,300		100	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Acetone	14	J	20	3.8	ug/Kg	As Recd	0.9921	EPA 8260B	EPA 5030B
2-Butanone	3.4	J	9.9	1.0	ug/Kg	As Recd	0.9921	EPA 8260B	EPA 5030B
Antimony	0.23	J	2.0	0.077	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	4.6		0.25	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	57		0.25	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.24	J	0.25	0.036	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.21	J	0.25	0.056	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	15		0.25	0.076	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	5.3		0.25	0.061	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	31		0.64	0.10	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	34		0.25	0.069	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.35		0.016	0.0029	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.39	J	0.42	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	31		0.40	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.39	J	2.0	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.060	J	0.25	0.026	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.059	J	0.25	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	22		0.64	0.15	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	91		1.0	0.25	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-1-3B Laboratory Sample ID : 282049-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.20	J	1.0	0.051	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	22	Y	20	6.1	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	1,300		99	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Acetone	53		19	3.7	ug/Kg	As Recd	0.9653	EPA 8260B	EPA 5030B
Carbon Disulfide	0.5	J	4.8	0.4	ug/Kg	As Recd	0.9653	EPA 8260B	EPA 5030B
2-Butanone	11		9.7	1.0	ug/Kg	As Recd	0.9653	EPA 8260B	EPA 5030B
Pyrene	270	J	1,000	200	ug/Kg	As Recd	100.0	EPA 8270C-SIM	EPA 3550B
Chrysene	390	J	1,000	200	ug/Kg	As Recd	100.0	EPA 8270C-SIM	EPA 3550B
Antimony	0.23	J	2.0	0.050	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	6.0		0.25	0.070	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	58		0.25	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.34		0.25	0.036	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.18	J	0.25	0.056	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	29		0.25	0.075	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	18		0.25	0.060	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	24		0.64	0.10	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	12		0.25	0.068	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.36		0.017	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.49		0.41	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	41		0.40	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.24	J	2.0	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.061	J	0.25	0.026	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.067	J	0.25	0.051	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	32		0.45	0.15	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	76		1.0	0.25	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-1-4C Laboratory Sample ID : 282049-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.19	J	1.0	0.051	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	530	Y	20	6.1	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	1,500		100	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Acetone	51		19	3.7	ug/Kg	As Recd	0.9671	EPA 8260B	EPA 5030B
Carbon Disulfide	0.8	J	4.8	0.4	ug/Kg	As Recd	0.9671	EPA 8260B	EPA 5030B
2-Butanone	11		9.7	1.0	ug/Kg	As Recd	0.9671	EPA 8260B	EPA 5030B
Pyrene	350	J	1,000	200	ug/Kg	As Recd	100.0	EPA 8270C-SIM	EPA 3550B
Antimony	0.36	J	1.9	0.070	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	7.2		0.23	0.064	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	60		0.23	0.048	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.28		0.23	0.033	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.56		0.23	0.051	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	20		0.23	0.069	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	34		0.23	0.055	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	71		0.58	0.093	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	56		0.23	0.062	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.73		0.018	0.0032	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	1.2		0.38	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	38		0.36	0.12	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.30	J	1.9	0.065	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.22	J	0.23	0.024	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.058	J	0.23	0.047	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	22		0.41	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	230		7.5	1.8	mg/Kg	As Recd	200.0	EPA 6020	EPA 3050B

Client Sample ID : B-2-2B Laboratory Sample ID : 282049-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.14	J	1.0	0.050	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	6.5	Y	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	75		5.0	1.5	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Phenanthrene	25	J	62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Fluoranthene	70		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Pyrene	85		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Benzo(a)anthracene	62	J	62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Chrysene	86		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Benzo(b)fluoranthene	120		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Benzo(k)fluoranthene	31	J	62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Benzo(a)pyrene	110		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Indeno(1,2,3-cd)pyrene	59	J	62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Dibenz(a,h)anthracene	23	J	62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Benzo(g,h,i)perylene	75		62	12	ug/Kg	As Recd	12.50	EPA 8270C-SIM	EPA 3550B
Aroclor-1260	25		4.8	0.77	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	1.9	J	2.0	0.078	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	14		0.25	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	220		0.25	0.054	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.56		0.25	0.037	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.65		0.25	0.057	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	47		0.25	0.077	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	14		0.25	0.062	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	110		0.66	0.11	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	250		1.7	0.56	mg/Kg	As Recd	200.0	EPA 6020	EPA 3050B
Mercury	0.43		0.017	0.0031	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	2.8		0.25	0.079	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	72		0.41	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.43	J	2.0	0.074	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.20	J	0.25	0.027	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.097	J	0.25	0.053	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	34		0.46	0.15	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	270		8.4	2.1	mg/Kg	As Recd	200.0	EPA 6020	EPA 3050B

Client Sample ID : B-2-5B Laboratory Sample ID : 282049-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.17	J	1.0	0.049	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Acetone	9.4	J	19	3.6	ug/Kg	As Recd	0.9363	EPA 8260B	EPA 5030B
Carbon Disulfide	0.8	J	4.7	0.4	ug/Kg	As Recd	0.9363	EPA 8260B	EPA 5030B
Antimony	0.13	J	2.0	0.078	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	4.8		0.66	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	91		0.25	0.054	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.38		0.25	0.037	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	2.2		0.25	0.057	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	29		0.25	0.077	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	9.9		0.25	0.062	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	17		0.66	0.11	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	4.5		0.25	0.070	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.042		0.016	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.58		0.25	0.079	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	55		0.41	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	1.2	J	2.0	0.074	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.34		0.25	0.029	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.16	J	0.25	0.053	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	41		0.46	0.15	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	40		1.1	0.26	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-3-1B Laboratory Sample ID : 282049-007

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.12	J	0.93	0.045	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	19	Y	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	130		5.0	1.5	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Phenanthrene	10	J	50	10	ug/Kg	As Recd	10.00	EPA 8270C-SIM	EPA 3550B
Fluoranthene	14	J	50	10	ug/Kg	As Recd	10.00	EPA 8270C-SIM	EPA 3550B
Pyrene	14	J	50	10	ug/Kg	As Recd	10.00	EPA 8270C-SIM	EPA 3550B
Antimony	0.59	J	2.0	0.073	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	5.6		0.61	0.067	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	130		0.25	0.050	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.49		0.25	0.035	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.23	J	0.25	0.053	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	37		0.25	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	16		0.25	0.058	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	37		0.61	0.098	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	110		0.25	0.065	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	2.1		0.083	0.015	mg/Kg	As Recd	5.000	EPA 7471A	METHOD
Molybdenum	0.74		0.25	0.074	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	59		0.38	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.16	J	2.0	0.069	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.11	J	0.25	0.025	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.11	J	0.25	0.049	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	30		0.43	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	61		0.98	0.24	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-3-2B Laboratory Sample ID : 282049-008

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.13	J	0.94	0.046	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	0.37	J	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	9.6	J	19	3.7	ug/Kg	As Recd	0.9747	EPA 8260B	EPA 5030B
Fluoranthene	16	J	67	10	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
Pyrene	16	J	67	11	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
Benzo(b)fluoranthene	11	J	67	9.1	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
Antimony	0.20	J	2.0	0.050	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	8.4		0.64	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	180		0.25	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.70		0.25	0.036	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.21	J	0.25	0.029	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	39		0.25	0.076	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	12		0.25	0.061	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	24		0.64	0.10	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	7.8		0.25	0.069	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.045		0.015	0.0028	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.67		0.25	0.077	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	48		0.40	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.85	J	2.0	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.20	J	0.25	0.026	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.13	J	0.25	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	35		0.45	0.15	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	60		1.0	0.25	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-3-4B Laboratory Sample ID : 282049-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.14	J	0.95	0.046	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	0.50	J	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	4.9	J	18	3.4	ug/Kg	As Recd	0.8961	EPA 8260B	EPA 5030B
Antimony	0.095	J	2.0	0.073	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	4.5		0.61	0.067	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	61		0.25	0.050	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.43		0.25	0.035	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	31		0.25	0.072	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	12		0.25	0.058	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	14		0.61	0.098	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	5.2		0.25	0.065	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.027		0.016	0.0029	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.30	J	0.40	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	47		0.38	0.13	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.074	J	2.0	0.069	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.044	J	0.25	0.025	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.079	J	0.25	0.049	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	22		0.43	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	33		0.98	0.24	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-3-5B Laboratory Sample ID : 282049-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.16	J	0.96	0.047	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Acetone	4.0	J	19	3.7	ug/Kg	As Recd	0.9709	EPA 8260B	EPA 5030B
Antimony	0.13	J	1.9	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Arsenic	7.3		0.60	0.066	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Barium	110		0.24	0.048	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Beryllium	0.49		0.24	0.034	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cadmium	0.31		0.24	0.052	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Chromium	32		0.24	0.070	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Cobalt	4.3		0.24	0.056	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Copper	15		0.60	0.095	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Lead	4.0		0.24	0.064	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Mercury	0.065		0.016	0.0029	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.57		0.24	0.071	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Nickel	40		0.37	0.12	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Selenium	0.25	J	1.9	0.067	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Silver	0.094	J	0.24	0.024	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Thallium	0.073	J	0.24	0.048	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Vanadium	26		0.60	0.14	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B
Zinc	40		0.95	0.23	mg/Kg	As Recd	25.00	EPA 6020	EPA 3050B

Client Sample ID : B-1-W Laboratory Sample ID : 282049-011

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	67	J	250	64	ug/L	As Recd	5.000	EPA 8015B	EPA 5030B
Diesel C10-C24	800	Y	47	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	3,600		280	90	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Acetone	40		20	6.6	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Carbon Disulfide	0.5	J	1.0	0.2	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Toluene	0.4	J	1.0	0.2	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Fluorene	0.2	J	0.6	0.1	ug/L	As Recd	6.250	EPA 8270C-SIM	EPA 3520C
Pyrene	0.1	J	0.6	0.1	ug/L	As Recd	6.250	EPA 8270C-SIM	EPA 3520C
Antimony	4.5		1.0	0.13	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Arsenic	7.1		1.0	0.25	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Barium	390		1.0	0.30	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Beryllium	0.53	J	1.0	0.13	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Cadmium	0.82	J	1.0	0.12	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Chromium	49		1.0	0.11	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Cobalt	15		1.0	0.16	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Copper	120		1.5	0.50	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Lead	340		1.0	0.094	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Molybdenum	1.8		1.0	0.25	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Nickel	41		1.5	0.50	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Silver	0.18	J	1.0	0.097	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Vanadium	52		1.0	0.24	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Zinc	390		10	2.5	ug/L	TOTAL	5.000	EPA 6020	EPA 200.8
Antimony	1.1		1.0	0.13	ug/L	DISS.	5.000	EPA 6020	METHOD
Arsenic	4.0		1.0	0.25	ug/L	DISS.	5.000	EPA 6020	METHOD
Barium	200		1.0	0.30	ug/L	DISS.	5.000	EPA 6020	METHOD
Chromium	0.52	J	1.0	0.11	ug/L	DISS.	5.000	EPA 6020	METHOD
Cobalt	1.2		1.0	0.16	ug/L	DISS.	5.000	EPA 6020	METHOD
Lead	1.3		1.0	0.094	ug/L	DISS.	5.000	EPA 6020	METHOD
Molybdenum	2.4		1.0	0.32	ug/L	DISS.	5.000	EPA 6020	METHOD
Nickel	4.3		1.5	0.50	ug/L	DISS.	5.000	EPA 6020	METHOD
Vanadium	3.3	J	5.0	0.57	ug/L	DISS.	1.000	EPA 6010B	METHOD
Zinc	12	J	23	7.6	ug/L	DISS.	5.000	EPA 6020	METHOD

J = Estimated value

Y = Sample exhibits chromatographic pattern which does not resemble standard

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Field ID:	B-1-W	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Analyzed:	10/12/16
Batch#:	240077		

Type: SAMPLE		Diln Fac: 5.000
Lab ID: 282049-011

Analyte	Result	RL	MDL
Gasoline C7-C12	67 J	250	64

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Type: BLANK		Diln Fac: 1.000
Lab ID: QC855373

Analyte	Result	RL	MDL
Gasoline C7-C12	15 J	50	13

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	80-132

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855370	Batch#:	240077
Matrix:	Water	Analyzed:	10/12/16
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,119	112	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	80-132

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	240077
MSS Lab ID:	281887-002	Sampled:	10/06/16
Matrix:	Water	Received:	10/06/16
Units:	ug/L	Analyzed:	10/12/16
Diln Fac:	1.000		

Type: MS Lab ID: QC855371

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<12.82	2,000	2,120	106	76-120

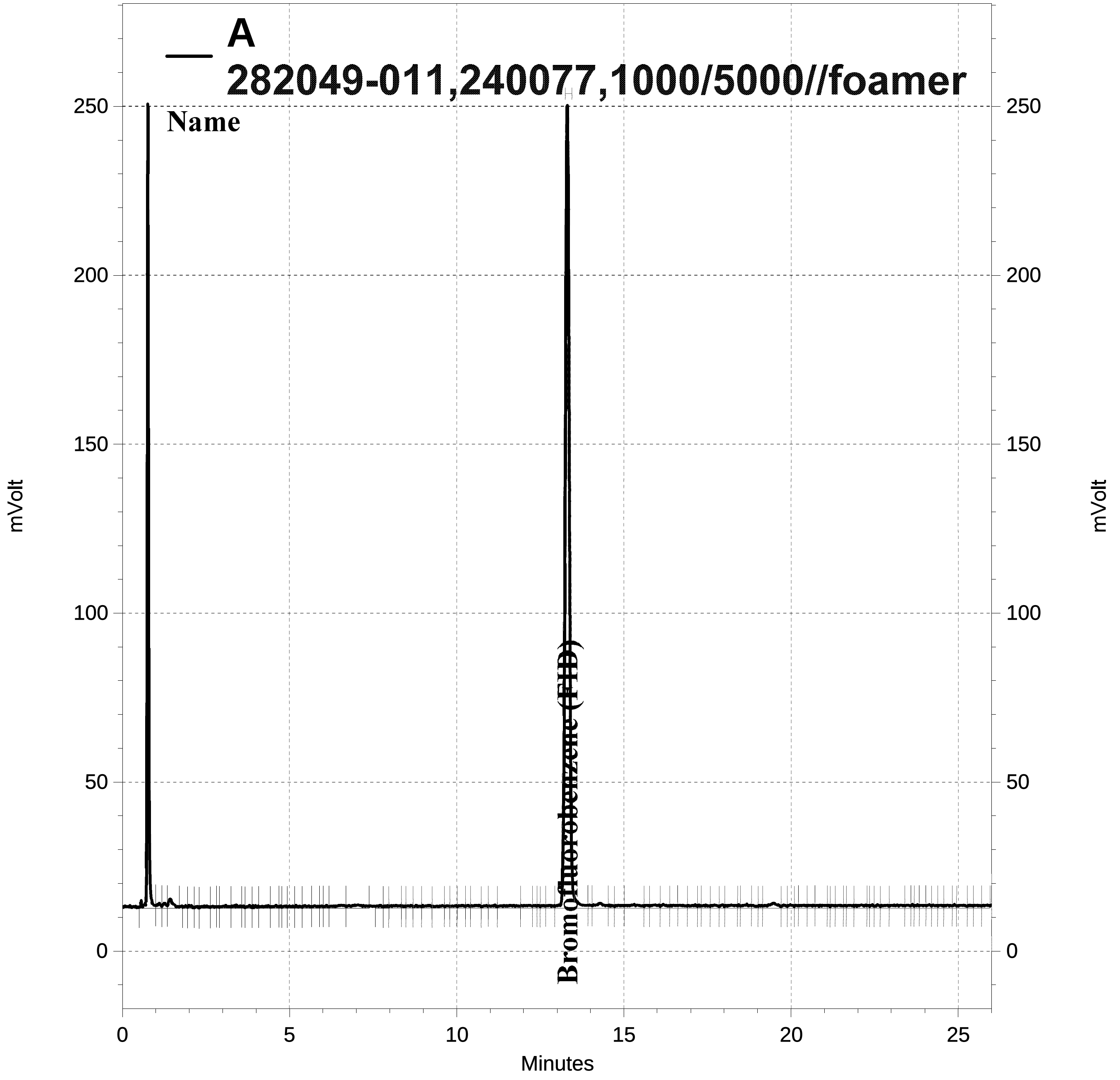
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	80-132

Type: MSD Lab ID: QC855372

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,049	102	76-120	3	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	80-132

RPD= Relative Percent Difference



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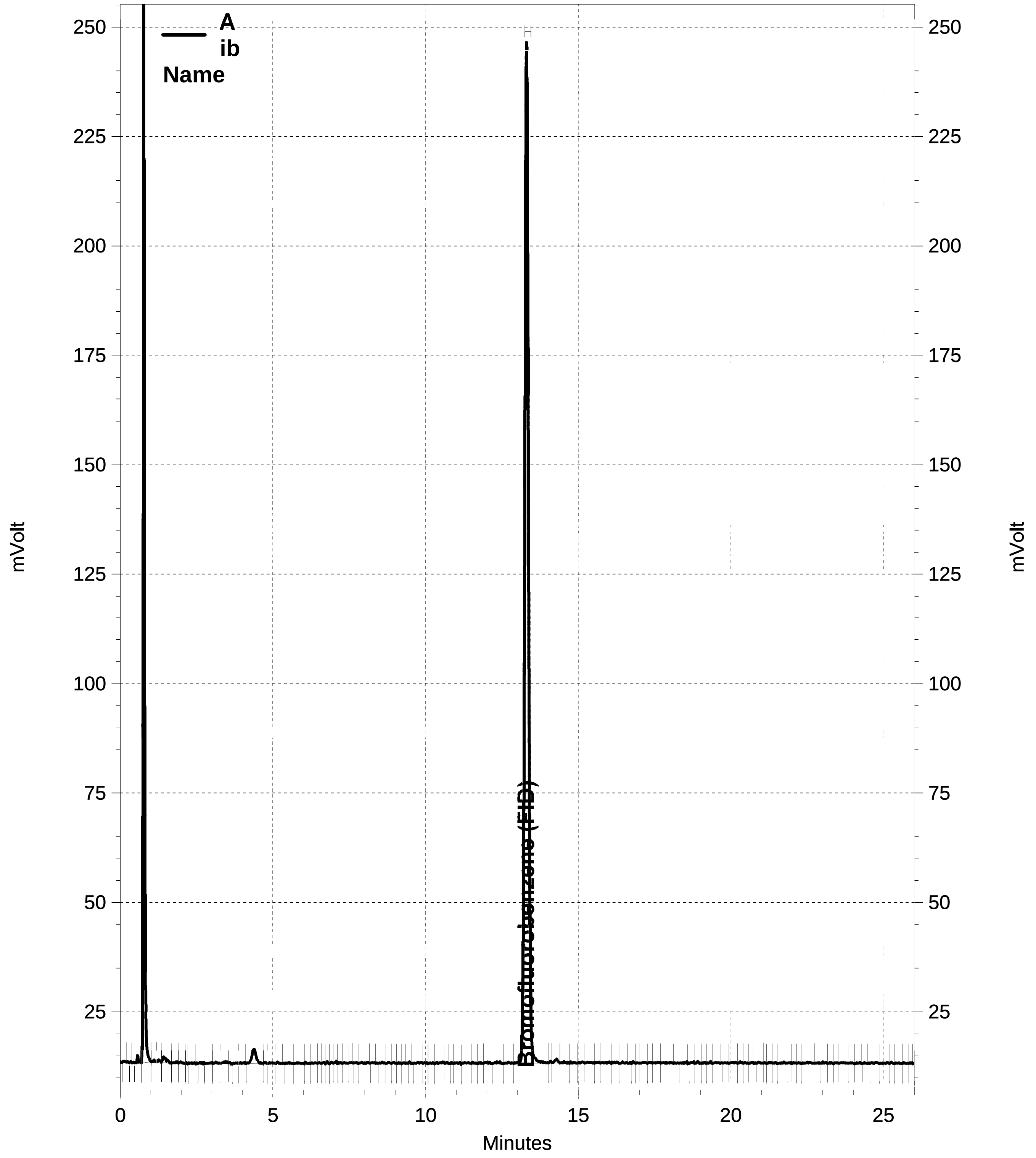

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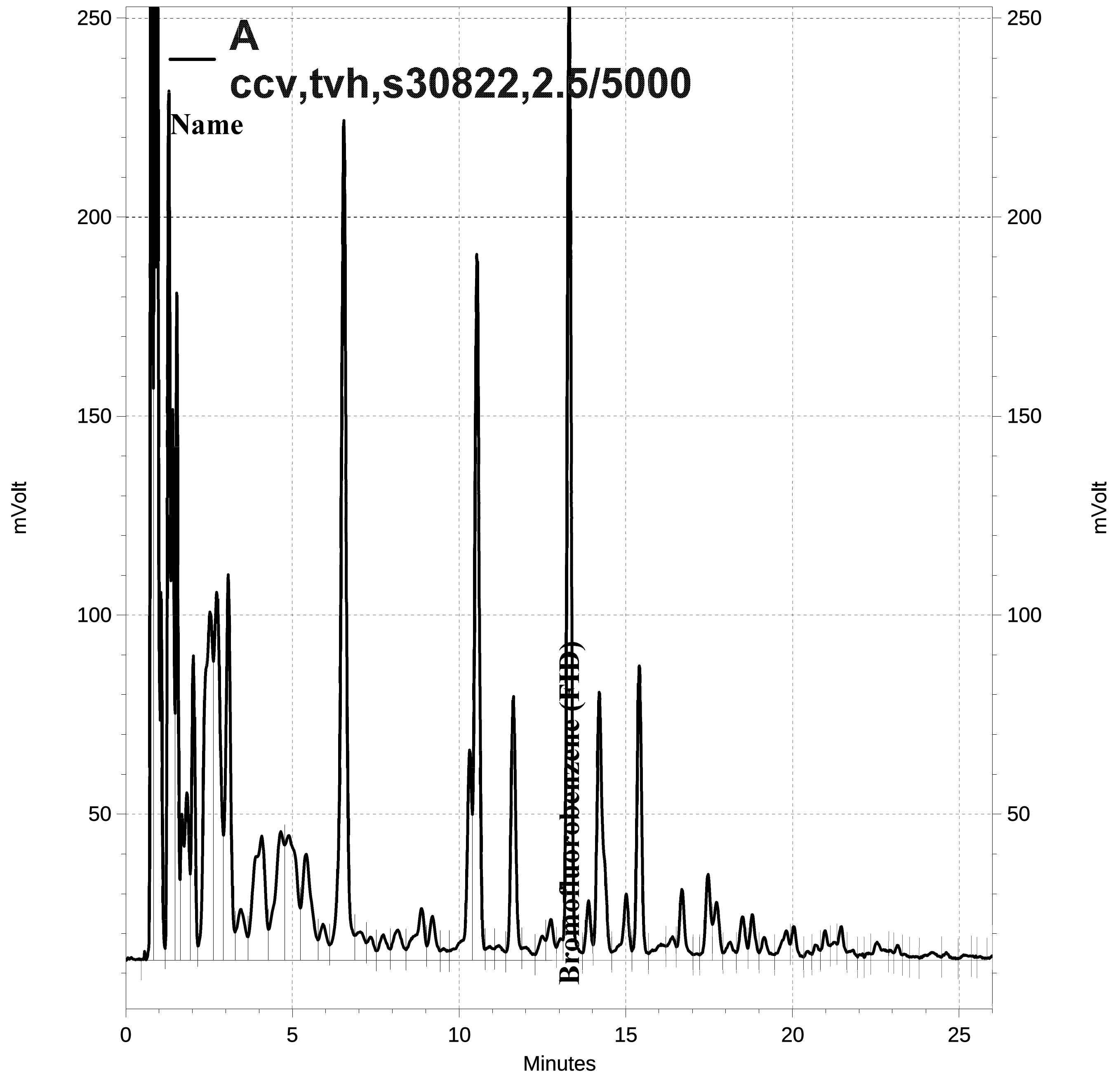

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Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240084
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	1.000		

Field ID: B-1-1   Lab ID: 282049-001
Type: SAMPLE   Sampled: 10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.17 J	1.0	0.049

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	78-138

Field ID: B-1-2B   Lab ID: 282049-002
Type: SAMPLE   Sampled: 10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.16 J	0.98	0.048

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

Field ID: B-1-3B   Lab ID: 282049-003
Type: SAMPLE   Sampled: 10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.20 J	1.0	0.051

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	78-138

Field ID: B-1-4C   Lab ID: 282049-004
Type: SAMPLE   Sampled: 10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.19 J	1.0	0.051

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	111	78-138

Field ID: B-2-2B   Lab ID: 282049-005
Type: SAMPLE   Sampled: 10/11/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.14 J	1.0	0.050

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	78-138

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240084
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	1.000		

Field ID:	B-2-5B	Lab ID:	282049-006
Type:	SAMPLE	Sampled:	10/11/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.17 J	1.0	0.049

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Field ID:	B-3-1B	Lab ID:	282049-007
Type:	SAMPLE	Sampled:	10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.12 J	0.93	0.045

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	78-138

Field ID:	B-3-2B	Lab ID:	282049-008
Type:	SAMPLE	Sampled:	10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.13 J	0.94	0.046

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Field ID:	B-3-4B	Lab ID:	282049-009
Type:	SAMPLE	Sampled:	10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.14 J	0.95	0.046

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	78-138

Field ID:	B-3-5B	Lab ID:	282049-010
Type:	SAMPLE	Sampled:	10/10/16

Analyte	Result	RL	MDL
Gasoline C7-C12	0.16 J	0.96	0.047

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	78-138

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240084
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	1.000		

Type: BLANK   Lab ID: QC855407

Analyte	Result	RL	MDL
Gasoline C7-C12	0.17 J	1.0	0.049

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-138

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855404	Batch#:	240084
Matrix:	Soil	Analyzed:	10/12/16
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.130	113	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	118	78-138

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8015B
Field ID:	B-1-1	Diln Fac:	1.000
MSS Lab ID:	282049-001	Batch#:	240084
Matrix:	Soil	Sampled:	10/10/16
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Type: MS Lab ID: QC855405

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1677	10.10	9.321	91	50-120

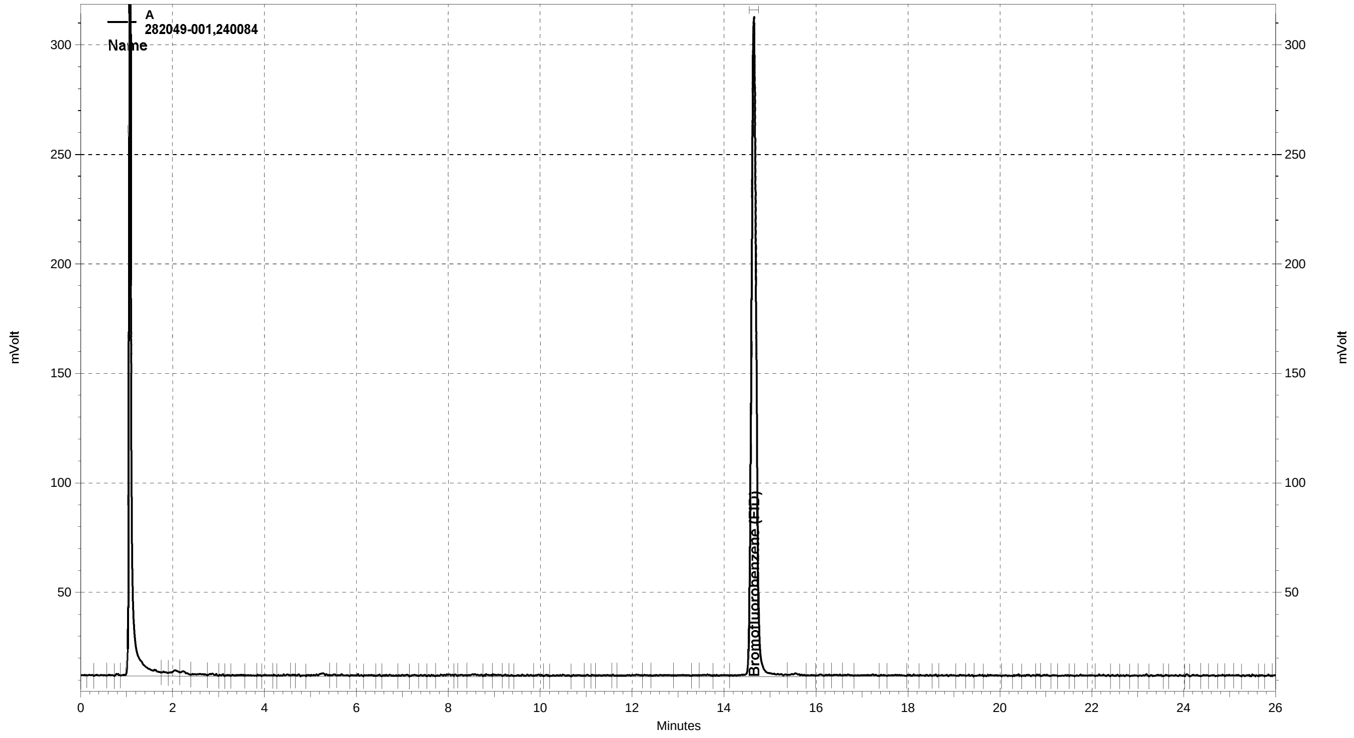
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	125	78-138

Type: MSD Lab ID: QC855406

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.524	8.698	90	50-120	1	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	126	78-138

RPD= Relative Percent Difference



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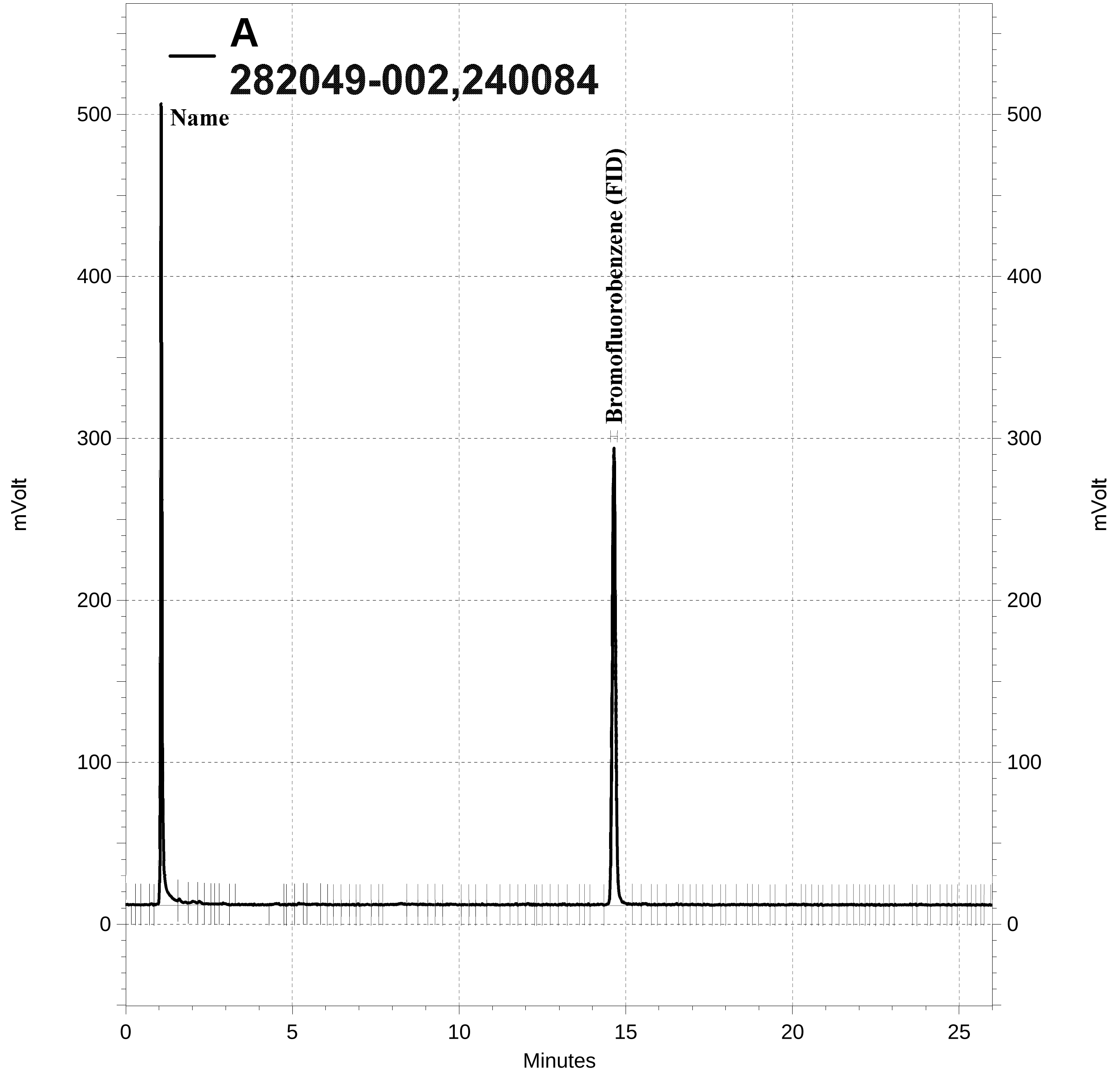

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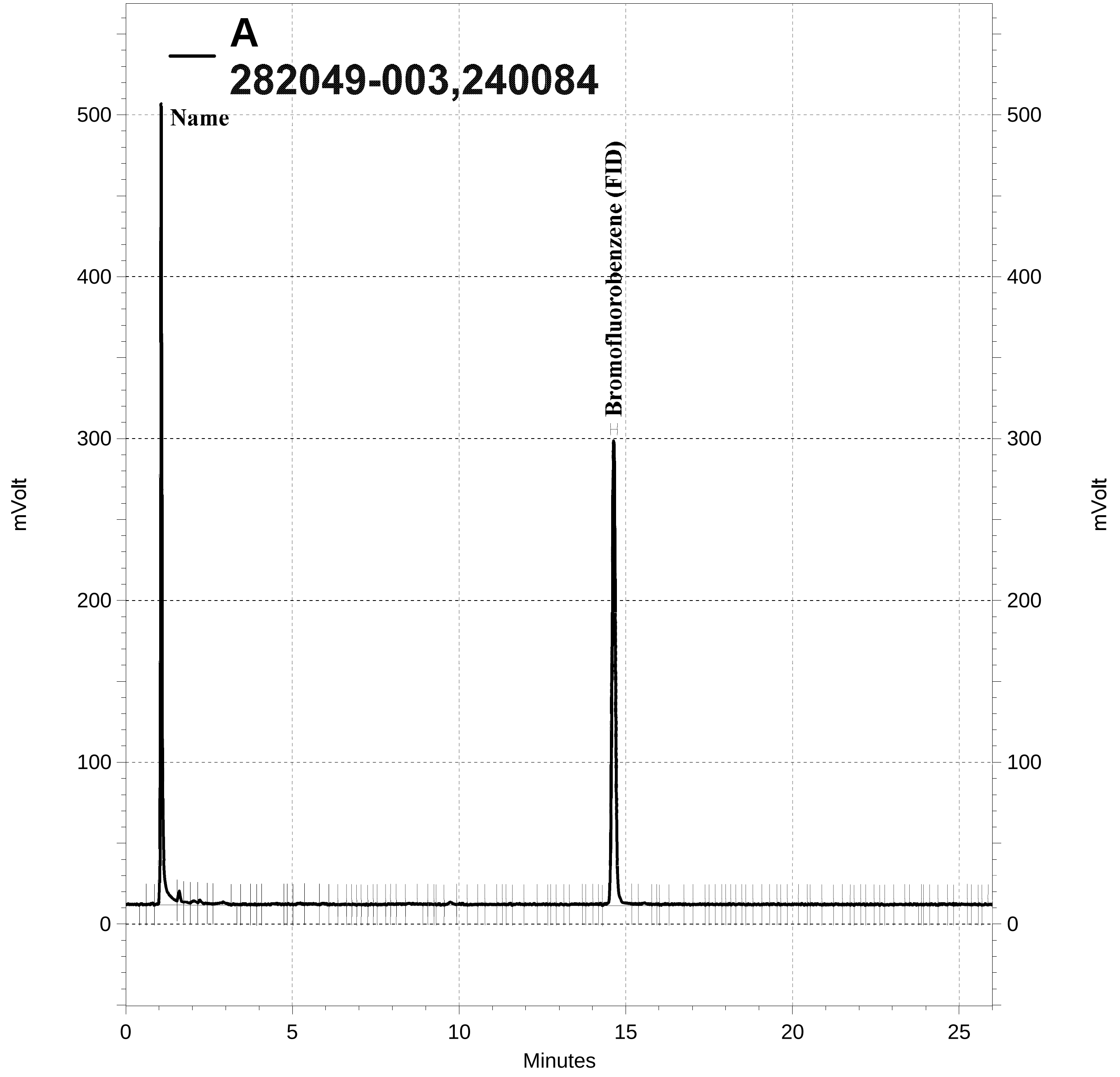

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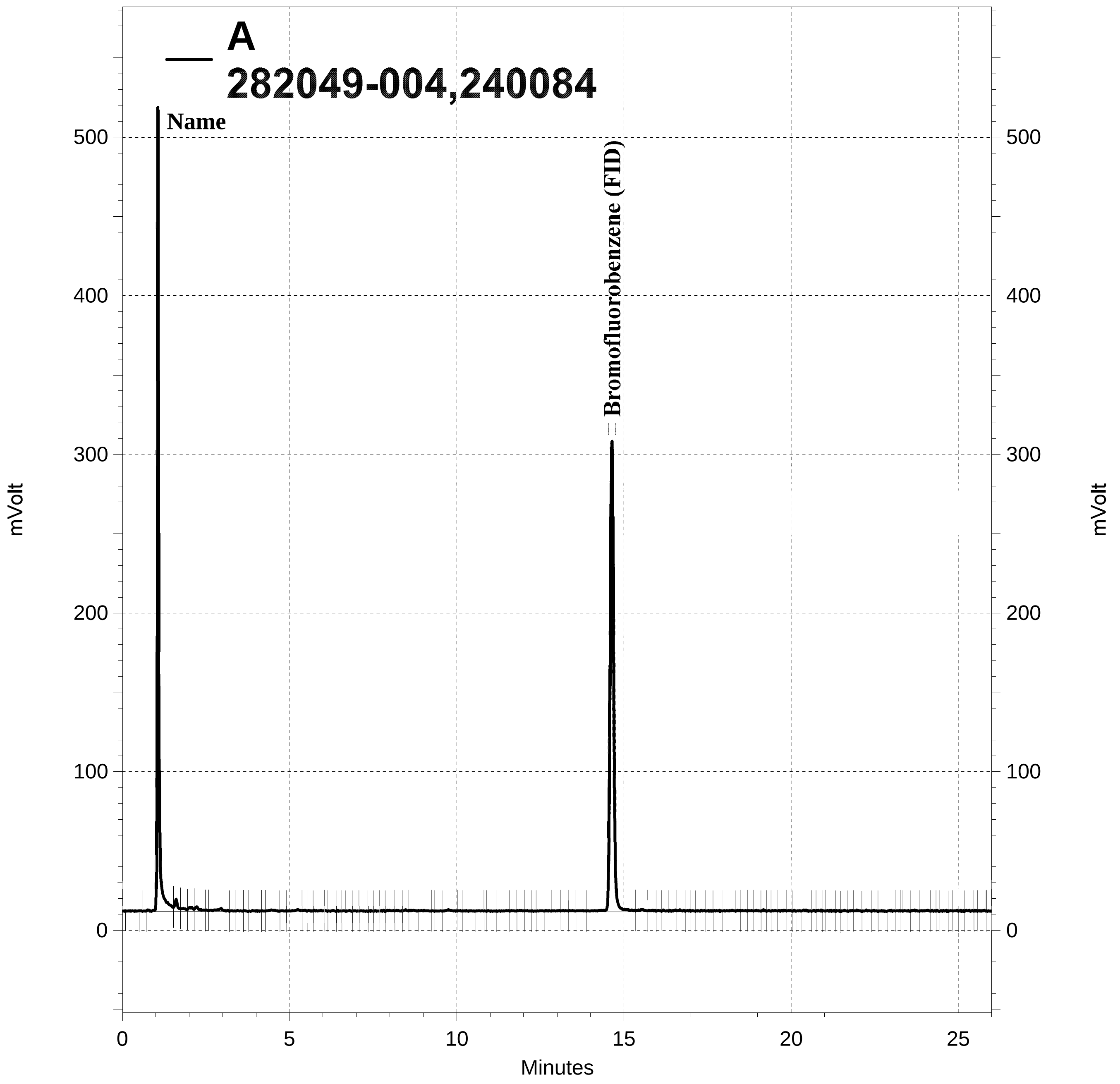

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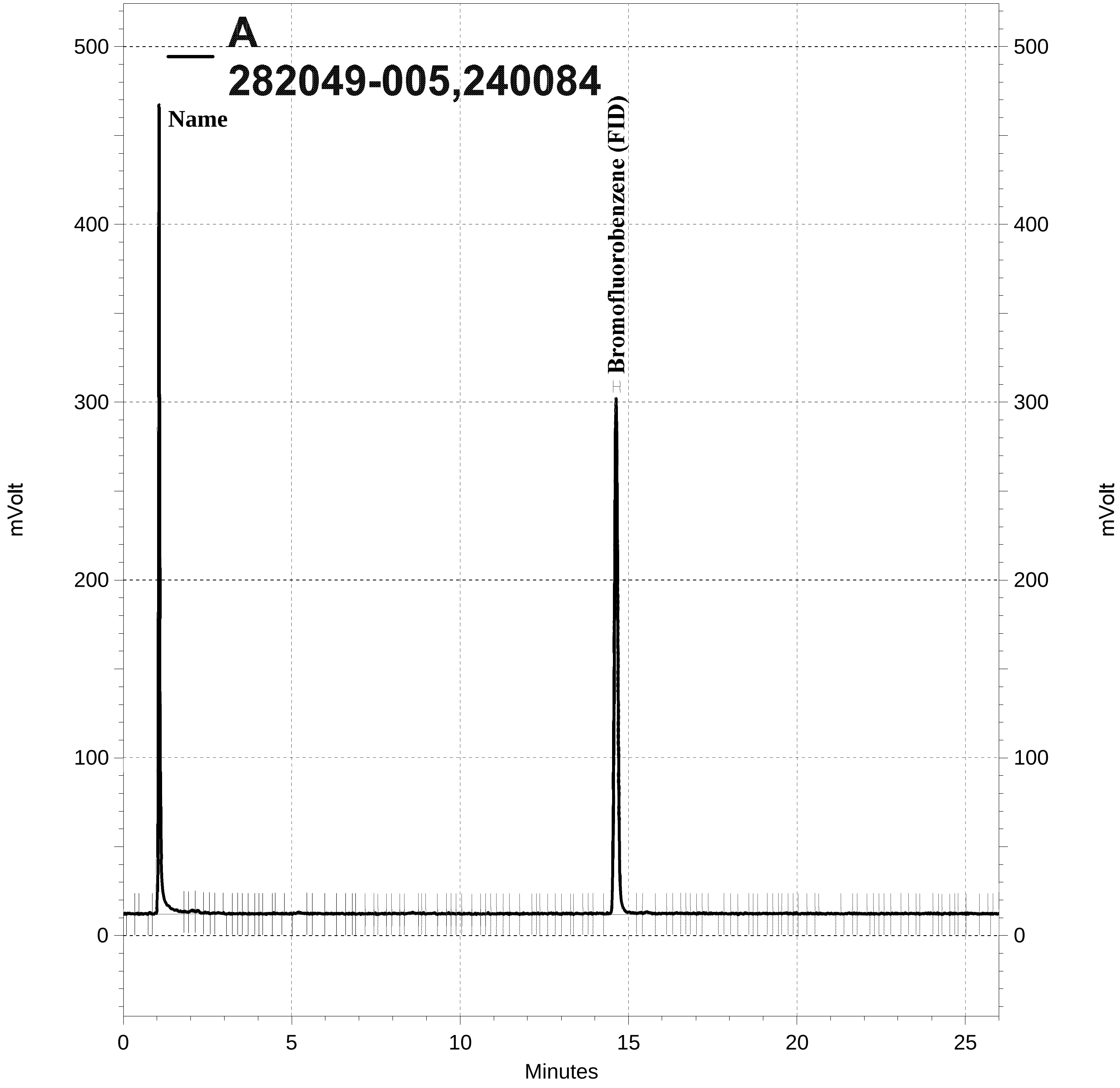

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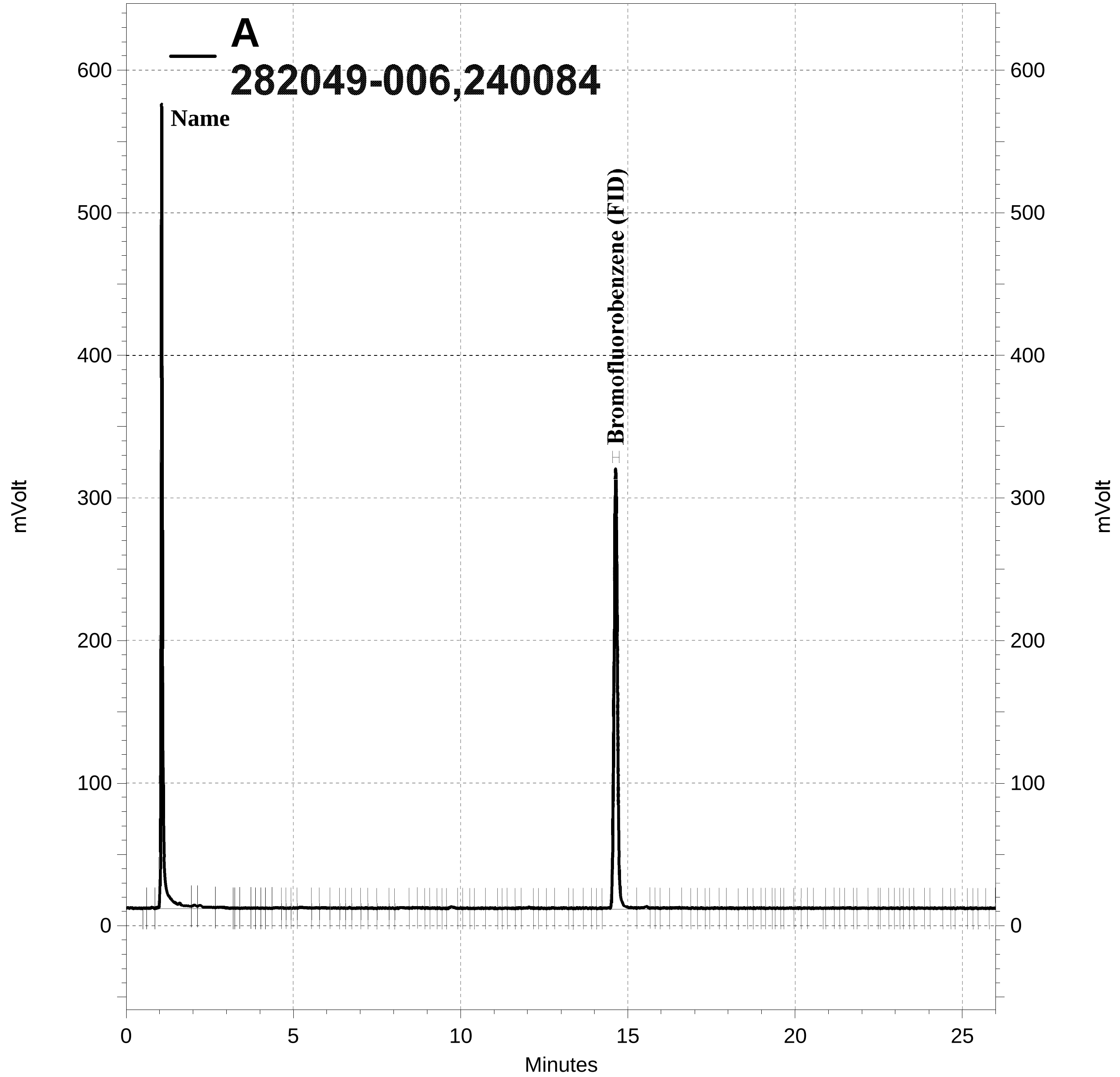

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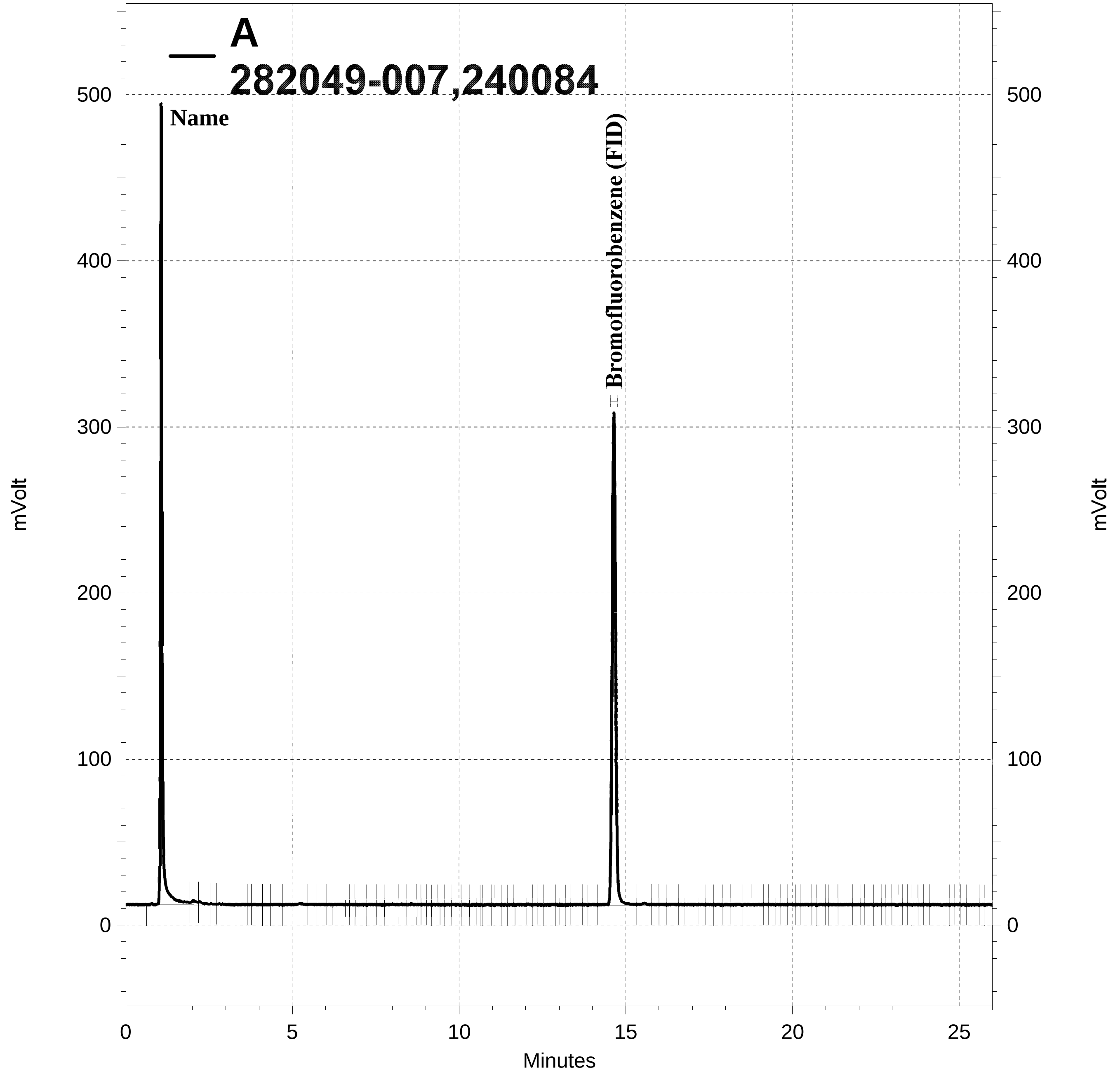

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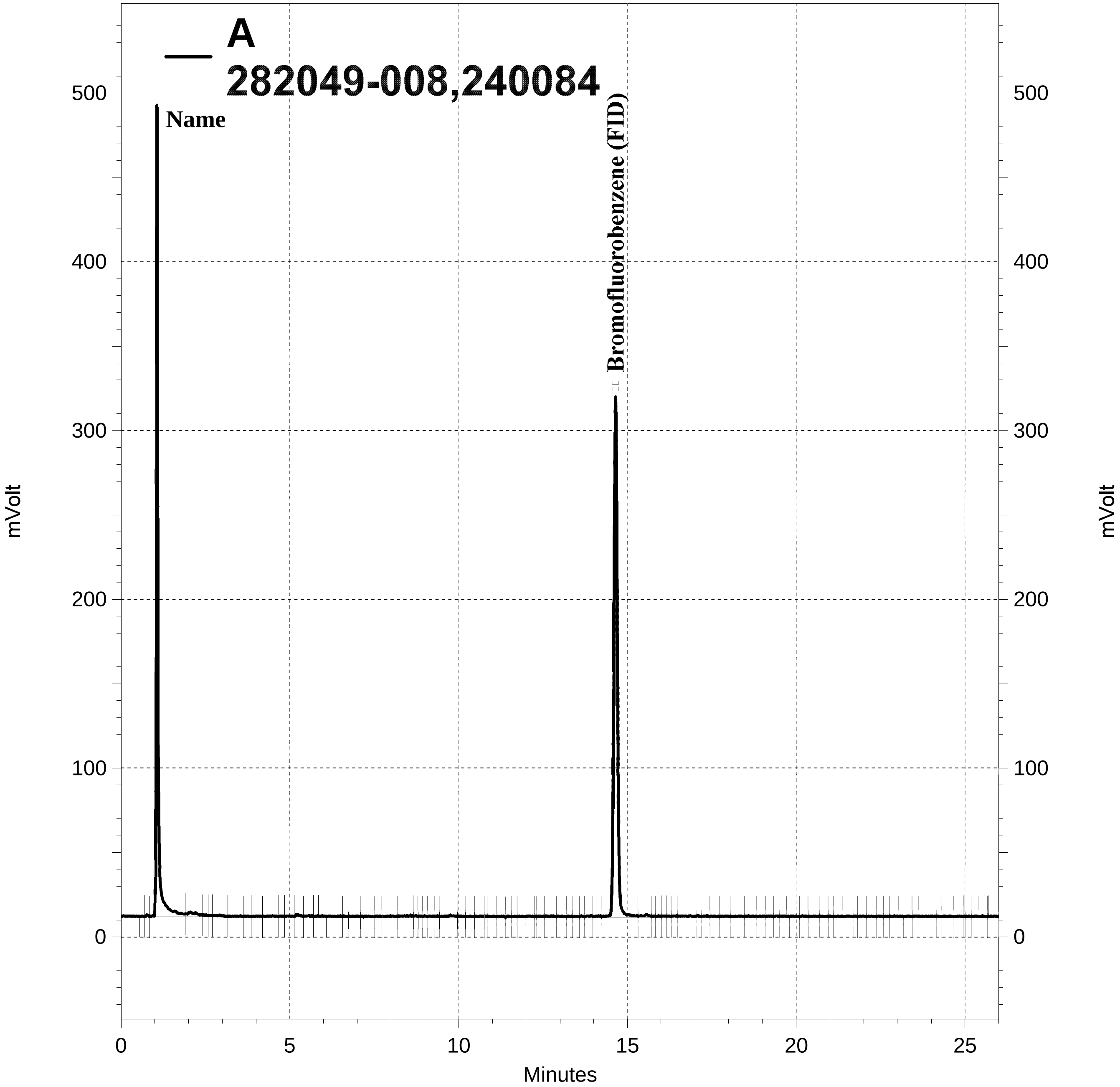

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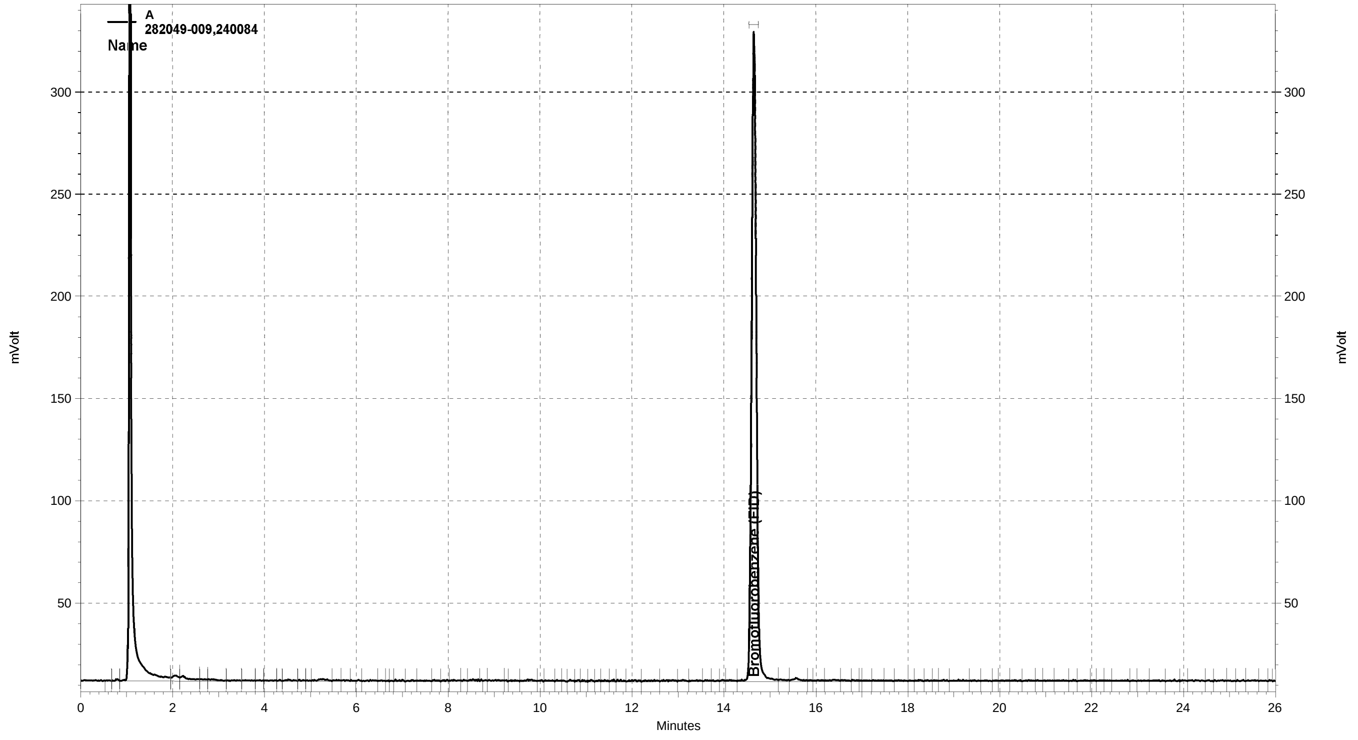

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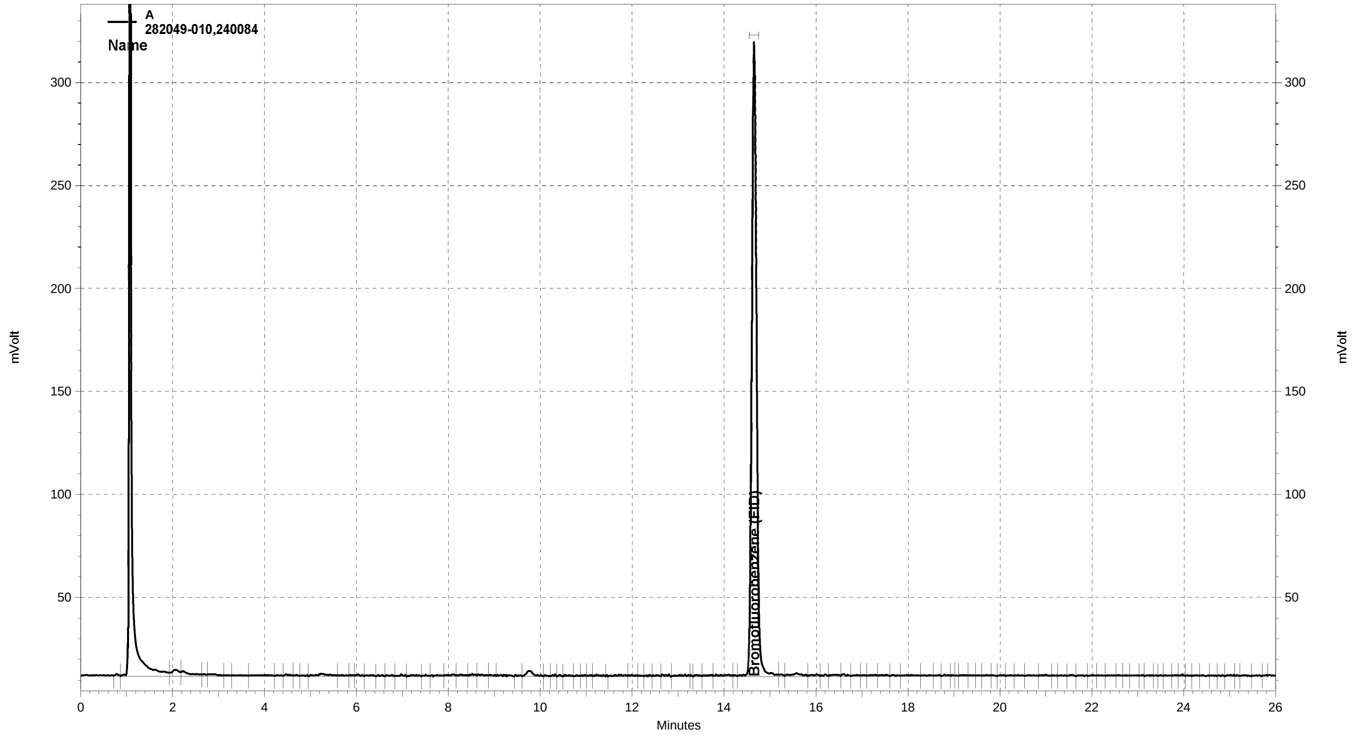

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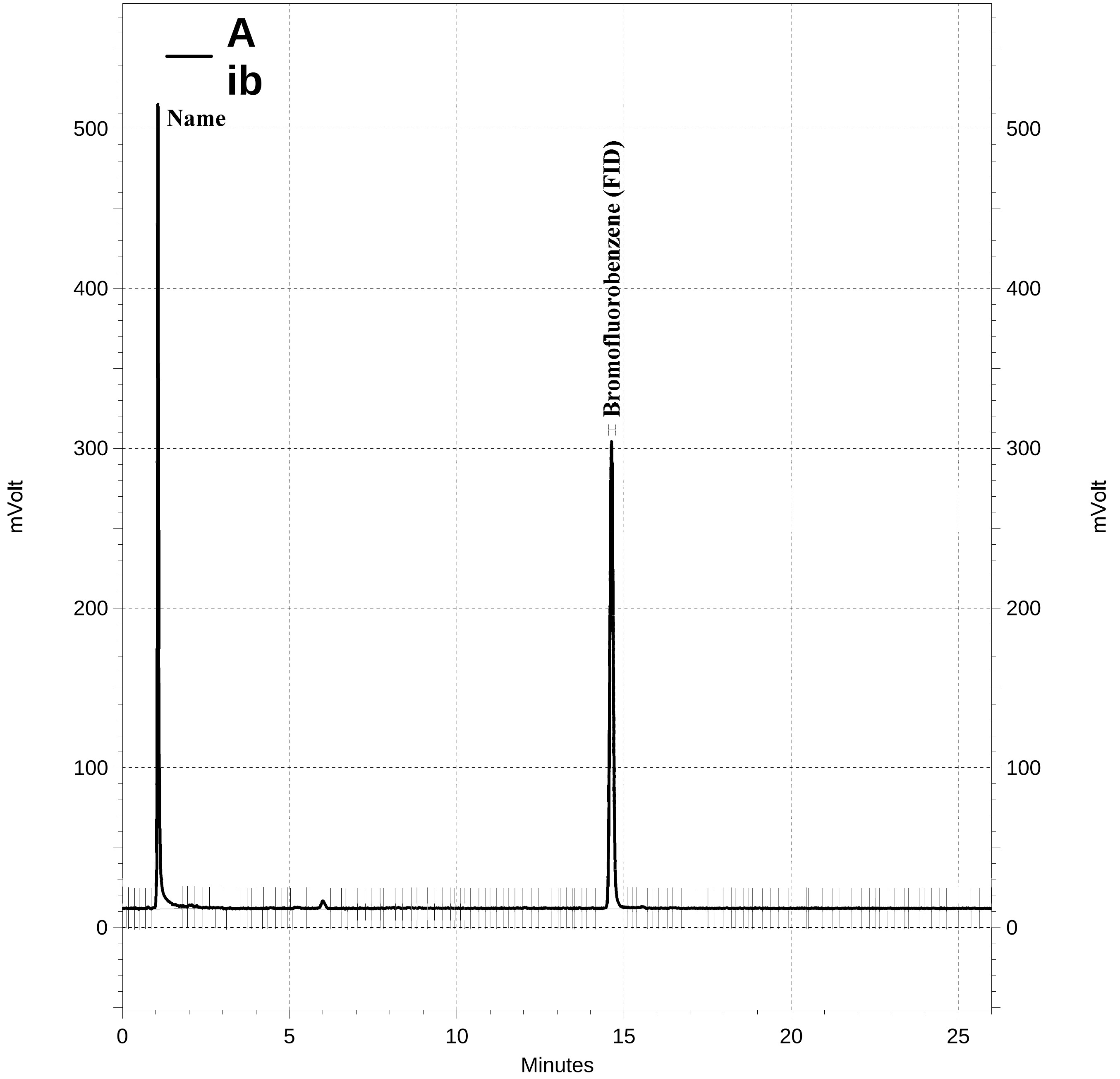

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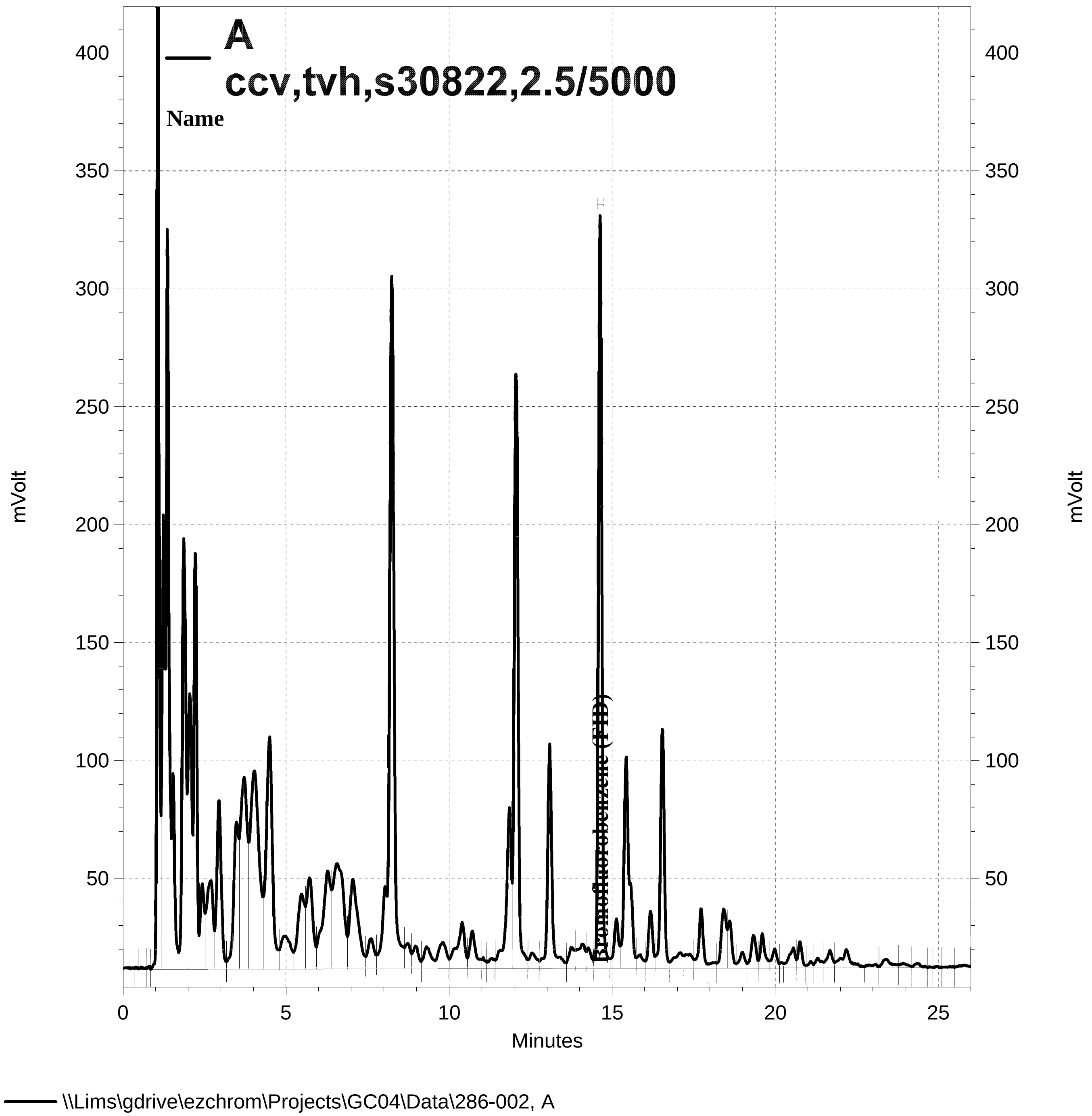
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ccv,tvh,s30822,2.5/5000
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Bromofluorobenzene (FID)
mVolt
mVolt
400
350
300
250
200
150
100
50
0
5
10
15
20
25
Minutes
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Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8015B
Field ID:	B-1-W	Batch#:	240045
Matrix:	Water	Sampled:	10/11/16
Units:	ug/L	Received:	10/11/16
Diln Fac:	1.000		

Type:	SAMPLE	Analyzed:	10/14/16
Lab ID:	282049-011	Cleanup Method:	EPA 3630C
Prepared:	10/12/16		

Analyte	Result	RL	MDL
Diesel C10-C24	800 Y	47	16
Motor Oil C24-C36	3,600	280	90

Surrogate	%REC	Limits
o-Terphenyl	75	67-136

Type:	BLANK	Analyzed:	10/12/16
Lab ID:	QC855248	Cleanup Method:	EPA 3630C
Prepared:	10/11/16		

Analyte	Result	RL	MDL
Diesel C10-C24	ND	50	16
Motor Oil C24-C36	ND	300	96

Surrogate	%REC	Limits
o-Terphenyl	92	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	240045
Units:	ug/L	Prepared:	10/11/16
Diln Fac:	1.000	Analyzed:	10/12/16

Type: BS
Cleanup Method: EPA 3630C
Lab ID: QC855249

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,997	80	60-121

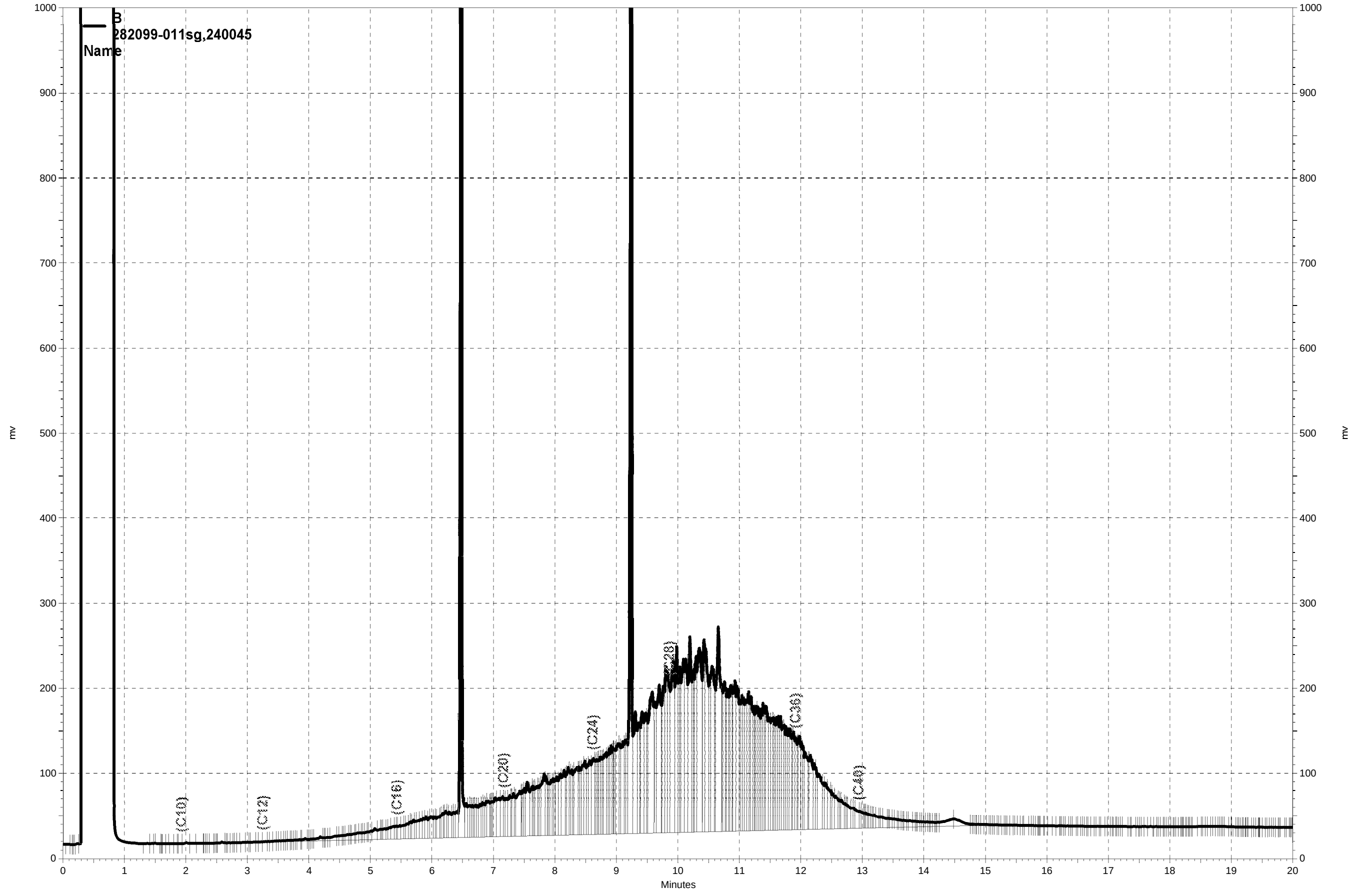
Surrogate	%REC	Limits
o-Terphenyl	86	67-136

Type: BSD
Cleanup Method: EPA 3630C
Lab ID: QC855250

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,927	77	60-121	4	32

Surrogate	%REC	Limits
o-Terphenyl	91	67-136

RPD= Relative Percent Difference



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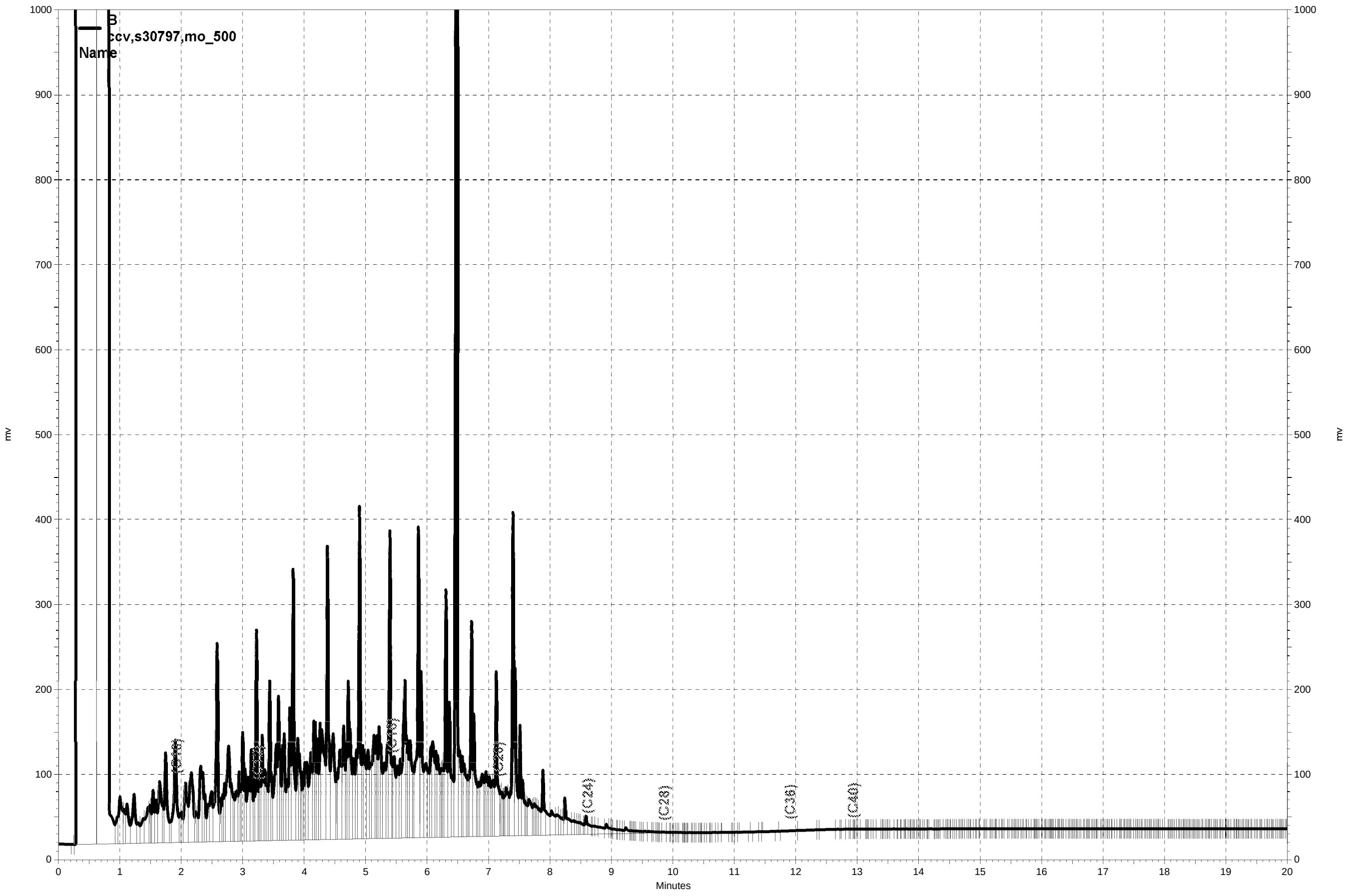

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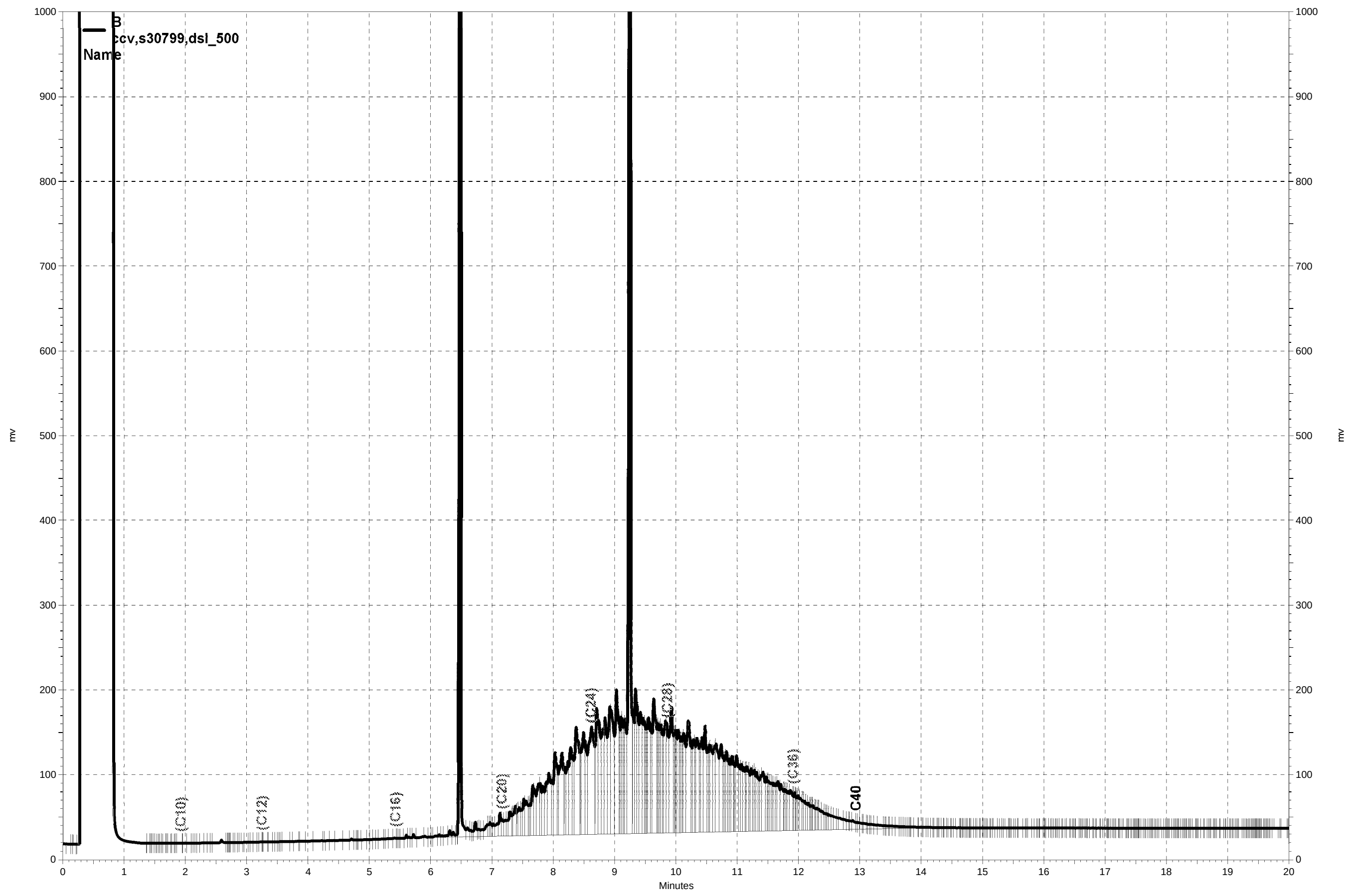

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Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240190
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/14/16

Field ID:	B-1-1	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-001	Cleanup Method:	EPA 3630C
Diln Fac:	2.000		

Analyte	Result	RL	MDL
Diesel C10-C24	5.5 Y	2.0	0.62
Motor Oil C24-C36	100	10	3.1

Surrogate	%REC	Limits
o-Terphenyl	101	59-140

Field ID:	B-1-2B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-002	Cleanup Method:	EPA 3630C
Diln Fac:	20.00		

Analyte	Result	RL	MDL
Diesel C10-C24	89 Y	20	6.2
Motor Oil C24-C36	3,300	100	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID:	B-1-3B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-003	Cleanup Method:	EPA 3630C
Diln Fac:	20.00		

Analyte	Result	RL	MDL
Diesel C10-C24	22 Y	20	6.1
Motor Oil C24-C36	1,300	99	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

J= Estimated value
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240190
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/14/16

Field ID:	B-1-4C	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-004	Cleanup Method:	EPA 3630C
Diln Fac:	20.00		

Analyte	Result	RL	MDL
Diesel C10-C24	530 Y	20	6.1
Motor Oil C24-C36	1,500	100	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID:	B-2-2B	Sampled:	10/11/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-005	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	6.5 Y	1.0	0.31
Motor Oil C24-C36	75	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	76	59-140

Field ID:	B-2-5B	Sampled:	10/11/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-006	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	93	59-140

J= Estimated value
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240190
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/14/16

Field ID:	B-3-1B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-007	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	19 Y	1.0	0.31
Motor Oil C24-C36	130	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	103	59-140

Field ID:	B-3-2B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-008	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	0.37 J	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	87	59-140

Field ID:	B-3-4B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/18/16
Lab ID:	282049-009	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	0.50 J	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	92	59-140

J= Estimated value
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240190
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/14/16

Field ID:	B-3-5B	Sampled:	10/10/16
Type:	SAMPLE	Analyzed:	10/17/16
Lab ID:	282049-010	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	71	59-140

Type:	BLANK	Analyzed:	10/17/16
Lab ID:	QC855807	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	88	59-140

J= Estimated value
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855808	Batch#:	240190
Matrix:	Soil	Prepared:	10/14/16
Units:	mg/Kg	Analyzed:	10/17/16

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.93	43.58	87	58-137

Surrogate	%REC	Limits
o-Terphenyl	92	59-140

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	240190
MSS Lab ID:	282090-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	mg/Kg	Prepared:	10/14/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: MS
Lab ID: QC855809

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	93.63	50.09	176.7	166 *	46-154

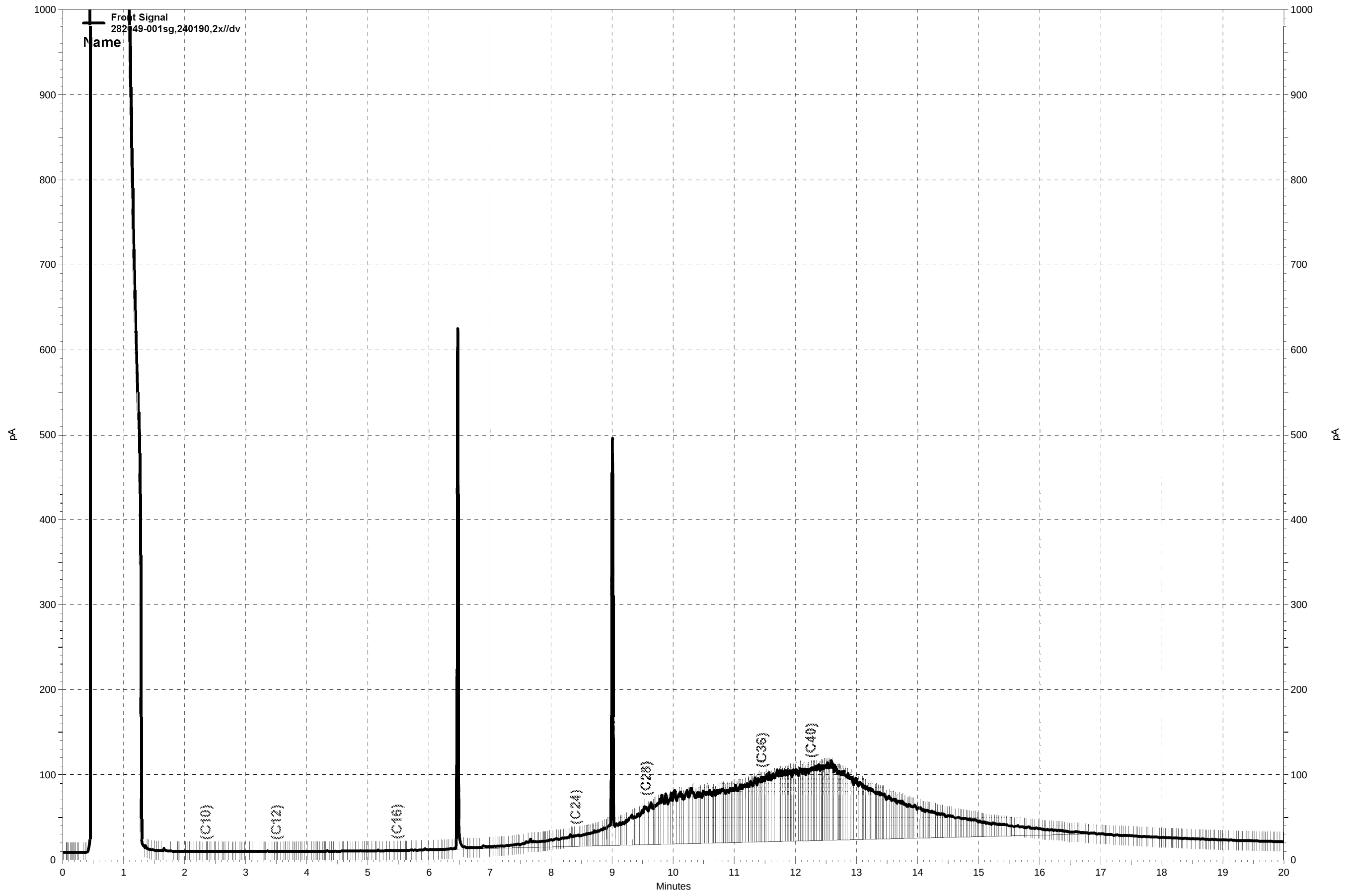
Surrogate	%REC	Limits
o-Terphenyl	86	59-140

Type: MSD
Lab ID: QC855810

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.15	210.4	233 *	46-154	17	50

Surrogate	%REC	Limits
o-Terphenyl	78	59-140

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference



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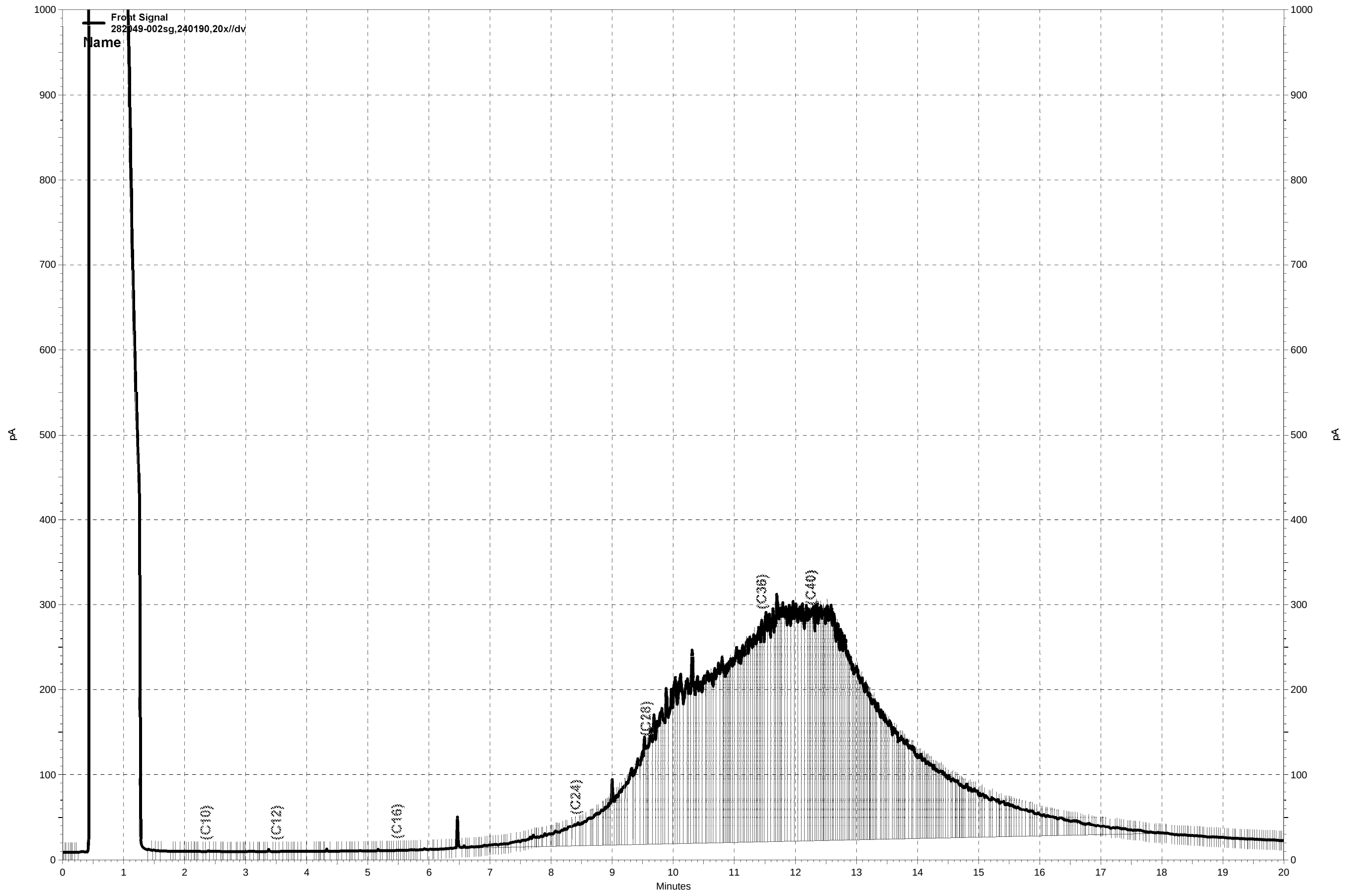

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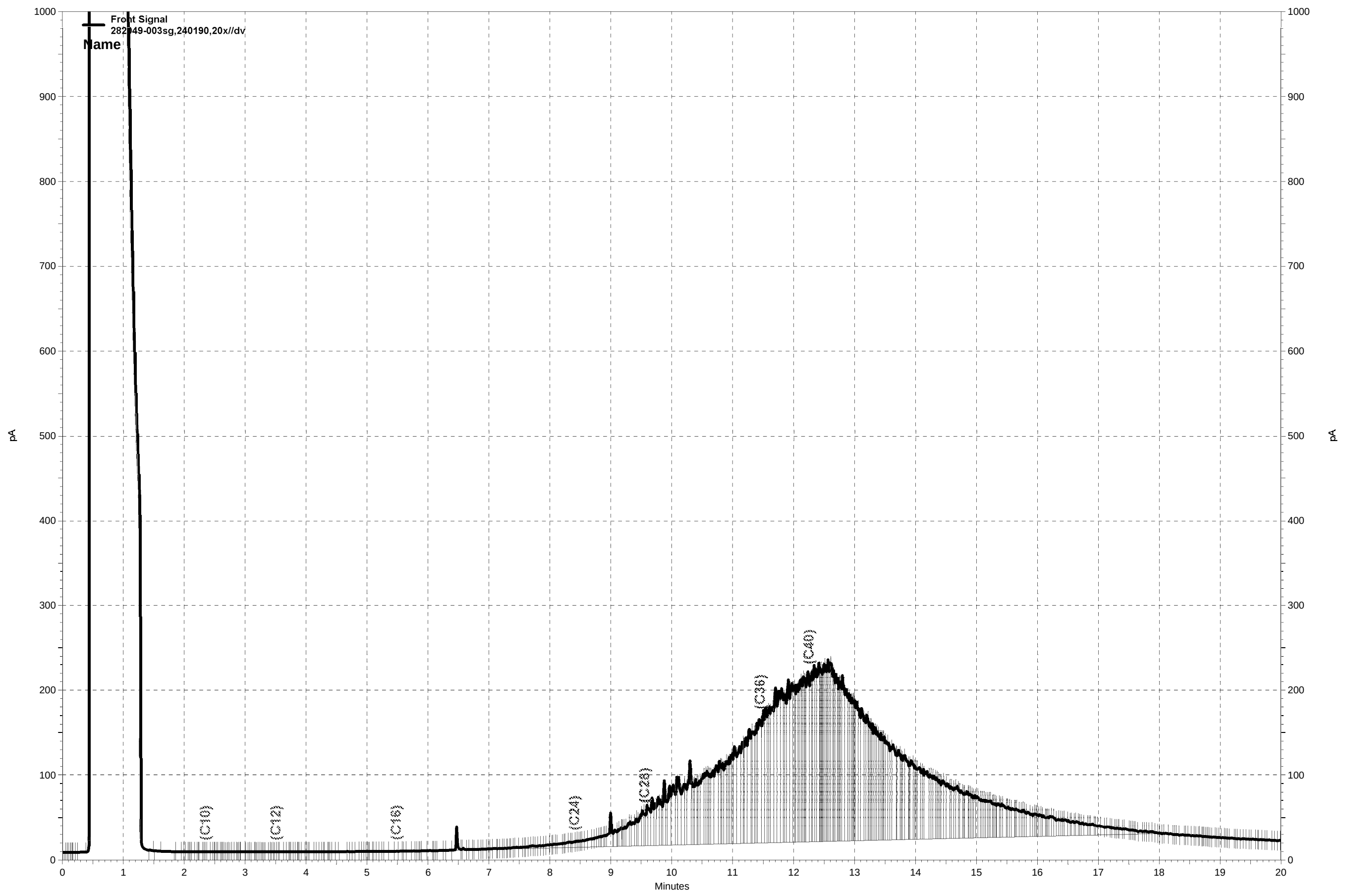

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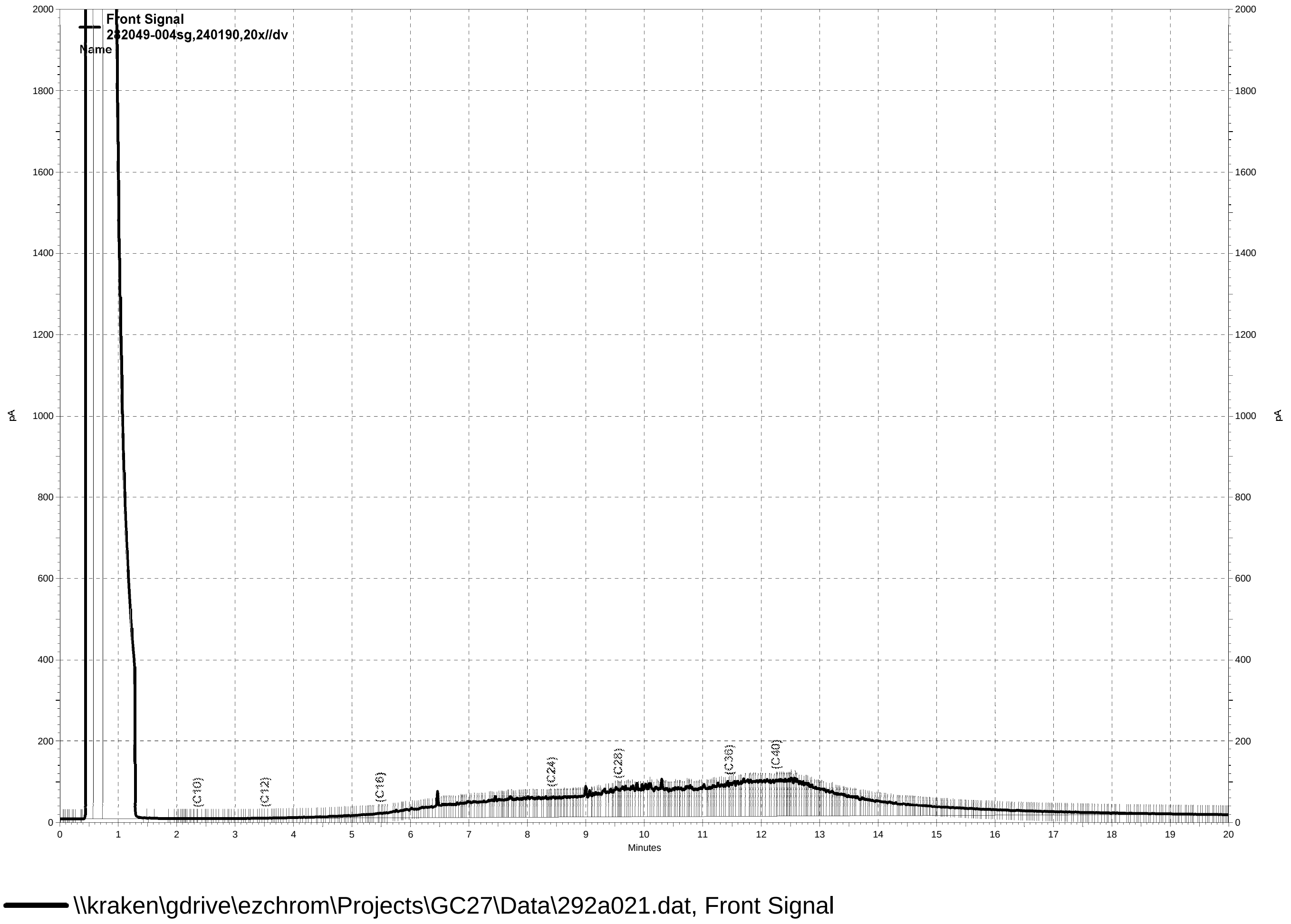
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0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Minutes
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{C12}
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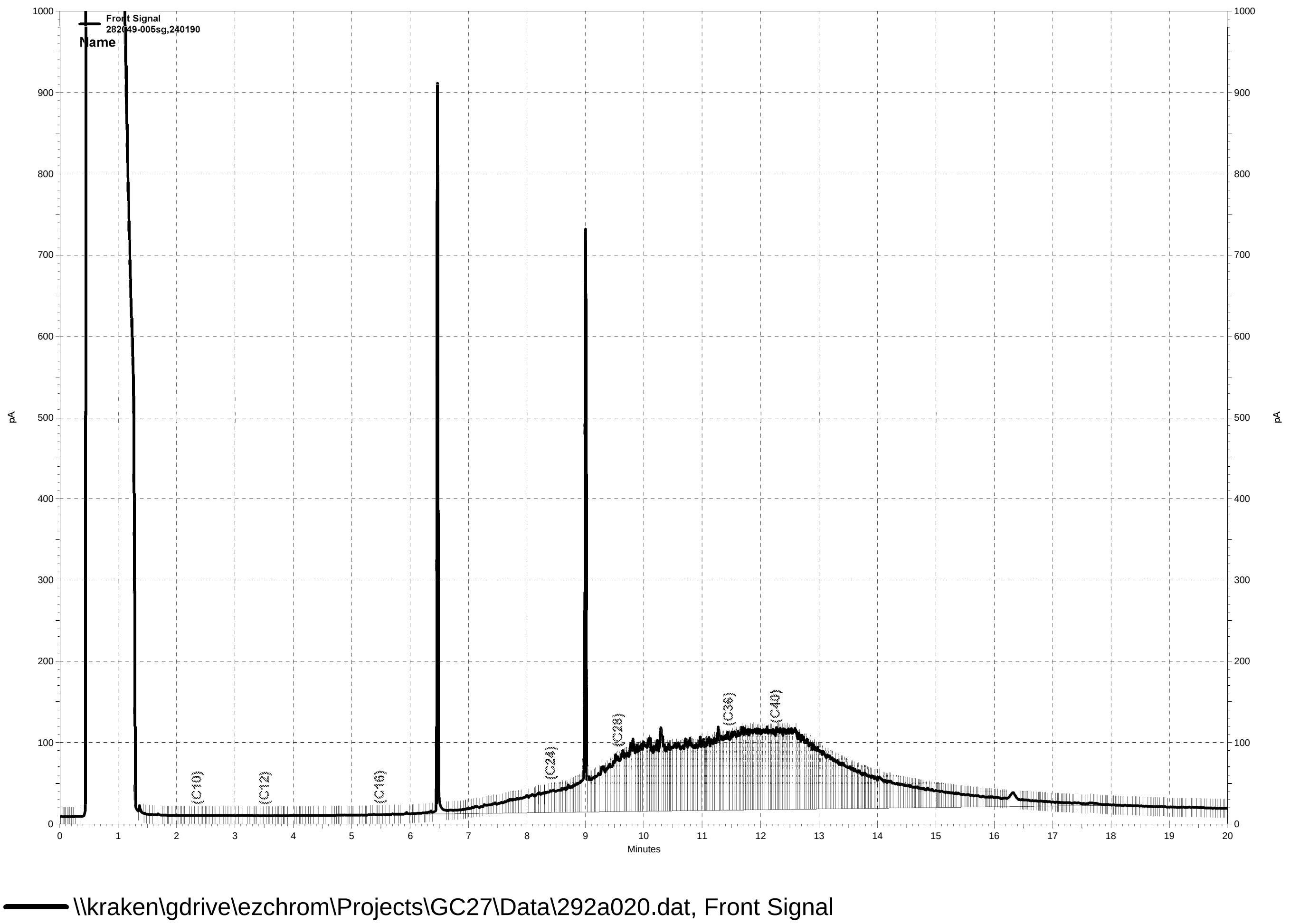
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(C12)
(C16)
(C24)
(C28)
(C36)
(C40)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
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17
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19
20
Minutes
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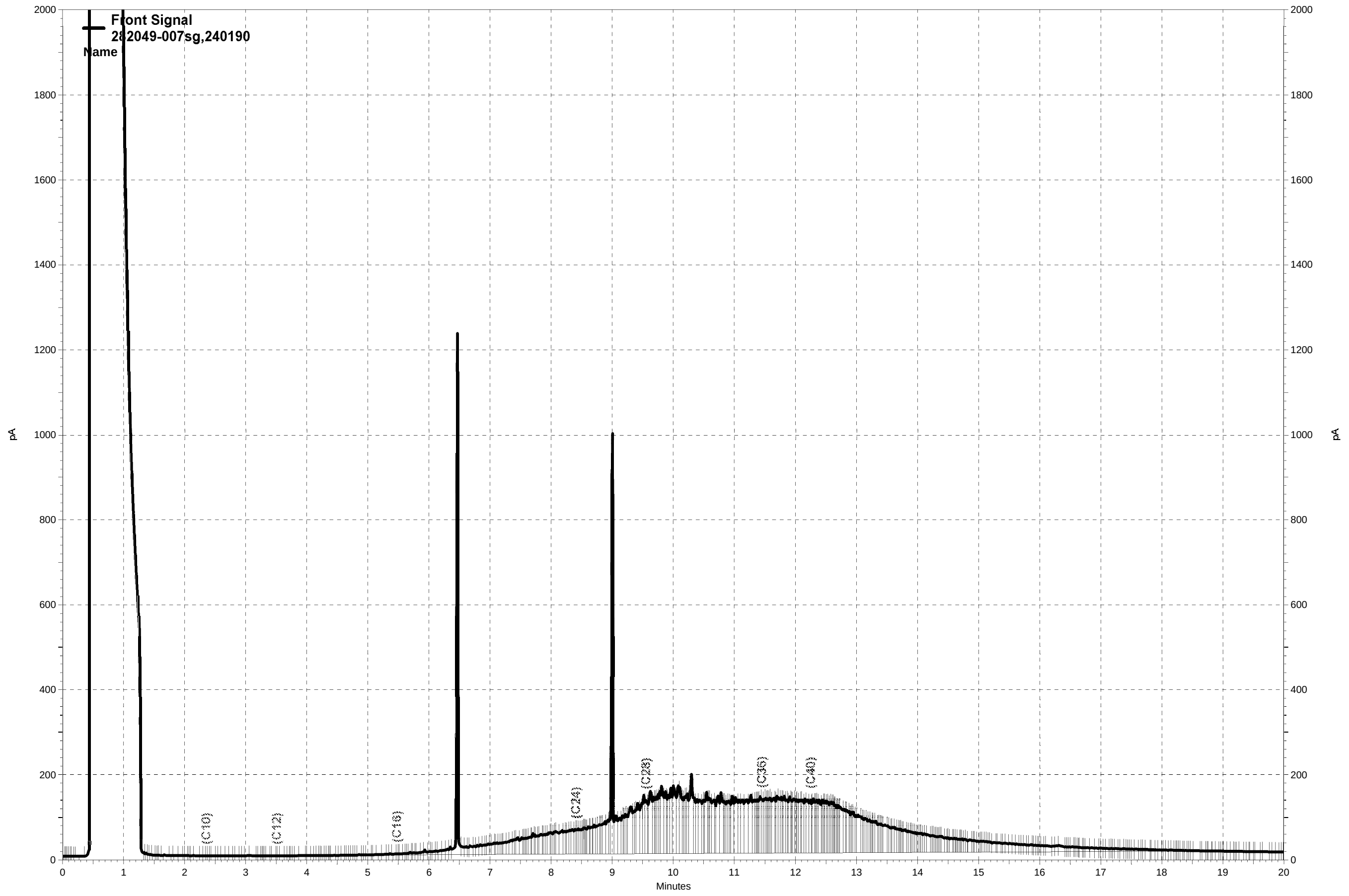

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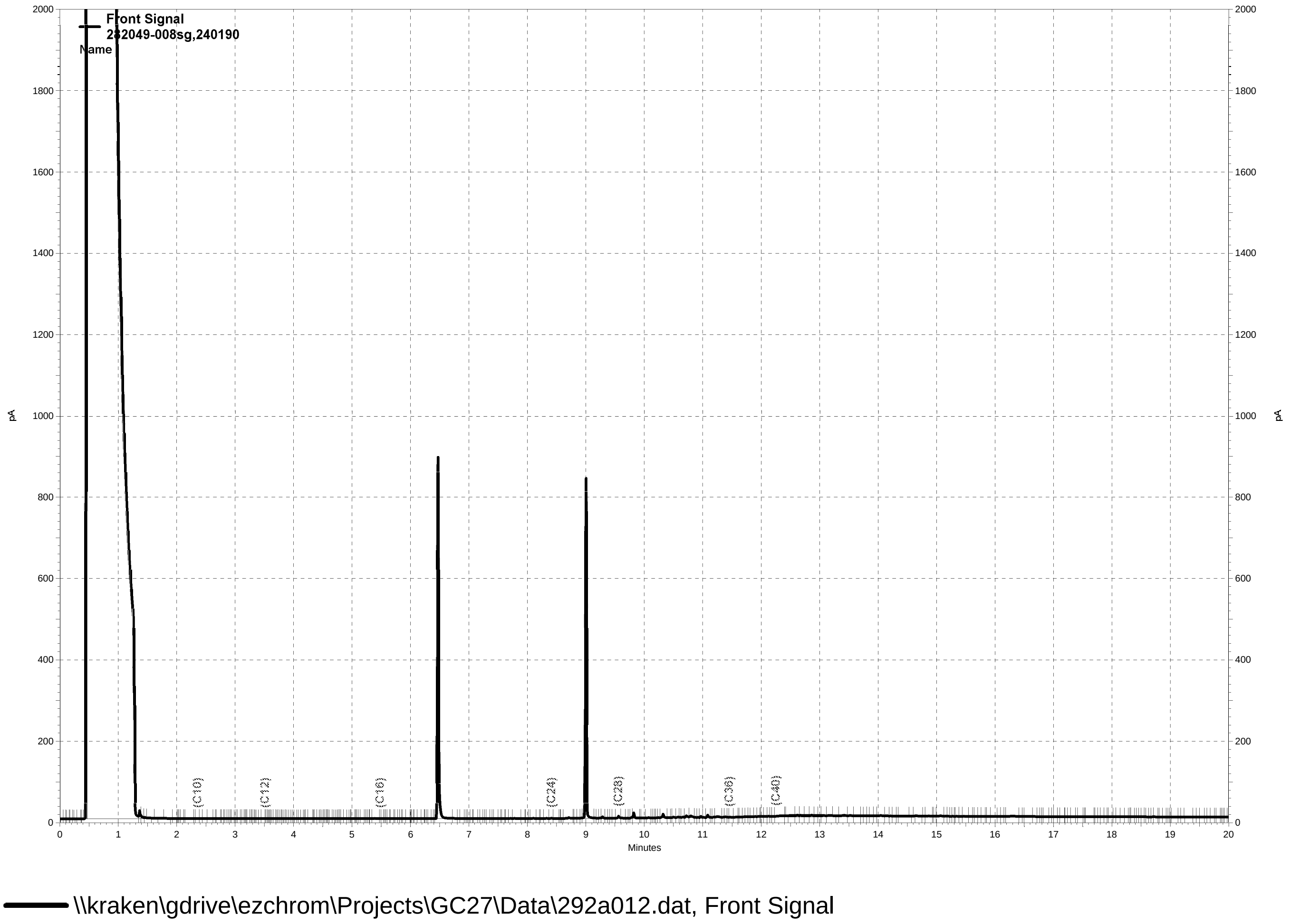
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pA
(C10)
(C12)
(C16)
(C24)
(C28)
(C36)
(C40)
0
1
2
3
4
5
6
7
8
9
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Minutes
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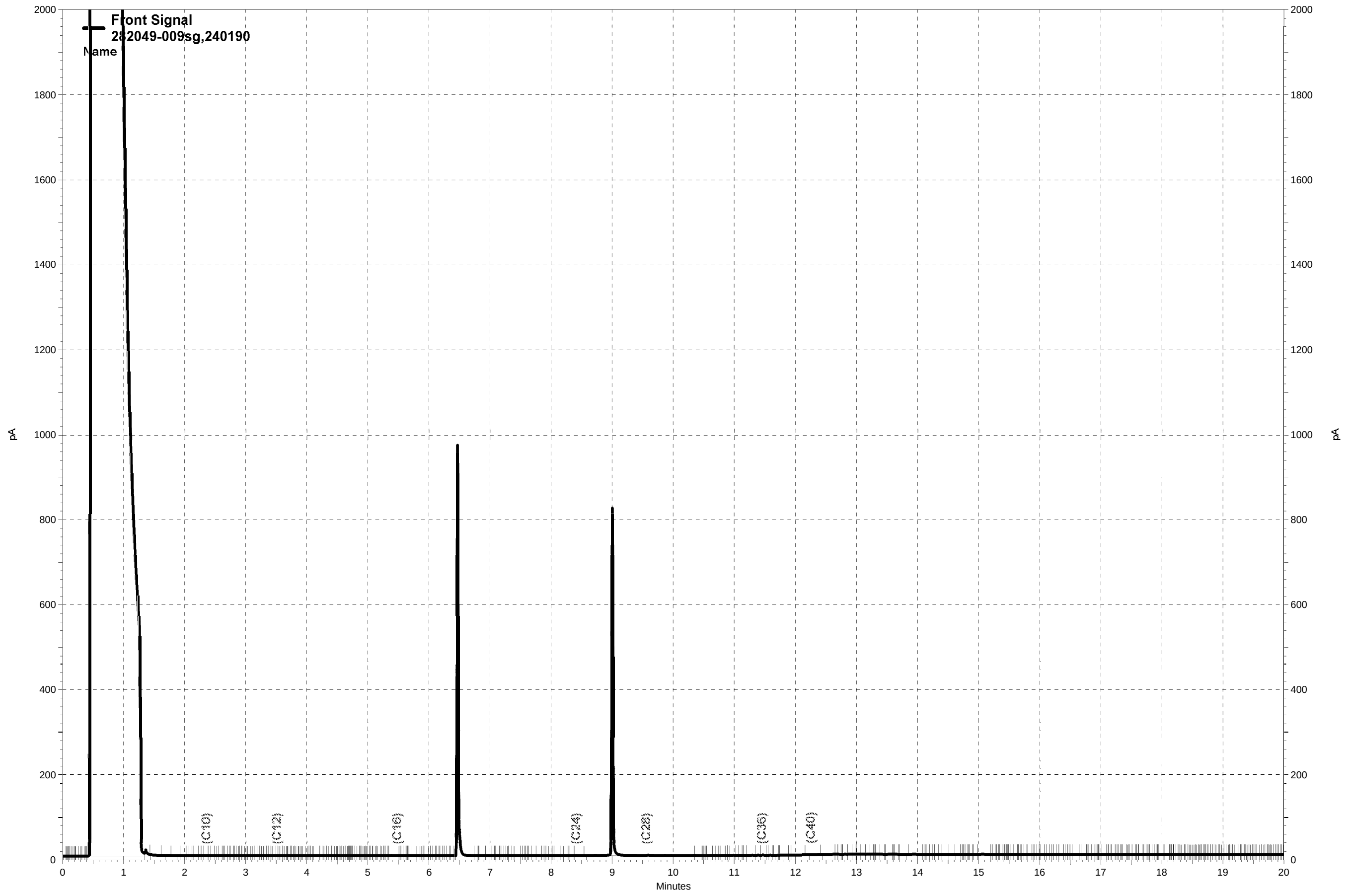

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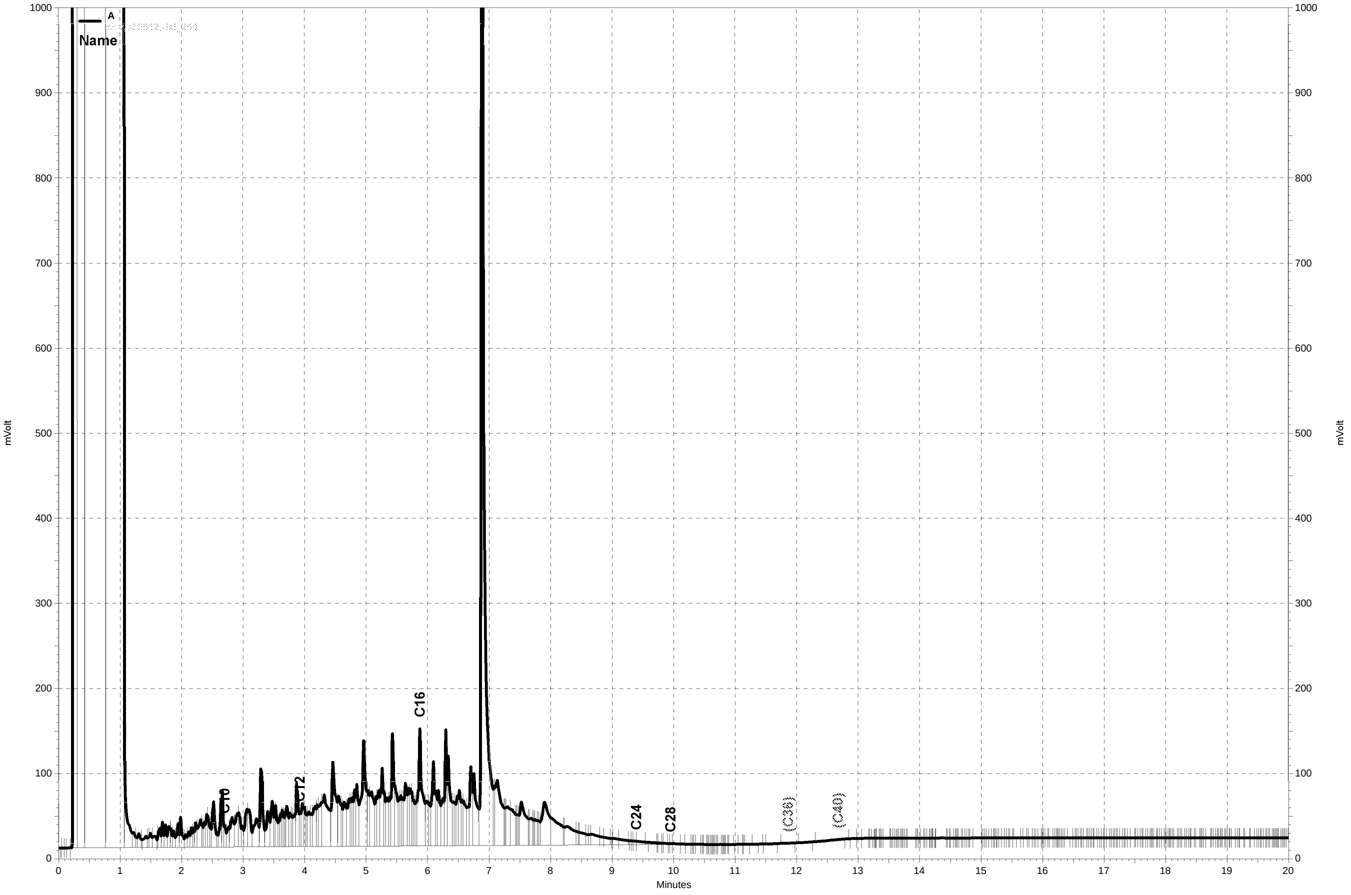

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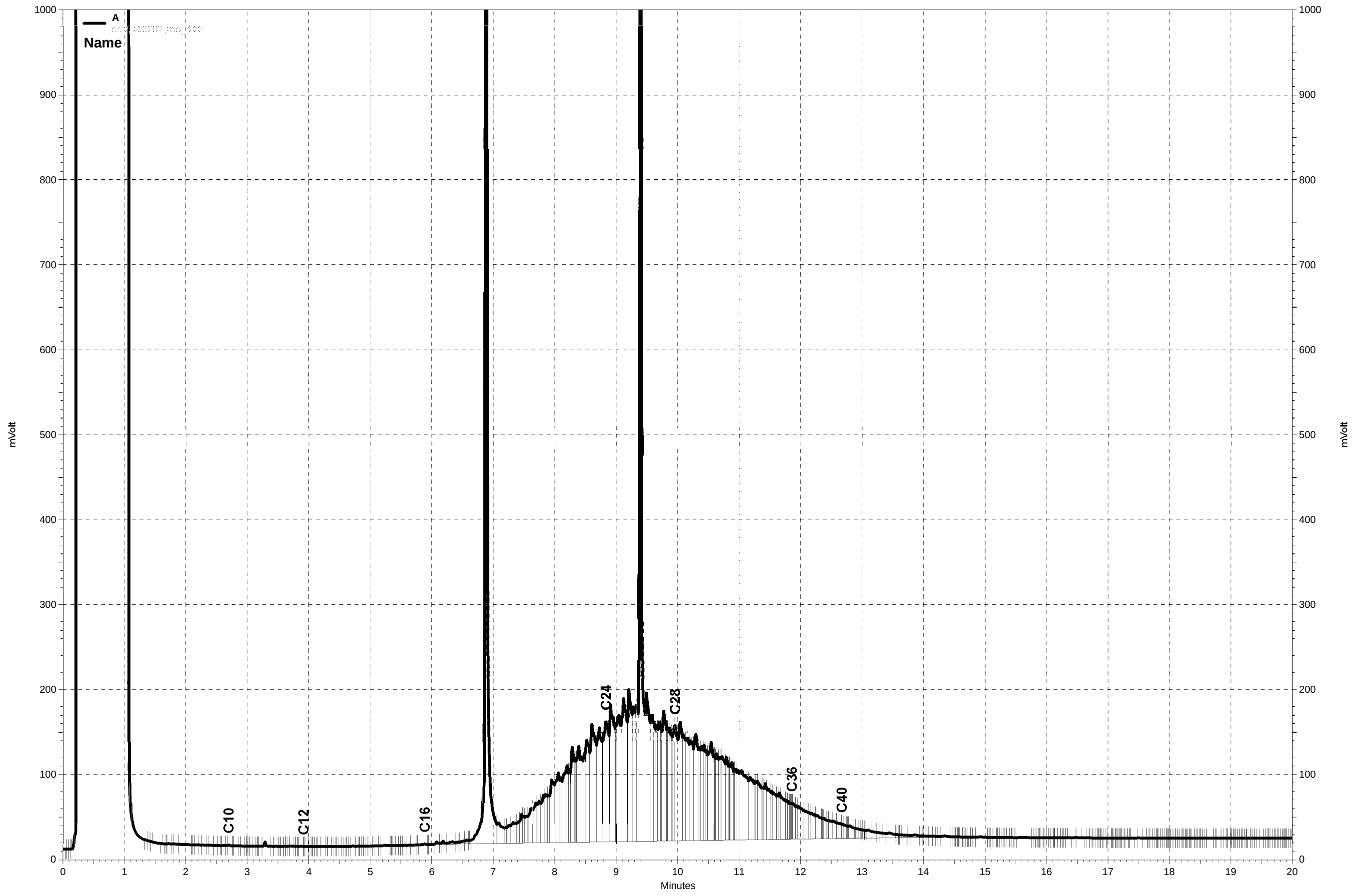

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Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-W	Batch#:	240122
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Analyzed:	10/13/16
Diln Fac:	2.000		

Analyte	Result	RL	MDL
Freon 12	ND	2.0	0.2
Chloromethane	ND	2.0	0.2
Vinyl Chloride	ND	2.0	0.2
Bromomethane	ND	2.0	0.3
Chloroethane	ND	2.0	0.2
Trichlorofluoromethane	ND	2.0	0.2
Acetone	40	20	6.6
Freon 113	ND	1.0	0.2
1,1-Dichloroethene	ND	1.0	0.3
Methylene Chloride	ND	20	0.3
Carbon Disulfide	0.5 J	1.0	0.2
trans-1,2-Dichloroethene	ND	1.0	0.2
Vinyl Acetate	ND	20	0.5
1,1-Dichloroethane	ND	1.0	0.2
2-Butanone	ND	20	0.5
cis-1,2-Dichloroethene	ND	1.0	0.2
2,2-Dichloropropane	ND	1.0	0.2
Chloroform	ND	1.0	0.2
Bromochloromethane	ND	1.0	0.3
1,1,1-Trichloroethane	ND	1.0	0.3
1,1-Dichloropropene	ND	1.0	0.2
Carbon Tetrachloride	ND	1.0	0.2
1,2-Dichloroethane	ND	1.0	0.2
Benzene	ND	1.0	0.2
Trichloroethene	ND	1.0	0.2
1,2-Dichloropropane	ND	1.0	0.2
Bromodichloromethane	ND	1.0	0.2
Dibromomethane	ND	1.0	0.3
4-Methyl-2-Pentanone	ND	20	0.3
cis-1,3-Dichloropropene	ND	1.0	0.2
Toluene	0.4 J	1.0	0.2
trans-1,3-Dichloropropene	ND	1.0	0.2
1,1,2-Trichloroethane	ND	1.0	0.2
2-Hexanone	ND	20	0.3
1,3-Dichloropropane	ND	1.0	0.2
Tetrachloroethene	ND	1.0	0.2
Dibromochloromethane	ND	1.0	0.2
1,2-Dibromoethane	ND	1.0	0.3
Chlorobenzene	ND	1.0	0.2
1,1,1,2-Tetrachloroethane	ND	1.0	0.2
Ethylbenzene	ND	1.0	0.2
m,p-Xylenes	ND	1.0	0.3
o-Xylene	ND	1.0	0.2
Styrene	ND	1.0	0.3
Bromoform	ND	2.0	0.2
Isopropylbenzene	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	1.0	0.2
1,2,3-Trichloropropane	ND	1.0	0.2
Propylbenzene	ND	1.0	0.2
Bromobenzene	ND	1.0	0.2
1,3,5-Trimethylbenzene	ND	1.0	0.2
2-Chlorotoluene	ND	1.0	0.2

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-W	Batch#:	240122
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Analyzed:	10/13/16
Diln Fac:	2.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	1.0	0.2
tert-Butylbenzene	ND	1.0	0.2
1,2,4-Trimethylbenzene	ND	1.0	0.2
sec-Butylbenzene	ND	1.0	0.2
para-Isopropyl Toluene	ND	1.0	0.2
1,3-Dichlorobenzene	ND	1.0	0.2
1,4-Dichlorobenzene	ND	1.0	0.2
n-Butylbenzene	ND	1.0	0.2
1,2-Dichlorobenzene	ND	1.0	0.2
1,2-Dibromo-3-Chloropropane	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.2
Hexachlorobutadiene	ND	1.0	0.5
Naphthalene	ND	2.0	0.5
1,2,3-Trichlorobenzene	ND	1.0	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	97	80-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	240122
Units:	ug/L	Analyzed:	10/13/16
Diln Fac:	1.000		

Type: BS　　Lab ID: QC855551

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.02	96	73-141
Benzene	12.50	13.26	106	86-116
Trichloroethene	12.50	12.27	98	84-113
Toluene	12.50	12.81	103	83-118
Chlorobenzene	12.50	11.86	95	87-117

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-120

Type: BSD　　Lab ID: QC855552

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.04	88	73-141	8	24
Benzene	12.50	12.52	100	86-116	6	20
Trichloroethene	12.50	11.43	91	84-113	7	20
Toluene	12.50	12.27	98	83-118	4	20
Chlorobenzene	12.50	11.28	90	87-117	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855553	Batch#:	240122
Matrix:	Water	Analyzed:	10/13/16
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	1.0	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	0.5	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.3
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855553	Batch#:	240122
Matrix:	Water	Analyzed:	10/13/16
Units:	ug/L		

Analyte	Result	RL	MDL
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	0.5	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	0.5	0.2
Naphthalene	ND	1.0	0.3
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-1	Diln Fac:	0.9901
Lab ID:	282049-001	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.9	0.8
Chloromethane	ND	9.9	0.9
Vinyl Chloride	ND	9.9	0.5
Bromomethane	ND	9.9	1.3
Chloroethane	ND	9.9	0.6
Trichlorofluoromethane	ND	5.0	0.6
Acetone	4.5 J	20	3.8
Freon 113	ND	5.0	0.4
1,1-Dichloroethene	ND	5.0	0.5
Methylene Chloride	ND	20	3.3
Carbon Disulfide	ND	5.0	0.4
MTBE	ND	5.0	0.7
trans-1,2-Dichloroethene	ND	5.0	0.6
Vinyl Acetate	ND	50	1.0
1,1-Dichloroethane	ND	5.0	0.6
2-Butanone	ND	9.9	1.0
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.5
Chloroform	ND	5.0	0.6
Bromochloromethane	ND	5.0	0.5
1,1,1-Trichloroethane	ND	5.0	0.5
1,1-Dichloropropene	ND	5.0	0.4
Carbon Tetrachloride	ND	5.0	0.4
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.5
Trichloroethene	ND	5.0	0.5
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.4
4-Methyl-2-Pentanone	ND	9.9	0.8
cis-1,3-Dichloropropene	ND	5.0	0.7
Toluene	ND	5.0	0.4
trans-1,3-Dichloropropene	ND	5.0	0.6
1,1,2-Trichloroethane	ND	5.0	0.6
2-Hexanone	ND	9.9	0.7
1,3-Dichloropropane	ND	5.0	0.7
Tetrachloroethene	ND	5.0	0.4
Dibromochloromethane	ND	5.0	0.6
1,2-Dibromoethane	ND	5.0	0.6
Chlorobenzene	ND	5.0	0.7
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.4
m,p-Xylenes	ND	5.0	1.0
o-Xylene	ND	5.0	0.4
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.6
Isopropylbenzene	ND	5.0	0.4
1,1,2,2-Tetrachloroethane	ND	5.0	0.6
1,2,3-Trichloropropane	ND	5.0	0.5
Propylbenzene	ND	5.0	0.4
Bromobenzene	ND	5.0	0.6
1,3,5-Trimethylbenzene	ND	5.0	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-1	Diln Fac:	0.9901
Lab ID:	282049-001	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	5.0	0.5
4-Chlorotoluene	ND	5.0	0.5
tert-Butylbenzene	ND	5.0	0.4
1,2,4-Trimethylbenzene	ND	5.0	0.5
sec-Butylbenzene	ND	5.0	0.4
para-Isopropyl Toluene	ND	5.0	0.3
1,3-Dichlorobenzene	ND	5.0	0.7
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.5
1,2-Dichlorobenzene	ND	5.0	0.7
1,2-Dibromo-3-Chloropropane	ND	5.0	0.6
1,2,4-Trichlorobenzene	ND	5.0	1.0
Hexachlorobutadiene	ND	5.0	0.4
Naphthalene	ND	5.0	0.6
1,2,3-Trichlorobenzene	ND	5.0	0.8

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-134
1,2-Dichloroethane-d4	101	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	103	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-2B	Diln Fac:	0.9921
Lab ID:	282049-002	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.9	0.8
Chloromethane	ND	9.9	0.9
Vinyl Chloride	ND	9.9	0.5
Bromomethane	ND	9.9	1.3
Chloroethane	ND	9.9	0.6
Trichlorofluoromethane	ND	5.0	0.6
Acetone	14 J	20	3.8
Freon 113	ND	5.0	0.4
1,1-Dichloroethene	ND	5.0	0.5
Methylene Chloride	ND	20	3.3
Carbon Disulfide	ND	5.0	0.4
MTBE	ND	5.0	0.7
trans-1,2-Dichloroethene	ND	5.0	0.6
Vinyl Acetate	ND	50	1.1
1,1-Dichloroethane	ND	5.0	0.6
2-Butanone	3.4 J	9.9	1.0
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.5
Chloroform	ND	5.0	0.6
Bromochloromethane	ND	5.0	0.5
1,1,1-Trichloroethane	ND	5.0	0.5
1,1-Dichloropropene	ND	5.0	0.4
Carbon Tetrachloride	ND	5.0	0.4
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.5
Trichloroethene	ND	5.0	0.5
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.4
4-Methyl-2-Pentanone	ND	9.9	0.8
cis-1,3-Dichloropropene	ND	5.0	0.7
Toluene	ND	5.0	0.4
trans-1,3-Dichloropropene	ND	5.0	0.6
1,1,2-Trichloroethane	ND	5.0	0.6
2-Hexanone	ND	9.9	0.7
1,3-Dichloropropane	ND	5.0	0.7
Tetrachloroethene	ND	5.0	0.4
Dibromochloromethane	ND	5.0	0.6
1,2-Dibromoethane	ND	5.0	0.6
Chlorobenzene	ND	5.0	0.7
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.4
m,p-Xylenes	ND	5.0	1.0
o-Xylene	ND	5.0	0.4
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.6
Isopropylbenzene	ND	5.0	0.4
1,1,2,2-Tetrachloroethane	ND	5.0	0.6
1,2,3-Trichloropropane	ND	5.0	0.5
Propylbenzene	ND	5.0	0.4
Bromobenzene	ND	5.0	0.6
1,3,5-Trimethylbenzene	ND	5.0	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-2B	Diln Fac:	0.9921
Lab ID:	282049-002	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	5.0	0.5
4-Chlorotoluene	ND	5.0	0.5
tert-Butylbenzene	ND	5.0	0.4
1,2,4-Trimethylbenzene	ND	5.0	0.5
sec-Butylbenzene	ND	5.0	0.4
para-Isopropyl Toluene	ND	5.0	0.3
1,3-Dichlorobenzene	ND	5.0	0.7
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.5
1,2-Dichlorobenzene	ND	5.0	0.7
1,2-Dibromo-3-Chloropropane	ND	5.0	0.6
1,2,4-Trichlorobenzene	ND	5.0	1.0
Hexachlorobutadiene	ND	5.0	0.4
Naphthalene	ND	5.0	0.6
1,2,3-Trichlorobenzene	ND	5.0	0.8

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	103	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	110	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-3B	Diln Fac:	0.9653
Lab ID:	282049-003	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.8
Chloromethane	ND	9.7	0.9
Vinyl Chloride	ND	9.7	0.5
Bromomethane	ND	9.7	1.2
Chloroethane	ND	9.7	0.6
Trichlorofluoromethane	ND	4.8	0.6
Acetone	53	19	3.7
Freon 113	ND	4.8	0.4
1,1-Dichloroethene	ND	4.8	0.4
Methylene Chloride	ND	19	3.2
Carbon Disulfide	0.5 J	4.8	0.4
MTBE	ND	4.8	0.7
trans-1,2-Dichloroethene	ND	4.8	0.6
Vinyl Acetate	ND	48	1.0
1,1-Dichloroethane	ND	4.8	0.6
2-Butanone	11	9.7	1.0
cis-1,2-Dichloroethene	ND	4.8	0.5
2,2-Dichloropropane	ND	4.8	0.5
Chloroform	ND	4.8	0.6
Bromochloromethane	ND	4.8	0.5
1,1,1-Trichloroethane	ND	4.8	0.5
1,1-Dichloropropene	ND	4.8	0.4
Carbon Tetrachloride	ND	4.8	0.4
1,2-Dichloroethane	ND	4.8	0.6
Benzene	ND	4.8	0.5
Trichloroethene	ND	4.8	0.5
1,2-Dichloropropane	ND	4.8	0.5
Bromodichloromethane	ND	4.8	0.5
Dibromomethane	ND	4.8	0.4
4-Methyl-2-Pentanone	ND	9.7	0.7
cis-1,3-Dichloropropene	ND	4.8	0.6
Toluene	ND	4.8	0.4
trans-1,3-Dichloropropene	ND	4.8	0.6
1,1,2-Trichloroethane	ND	4.8	0.5
2-Hexanone	ND	9.7	0.7
1,3-Dichloropropane	ND	4.8	0.6
Tetrachloroethene	ND	4.8	0.4
Dibromochloromethane	ND	4.8	0.5
1,2-Dibromoethane	ND	4.8	0.6
Chlorobenzene	ND	4.8	0.7
1,1,1,2-Tetrachloroethane	ND	4.8	0.5
Ethylbenzene	ND	4.8	0.4
m,p-Xylenes	ND	4.8	1.0
o-Xylene	ND	4.8	0.4
Styrene	ND	4.8	0.5
Bromoform	ND	4.8	0.5
Isopropylbenzene	ND	4.8	0.4
1,1,2,2-Tetrachloroethane	ND	4.8	0.6
1,2,3-Trichloropropane	ND	4.8	0.5
Propylbenzene	ND	4.8	0.4
Bromobenzene	ND	4.8	0.6
1,3,5-Trimethylbenzene	ND	4.8	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-3B	Diln Fac:	0.9653
Lab ID:	282049-003	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.8	0.5
4-Chlorotoluene	ND	4.8	0.5
tert-Butylbenzene	ND	4.8	0.4
1,2,4-Trimethylbenzene	ND	4.8	0.4
sec-Butylbenzene	ND	4.8	0.4
para-Isopropyl Toluene	ND	4.8	0.3
1,3-Dichlorobenzene	ND	4.8	0.7
1,4-Dichlorobenzene	ND	4.8	0.5
n-Butylbenzene	ND	4.8	0.5
1,2-Dichlorobenzene	ND	4.8	0.7
1,2-Dibromo-3-Chloropropane	ND	4.8	0.6
1,2,4-Trichlorobenzene	ND	4.8	1.0
Hexachlorobutadiene	ND	4.8	0.4
Naphthalene	ND	4.8	0.6
1,2,3-Trichlorobenzene	ND	4.8	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	103	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	106	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-4C	Diln Fac:	0.9671
Lab ID:	282049-004	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.8
Chloromethane	ND	9.7	0.9
Vinyl Chloride	ND	9.7	0.5
Bromomethane	ND	9.7	1.2
Chloroethane	ND	9.7	0.6
Trichlorofluoromethane	ND	4.8	0.6
Acetone	51	19	3.7
Freon 113	ND	4.8	0.4
1,1-Dichloroethene	ND	4.8	0.4
Methylene Chloride	ND	19	3.2
Carbon Disulfide	0.8 J	4.8	0.4
MTBE	ND	4.8	0.7
trans-1,2-Dichloroethene	ND	4.8	0.6
Vinyl Acetate	ND	48	1.0
1,1-Dichloroethane	ND	4.8	0.6
2-Butanone	11	9.7	1.0
cis-1,2-Dichloroethene	ND	4.8	0.5
2,2-Dichloropropane	ND	4.8	0.5
Chloroform	ND	4.8	0.6
Bromochloromethane	ND	4.8	0.5
1,1,1-Trichloroethane	ND	4.8	0.5
1,1-Dichloropropene	ND	4.8	0.4
Carbon Tetrachloride	ND	4.8	0.4
1,2-Dichloroethane	ND	4.8	0.6
Benzene	ND	4.8	0.5
Trichloroethene	ND	4.8	0.5
1,2-Dichloropropane	ND	4.8	0.5
Bromodichloromethane	ND	4.8	0.5
Dibromomethane	ND	4.8	0.4
4-Methyl-2-Pentanone	ND	9.7	0.7
cis-1,3-Dichloropropene	ND	4.8	0.6
Toluene	ND	4.8	0.4
trans-1,3-Dichloropropene	ND	4.8	0.6
1,1,2-Trichloroethane	ND	4.8	0.5
2-Hexanone	ND	9.7	0.7
1,3-Dichloropropane	ND	4.8	0.6
Tetrachloroethene	ND	4.8	0.4
Dibromochloromethane	ND	4.8	0.5
1,2-Dibromoethane	ND	4.8	0.6
Chlorobenzene	ND	4.8	0.7
1,1,1,2-Tetrachloroethane	ND	4.8	0.5
Ethylbenzene	ND	4.8	0.4
m,p-Xylenes	ND	4.8	1.0
o-Xylene	ND	4.8	0.4
Styrene	ND	4.8	0.5
Bromoform	ND	4.8	0.5
Isopropylbenzene	ND	4.8	0.4
1,1,2,2-Tetrachloroethane	ND	4.8	0.6
1,2,3-Trichloropropane	ND	4.8	0.5
Propylbenzene	ND	4.8	0.4
Bromobenzene	ND	4.8	0.6
1,3,5-Trimethylbenzene	ND	4.8	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-4C	Diln Fac:	0.9671
Lab ID:	282049-004	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.8	0.5
4-Chlorotoluene	ND	4.8	0.5
tert-Butylbenzene	ND	4.8	0.4
1,2,4-Trimethylbenzene	ND	4.8	0.4
sec-Butylbenzene	ND	4.8	0.4
para-Isopropyl Toluene	ND	4.8	0.3
1,3-Dichlorobenzene	ND	4.8	0.7
1,4-Dichlorobenzene	ND	4.8	0.5
n-Butylbenzene	ND	4.8	0.5
1,2-Dichlorobenzene	ND	4.8	0.7
1,2-Dibromo-3-Chloropropane	ND	4.8	0.6
1,2,4-Trichlorobenzene	ND	4.8	1.0
Hexachlorobutadiene	ND	4.8	0.4
Naphthalene	ND	4.8	0.6
1,2,3-Trichlorobenzene	ND	4.8	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	104	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	106	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-2-2B	Diln Fac:	0.9671
Lab ID:	282049-005	Batch#:	240072
Matrix:	Soil	Sampled:	10/11/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.8
Chloromethane	ND	9.7	0.9
Vinyl Chloride	ND	9.7	0.5
Bromomethane	ND	9.7	1.2
Chloroethane	ND	9.7	0.6
Trichlorofluoromethane	ND	4.8	0.6
Acetone	ND	19	3.7
Freon 113	ND	4.8	0.4
1,1-Dichloroethene	ND	4.8	0.4
Methylene Chloride	ND	19	3.2
Carbon Disulfide	ND	4.8	0.4
MTBE	ND	4.8	0.7
trans-1,2-Dichloroethene	ND	4.8	0.6
Vinyl Acetate	ND	48	1.0
1,1-Dichloroethane	ND	4.8	0.6
2-Butanone	ND	9.7	1.0
cis-1,2-Dichloroethene	ND	4.8	0.5
2,2-Dichloropropane	ND	4.8	0.5
Chloroform	ND	4.8	0.6
Bromochloromethane	ND	4.8	0.5
1,1,1-Trichloroethane	ND	4.8	0.5
1,1-Dichloropropene	ND	4.8	0.4
Carbon Tetrachloride	ND	4.8	0.4
1,2-Dichloroethane	ND	4.8	0.6
Benzene	ND	4.8	0.5
Trichloroethene	ND	4.8	0.5
1,2-Dichloropropane	ND	4.8	0.5
Bromodichloromethane	ND	4.8	0.5
Dibromomethane	ND	4.8	0.4
4-Methyl-2-Pentanone	ND	9.7	0.7
cis-1,3-Dichloropropene	ND	4.8	0.6
Toluene	ND	4.8	0.4
trans-1,3-Dichloropropene	ND	4.8	0.6
1,1,2-Trichloroethane	ND	4.8	0.5
2-Hexanone	ND	9.7	0.7
1,3-Dichloropropane	ND	4.8	0.6
Tetrachloroethene	ND	4.8	0.4
Dibromochloromethane	ND	4.8	0.5
1,2-Dibromoethane	ND	4.8	0.6
Chlorobenzene	ND	4.8	0.7
1,1,1,2-Tetrachloroethane	ND	4.8	0.5
Ethylbenzene	ND	4.8	0.4
m,p-Xylenes	ND	4.8	1.0
o-Xylene	ND	4.8	0.4
Styrene	ND	4.8	0.5
Bromoform	ND	4.8	0.5
Isopropylbenzene	ND	4.8	0.4
1,1,2,2-Tetrachloroethane	ND	4.8	0.6
1,2,3-Trichloropropane	ND	4.8	0.5
Propylbenzene	ND	4.8	0.4
Bromobenzene	ND	4.8	0.6
1,3,5-Trimethylbenzene	ND	4.8	0.4
2-Chlorotoluene	ND	4.8	0.5

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-2-2B	Diln Fac:	0.9671
Lab ID:	282049-005	Batch#:	240072
Matrix:	Soil	Sampled:	10/11/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.8	0.5
tert-Butylbenzene	ND	4.8	0.4
1,2,4-Trimethylbenzene	ND	4.8	0.4
sec-Butylbenzene	ND	4.8	0.4
para-Isopropyl Toluene	ND	4.8	0.3
1,3-Dichlorobenzene	ND	4.8	0.7
1,4-Dichlorobenzene	ND	4.8	0.5
n-Butylbenzene	ND	4.8	0.5
1,2-Dichlorobenzene	ND	4.8	0.7
1,2-Dibromo-3-Chloropropane	ND	4.8	0.6
1,2,4-Trichlorobenzene	ND	4.8	1.0
Hexachlorobutadiene	ND	4.8	0.4
Naphthalene	ND	4.8	0.6
1,2,3-Trichlorobenzene	ND	4.8	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-134
1,2-Dichloroethane-d4	105	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	102	78-123

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-2-5B	Diln Fac:	0.9363
Lab ID:	282049-006	Batch#:	240072
Matrix:	Soil	Sampled:	10/11/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.8
Chloromethane	ND	9.4	0.8
Vinyl Chloride	ND	9.4	0.5
Bromomethane	ND	9.4	1.2
Chloroethane	ND	9.4	0.6
Trichlorofluoromethane	ND	4.7	0.6
Acetone	9.4 J	19	3.6
Freon 113	ND	4.7	0.4
1,1-Dichloroethene	ND	4.7	0.4
Methylene Chloride	ND	19	3.1
Carbon Disulfide	0.8 J	4.7	0.4
MTBE	ND	4.7	0.7
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	1.0
1,1-Dichloroethane	ND	4.7	0.5
2-Butanone	ND	9.4	1.0
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.5
Chloroform	ND	4.7	0.5
Bromochloromethane	ND	4.7	0.5
1,1,1-Trichloroethane	ND	4.7	0.4
1,1-Dichloropropene	ND	4.7	0.4
Carbon Tetrachloride	ND	4.7	0.4
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.5
Trichloroethene	ND	4.7	0.5
1,2-Dichloropropane	ND	4.7	0.5
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.4
4-Methyl-2-Pentanone	ND	9.4	0.7
cis-1,3-Dichloropropene	ND	4.7	0.6
Toluene	ND	4.7	0.4
trans-1,3-Dichloropropene	ND	4.7	0.5
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.7
1,3-Dichloropropane	ND	4.7	0.6
Tetrachloroethene	ND	4.7	0.4
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.5
Chlorobenzene	ND	4.7	0.7
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.4
m,p-Xylenes	ND	4.7	0.9
o-Xylene	ND	4.7	0.4
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.5
Isopropylbenzene	ND	4.7	0.4
1,1,2,2-Tetrachloroethane	ND	4.7	0.6
1,2,3-Trichloropropane	ND	4.7	0.4
Propylbenzene	ND	4.7	0.4
Bromobenzene	ND	4.7	0.6
1,3,5-Trimethylbenzene	ND	4.7	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-2-5B	Diln Fac:	0.9363
Lab ID:	282049-006	Batch#:	240072
Matrix:	Soil	Sampled:	10/11/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.7	0.5
4-Chlorotoluene	ND	4.7	0.5
tert-Butylbenzene	ND	4.7	0.4
1,2,4-Trimethylbenzene	ND	4.7	0.4
sec-Butylbenzene	ND	4.7	0.4
para-Isopropyl Toluene	ND	4.7	0.3
1,3-Dichlorobenzene	ND	4.7	0.6
1,4-Dichlorobenzene	ND	4.7	0.5
n-Butylbenzene	ND	4.7	0.5
1,2-Dichlorobenzene	ND	4.7	0.7
1,2-Dibromo-3-Chloropropane	ND	4.7	0.5
1,2,4-Trichlorobenzene	ND	4.7	0.9
Hexachlorobutadiene	ND	4.7	0.4
Naphthalene	ND	4.7	0.6
1,2,3-Trichlorobenzene	ND	4.7	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	93	80-120
Bromofluorobenzene	104	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-1B	Diln Fac:	0.9398
Lab ID:	282049-007	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.8
Chloromethane	ND	9.4	0.8
Vinyl Chloride	ND	9.4	0.5
Bromomethane	ND	9.4	1.2
Chloroethane	ND	9.4	0.6
Trichlorofluoromethane	ND	4.7	0.6
Acetone	ND	19	3.6
Freon 113	ND	4.7	0.4
1,1-Dichloroethene	ND	4.7	0.4
Methylene Chloride	ND	19	3.1
Carbon Disulfide	ND	4.7	0.4
MTBE	ND	4.7	0.7
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	1.0
1,1-Dichloroethane	ND	4.7	0.5
2-Butanone	ND	9.4	1.0
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.5
Chloroform	ND	4.7	0.5
Bromochloromethane	ND	4.7	0.5
1,1,1-Trichloroethane	ND	4.7	0.4
1,1-Dichloropropene	ND	4.7	0.4
Carbon Tetrachloride	ND	4.7	0.4
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.5
Trichloroethene	ND	4.7	0.5
1,2-Dichloropropane	ND	4.7	0.5
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.4
4-Methyl-2-Pentanone	ND	9.4	0.7
cis-1,3-Dichloropropene	ND	4.7	0.6
Toluene	ND	4.7	0.4
trans-1,3-Dichloropropene	ND	4.7	0.5
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.7
1,3-Dichloropropane	ND	4.7	0.6
Tetrachloroethene	ND	4.7	0.4
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.6
Chlorobenzene	ND	4.7	0.7
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.4
m,p-Xylenes	ND	4.7	0.9
o-Xylene	ND	4.7	0.4
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.5
Isopropylbenzene	ND	4.7	0.4
1,1,2,2-Tetrachloroethane	ND	4.7	0.6
1,2,3-Trichloropropane	ND	4.7	0.4
Propylbenzene	ND	4.7	0.4
Bromobenzene	ND	4.7	0.6
1,3,5-Trimethylbenzene	ND	4.7	0.4
2-Chlorotoluene	ND	4.7	0.5

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-1B	Diln Fac:	0.9398
Lab ID:	282049-007	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.7	0.5
tert-Butylbenzene	ND	4.7	0.4
1,2,4-Trimethylbenzene	ND	4.7	0.4
sec-Butylbenzene	ND	4.7	0.4
para-Isopropyl Toluene	ND	4.7	0.3
1,3-Dichlorobenzene	ND	4.7	0.6
1,4-Dichlorobenzene	ND	4.7	0.5
n-Butylbenzene	ND	4.7	0.5
1,2-Dichlorobenzene	ND	4.7	0.7
1,2-Dibromo-3-Chloropropane	ND	4.7	0.5
1,2,4-Trichlorobenzene	ND	4.7	0.9
Hexachlorobutadiene	ND	4.7	0.4
Naphthalene	ND	4.7	0.6
1,2,3-Trichlorobenzene	ND	4.7	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	104	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	105	78-123

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-2B	Diln Fac:	0.9747
Lab ID:	282049-008	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.8
Chloromethane	ND	9.7	0.9
Vinyl Chloride	ND	9.7	0.5
Bromomethane	ND	9.7	1.3
Chloroethane	ND	9.7	0.6
Trichlorofluoromethane	ND	4.9	0.6
Acetone	9.6 J	19	3.7
Freon 113	ND	4.9	0.4
1,1-Dichloroethene	ND	4.9	0.4
Methylene Chloride	ND	19	3.2
Carbon Disulfide	ND	4.9	0.4
MTBE	ND	4.9	0.7
trans-1,2-Dichloroethene	ND	4.9	0.6
Vinyl Acetate	ND	49	1.0
1,1-Dichloroethane	ND	4.9	0.6
2-Butanone	ND	9.7	1.0
cis-1,2-Dichloroethene	ND	4.9	0.5
2,2-Dichloropropane	ND	4.9	0.5
Chloroform	ND	4.9	0.6
Bromochloromethane	ND	4.9	0.5
1,1,1-Trichloroethane	ND	4.9	0.5
1,1-Dichloropropene	ND	4.9	0.4
Carbon Tetrachloride	ND	4.9	0.4
1,2-Dichloroethane	ND	4.9	0.6
Benzene	ND	4.9	0.5
Trichloroethene	ND	4.9	0.5
1,2-Dichloropropane	ND	4.9	0.5
Bromodichloromethane	ND	4.9	0.5
Dibromomethane	ND	4.9	0.4
4-Methyl-2-Pentanone	ND	9.7	0.8
cis-1,3-Dichloropropene	ND	4.9	0.6
Toluene	ND	4.9	0.4
trans-1,3-Dichloropropene	ND	4.9	0.6
1,1,2-Trichloroethane	ND	4.9	0.5
2-Hexanone	ND	9.7	0.7
1,3-Dichloropropane	ND	4.9	0.6
Tetrachloroethene	ND	4.9	0.4
Dibromochloromethane	ND	4.9	0.5
1,2-Dibromoethane	ND	4.9	0.6
Chlorobenzene	ND	4.9	0.7
1,1,1,2-Tetrachloroethane	ND	4.9	0.5
Ethylbenzene	ND	4.9	0.4
m,p-Xylenes	ND	4.9	1.0
o-Xylene	ND	4.9	0.4
Styrene	ND	4.9	0.5
Bromoform	ND	4.9	0.5
Isopropylbenzene	ND	4.9	0.4
1,1,2,2-Tetrachloroethane	ND	4.9	0.6
1,2,3-Trichloropropane	ND	4.9	0.5
Propylbenzene	ND	4.9	0.4
Bromobenzene	ND	4.9	0.6
1,3,5-Trimethylbenzene	ND	4.9	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-2B	Diln Fac:	0.9747
Lab ID:	282049-008	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.9	0.5
4-Chlorotoluene	ND	4.9	0.5
tert-Butylbenzene	ND	4.9	0.4
1,2,4-Trimethylbenzene	ND	4.9	0.5
sec-Butylbenzene	ND	4.9	0.4
para-Isopropyl Toluene	ND	4.9	0.3
1,3-Dichlorobenzene	ND	4.9	0.7
1,4-Dichlorobenzene	ND	4.9	0.5
n-Butylbenzene	ND	4.9	0.5
1,2-Dichlorobenzene	ND	4.9	0.7
1,2-Dibromo-3-Chloropropane	ND	4.9	0.6
1,2,4-Trichlorobenzene	ND	4.9	1.0
Hexachlorobutadiene	ND	4.9	0.4
Naphthalene	ND	4.9	0.6
1,2,3-Trichlorobenzene	ND	4.9	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	107	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	104	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-4B	Diln Fac:	0.8961
Lab ID:	282049-009	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.0	0.8
Chloromethane	ND	9.0	0.8
Vinyl Chloride	ND	9.0	0.5
Bromomethane	ND	9.0	1.2
Chloroethane	ND	9.0	0.6
Trichlorofluoromethane	ND	4.5	0.6
Acetone	4.9 J	18	3.4
Freon 113	ND	4.5	0.4
1,1-Dichloroethene	ND	4.5	0.4
Methylene Chloride	ND	18	3.0
Carbon Disulfide	ND	4.5	0.4
MTBE	ND	4.5	0.6
trans-1,2-Dichloroethene	ND	4.5	0.6
Vinyl Acetate	ND	45	0.9
1,1-Dichloroethane	ND	4.5	0.5
2-Butanone	ND	9.0	0.9
cis-1,2-Dichloroethene	ND	4.5	0.5
2,2-Dichloropropane	ND	4.5	0.4
Chloroform	ND	4.5	0.5
Bromochloromethane	ND	4.5	0.5
1,1,1-Trichloroethane	ND	4.5	0.4
1,1-Dichloropropene	ND	4.5	0.4
Carbon Tetrachloride	ND	4.5	0.3
1,2-Dichloroethane	ND	4.5	0.5
Benzene	ND	4.5	0.5
Trichloroethene	ND	4.5	0.5
1,2-Dichloropropane	ND	4.5	0.5
Bromodichloromethane	ND	4.5	0.5
Dibromomethane	ND	4.5	0.4
4-Methyl-2-Pentanone	ND	9.0	0.7
cis-1,3-Dichloropropene	ND	4.5	0.6
Toluene	ND	4.5	0.4
trans-1,3-Dichloropropene	ND	4.5	0.5
1,1,2-Trichloroethane	ND	4.5	0.5
2-Hexanone	ND	9.0	0.6
1,3-Dichloropropane	ND	4.5	0.6
Tetrachloroethene	ND	4.5	0.4
Dibromochloromethane	ND	4.5	0.5
1,2-Dibromoethane	ND	4.5	0.5
Chlorobenzene	ND	4.5	0.7
1,1,1,2-Tetrachloroethane	ND	4.5	0.4
Ethylbenzene	ND	4.5	0.4
m,p-Xylenes	ND	4.5	0.9
o-Xylene	ND	4.5	0.4
Styrene	ND	4.5	0.5
Bromoform	ND	4.5	0.5
Isopropylbenzene	ND	4.5	0.3
1,1,2,2-Tetrachloroethane	ND	4.5	0.5
1,2,3-Trichloropropane	ND	4.5	0.4
Propylbenzene	ND	4.5	0.4
Bromobenzene	ND	4.5	0.5
1,3,5-Trimethylbenzene	ND	4.5	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-4B	Diln Fac:	0.8961
Lab ID:	282049-009	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.5	0.5
4-Chlorotoluene	ND	4.5	0.5
tert-Butylbenzene	ND	4.5	0.4
1,2,4-Trimethylbenzene	ND	4.5	0.4
sec-Butylbenzene	ND	4.5	0.3
para-Isopropyl Toluene	ND	4.5	0.3
1,3-Dichlorobenzene	ND	4.5	0.6
1,4-Dichlorobenzene	ND	4.5	0.5
n-Butylbenzene	ND	4.5	0.5
1,2-Dichlorobenzene	ND	4.5	0.7
1,2-Dibromo-3-Chloropropane	ND	4.5	0.5
1,2,4-Trichlorobenzene	ND	4.5	0.9
Hexachlorobutadiene	ND	4.5	0.3
Naphthalene	ND	4.5	0.6
1,2,3-Trichlorobenzene	ND	4.5	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	110	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	102	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-5B	Diln Fac:	0.9709
Lab ID:	282049-010	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.8
Chloromethane	ND	9.7	0.9
Vinyl Chloride	ND	9.7	0.5
Bromomethane	ND	9.7	1.2
Chloroethane	ND	9.7	0.6
Trichlorofluoromethane	ND	4.9	0.6
Acetone	4.0 J	19	3.7
Freon 113	ND	4.9	0.4
1,1-Dichloroethene	ND	4.9	0.4
Methylene Chloride	ND	19	3.2
Carbon Disulfide	ND	4.9	0.4
MTBE	ND	4.9	0.7
trans-1,2-Dichloroethene	ND	4.9	0.6
Vinyl Acetate	ND	49	1.0
1,1-Dichloroethane	ND	4.9	0.6
2-Butanone	ND	9.7	1.0
cis-1,2-Dichloroethene	ND	4.9	0.5
2,2-Dichloropropane	ND	4.9	0.5
Chloroform	ND	4.9	0.6
Bromochloromethane	ND	4.9	0.5
1,1,1-Trichloroethane	ND	4.9	0.5
1,1-Dichloropropene	ND	4.9	0.4
Carbon Tetrachloride	ND	4.9	0.4
1,2-Dichloroethane	ND	4.9	0.6
Benzene	ND	4.9	0.5
Trichloroethene	ND	4.9	0.5
1,2-Dichloropropane	ND	4.9	0.5
Bromodichloromethane	ND	4.9	0.5
Dibromomethane	ND	4.9	0.4
4-Methyl-2-Pentanone	ND	9.7	0.8
cis-1,3-Dichloropropene	ND	4.9	0.6
Toluene	ND	4.9	0.4
trans-1,3-Dichloropropene	ND	4.9	0.6
1,1,2-Trichloroethane	ND	4.9	0.5
2-Hexanone	ND	9.7	0.7
1,3-Dichloropropane	ND	4.9	0.6
Tetrachloroethene	ND	4.9	0.4
Dibromochloromethane	ND	4.9	0.5
1,2-Dibromoethane	ND	4.9	0.6
Chlorobenzene	ND	4.9	0.7
1,1,1,2-Tetrachloroethane	ND	4.9	0.5
Ethylbenzene	ND	4.9	0.4
m,p-Xylenes	ND	4.9	1.0
o-Xylene	ND	4.9	0.4
Styrene	ND	4.9	0.5
Bromoform	ND	4.9	0.5
Isopropylbenzene	ND	4.9	0.4
1,1,2,2-Tetrachloroethane	ND	4.9	0.6
1,2,3-Trichloropropane	ND	4.9	0.5
Propylbenzene	ND	4.9	0.4
Bromobenzene	ND	4.9	0.6
1,3,5-Trimethylbenzene	ND	4.9	0.4

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-3-5B	Diln Fac:	0.9709
Lab ID:	282049-010	Batch#:	240072
Matrix:	Soil	Sampled:	10/10/16
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Analyzed:	10/12/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.9	0.5
4-Chlorotoluene	ND	4.9	0.5
tert-Butylbenzene	ND	4.9	0.4
1,2,4-Trimethylbenzene	ND	4.9	0.5
sec-Butylbenzene	ND	4.9	0.4
para-Isopropyl Toluene	ND	4.9	0.3
1,3-Dichlorobenzene	ND	4.9	0.7
1,4-Dichlorobenzene	ND	4.9	0.5
n-Butylbenzene	ND	4.9	0.5
1,2-Dichlorobenzene	ND	4.9	0.7
1,2-Dibromo-3-Chloropropane	ND	4.9	0.6
1,2,4-Trichlorobenzene	ND	4.9	1.0
Hexachlorobutadiene	ND	4.9	0.4
Naphthalene	ND	4.9	0.6
1,2,3-Trichlorobenzene	ND	4.9	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	102	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	102	78-123

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855351	Batch#:	240072
Matrix:	Soil	Analyzed:	10/12/16
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	21.28	85	70-134
Benzene	25.00	22.69	91	80-123
Trichloroethene	25.00	22.66	91	80-128
Toluene	25.00	21.81	87	80-120
Chlorobenzene	25.00	21.71	87	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	95	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	100	78-123

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855352	Batch#:	240072
Matrix:	Soil	Analyzed:	10/12/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
Freon 12	ND	10	0.8
Chloromethane	ND	10	0.9
Vinyl Chloride	ND	10	0.5
Bromomethane	ND	10	1.3
Chloroethane	ND	10	0.6
Trichlorofluoromethane	ND	5.0	0.6
Acetone	ND	20	3.8
Freon 113	ND	5.0	0.4
1,1-Dichloroethene	ND	5.0	0.5
Methylene Chloride	ND	20	3.3
Carbon Disulfide	ND	5.0	0.5
MTBE	ND	5.0	0.7
trans-1,2-Dichloroethene	ND	5.0	0.6
Vinyl Acetate	ND	50	1.1
1,1-Dichloroethane	ND	5.0	0.6
2-Butanone	ND	10	1.0
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.5
Chloroform	ND	5.0	0.6
Bromochloromethane	ND	5.0	0.5
1,1,1-Trichloroethane	ND	5.0	0.5
1,1-Dichloropropene	ND	5.0	0.4
Carbon Tetrachloride	ND	5.0	0.4
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.5
Trichloroethene	ND	5.0	0.5
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.4
4-Methyl-2-Pentanone	ND	10	0.8
cis-1,3-Dichloropropene	ND	5.0	0.7
Toluene	ND	5.0	0.4
trans-1,3-Dichloropropene	ND	5.0	0.6
1,1,2-Trichloroethane	ND	5.0	0.6
2-Hexanone	ND	10	0.7
1,3-Dichloropropane	ND	5.0	0.7
Tetrachloroethene	ND	5.0	0.4
Dibromochloromethane	ND	5.0	0.6
1,2-Dibromoethane	ND	5.0	0.6
Chlorobenzene	ND	5.0	0.7
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.4
m,p-Xylenes	ND	5.0	1.0
o-Xylene	ND	5.0	0.5
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.6
Isopropylbenzene	ND	5.0	0.4
1,1,2,2-Tetrachloroethane	ND	5.0	0.6
1,2,3-Trichloropropane	ND	5.0	0.5
Propylbenzene	ND	5.0	0.4
Bromobenzene	ND	5.0	0.6
1,3,5-Trimethylbenzene	ND	5.0	0.4
2-Chlorotoluene	ND	5.0	0.6

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855352	Batch#:	240072
Matrix:	Soil	Analyzed:	10/12/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	5.0	0.5
tert-Butylbenzene	ND	5.0	0.4
1,2,4-Trimethylbenzene	ND	5.0	0.5
sec-Butylbenzene	ND	5.0	0.4
para-Isopropyl Toluene	ND	5.0	0.3
1,3-Dichlorobenzene	ND	5.0	0.7
1,4-Dichlorobenzene	ND	5.0	0.6
n-Butylbenzene	ND	5.0	0.5
1,2-Dichlorobenzene	ND	5.0	0.7
1,2-Dibromo-3-Chloropropane	ND	5.0	0.6
1,2,4-Trichlorobenzene	ND	5.0	1.0
Hexachlorobutadiene	ND	5.0	0.4
Naphthalene	ND	5.0	0.6
1,2,3-Trichlorobenzene	ND	5.0	0.8

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 5030B
Project#:	20172194	Analysis:	EPA 8260B
Field ID:	B-1-1	Batch#:	240072
MSS Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Analyzed:	10/12/16
Basis:	as received		

Type: MS
Diln Fac: 0.9728
Lab ID: QC855374

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.4567	48.64	48.38	99	56-133
Benzene	<0.5082	48.64	46.76	96	57-120
Trichloroethene	<0.5058	48.64	52.45	108	49-145
Toluene	<0.4182	48.64	43.36	89	51-120
Chlorobenzene	<0.7192	48.64	41.61	86	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	96	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	99	78-123

Type: MSD
Diln Fac: 0.9524
Lab ID: QC855375

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	47.62	49.42	104	56-133	4	46
Benzene	47.62	47.92	101	57-120	5	44
Trichloroethene	47.62	53.36	112	49-145	4	46
Toluene	47.62	44.68	94	51-120	5	47
Chlorobenzene	47.62	43.05	90	47-120	6	50

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	95	80-138
Toluene-d8	95	80-120
Bromofluorobenzene	98	78-123

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-W	Batch#:	240099
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Prepared:	10/12/16
Diln Fac:	50.00	Analyzed:	10/13/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	470	110
Phenol	ND	470	78
bis(2-Chloroethyl)ether	ND	470	76
2-Chlorophenol	ND	470	75
1,3-Dichlorobenzene	ND	470	77
1,4-Dichlorobenzene	ND	470	78
Benzyl alcohol	ND	470	71
1,2-Dichlorobenzene	ND	470	79
2-Methylphenol	ND	470	68
bis(2-Chloroisopropyl) ether	ND	470	130
4-Methylphenol	ND	470	72
N-Nitroso-di-n-propylamine	ND	470	94
Hexachloroethane	ND	470	82
Nitrobenzene	ND	470	76
Isophorone	ND	470	89
2-Nitrophenol	ND	940	120
2,4-Dimethylphenol	ND	470	60
Benzoic acid	ND	2,400	480
bis(2-Chloroethoxy)methane	ND	470	59
2,4-Dichlorophenol	ND	470	63
1,2,4-Trichlorobenzene	ND	470	67
Naphthalene	ND	470	68
4-Chloroaniline	ND	470	59
Hexachlorobutadiene	ND	470	63
4-Chloro-3-methylphenol	ND	470	64
2-Methylnaphthalene	ND	470	69
Hexachlorocyclopentadiene	ND	940	240
2,4,6-Trichlorophenol	ND	470	46
2,4,5-Trichlorophenol	ND	470	45
2-Chloronaphthalene	ND	470	73
2-Nitroaniline	ND	940	84
Dimethylphthalate	ND	470	73
Acenaphthylene	ND	470	72
2,6-Dinitrotoluene	ND	470	66
3-Nitroaniline	ND	940	49
Acenaphthene	ND	470	65
2,4-Dinitrophenol	ND	940	99
4-Nitrophenol	ND	940	56
Dibenzofuran	ND	470	69
2,4-Dinitrotoluene	ND	470	69
Diethylphthalate	ND	470	76
Fluorene	ND	470	73
4-Chlorophenyl-phenylether	ND	470	64
4-Nitroaniline	ND	940	56
4,6-Dinitro-2-methylphenol	ND	940	78
N-Nitrosodiphenylamine	ND	470	58
Azobenzene	ND	470	75
4-Bromophenyl-phenylether	ND	470	57
Hexachlorobenzene	ND	470	58
Pentachlorophenol	ND	940	61
Phenanthrene	ND	470	62
Anthracene	ND	470	63

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-W	Batch#:	240099
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Prepared:	10/12/16
Diln Fac:	50.00	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	470	55
Fluoranthene	ND	470	74
Pyrene	ND	470	59
Butylbenzylphthalate	ND	470	65
3,3'-Dichlorobenzidine	ND	940	30
Benzo(a)anthracene	ND	470	63
Chrysene	ND	470	67
bis(2-Ethylhexyl)phthalate	ND	470	80
Di-n-octylphthalate	ND	470	61
Benzo(b)fluoranthene	ND	470	65
Benzo(k)fluoranthene	ND	470	71
Benzo(a)pyrene	ND	470	53
Indeno(1,2,3-cd)pyrene	ND	470	68
Dibenz(a,h)anthracene	ND	470	64
Benzo(g,h,i)perylene	ND	470	71

Surrogate	%REC	Limits
2-Fluorophenol	DO	38-120
Phenol-d5	DO	38-120
2,4,6-Tribromophenol	DO	46-120
Nitrobenzene-d5	DO	51-120
2-Fluorobiphenyl	DO	54-120
Terphenyl-d14	DO	21-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855467	Batch#:	240099
Matrix:	Water	Prepared:	10/12/16
Units:	ug/L	Analyzed:	10/13/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	2.3
Phenol	ND	10	1.7
bis(2-Chloroethyl)ether	ND	10	1.6
2-Chlorophenol	ND	10	1.6
1,3-Dichlorobenzene	ND	10	1.6
1,4-Dichlorobenzene	ND	10	1.6
Benzyl alcohol	ND	10	1.5
1,2-Dichlorobenzene	ND	10	1.7
2-Methylphenol	ND	10	1.5
bis(2-Chloroisopropyl) ether	ND	10	2.7
4-Methylphenol	ND	10	1.5
N-Nitroso-di-n-propylamine	ND	10	2.0
Hexachloroethane	ND	10	1.7
Nitrobenzene	ND	10	1.6
Isophorone	ND	10	1.9
2-Nitrophenol	ND	20	2.6
2,4-Dimethylphenol	ND	10	1.3
Benzoic acid	ND	50	10
bis(2-Chloroethoxy)methane	ND	10	1.2
2,4-Dichlorophenol	ND	10	1.3
1,2,4-Trichlorobenzene	ND	10	1.4
Naphthalene	ND	10	1.4
4-Chloroaniline	ND	10	1.3
Hexachlorobutadiene	ND	10	1.3
4-Chloro-3-methylphenol	ND	10	1.4
2-Methylnaphthalene	ND	10	1.5
Hexachlorocyclopentadiene	ND	20	5.0
2,4,6-Trichlorophenol	ND	10	0.98
2,4,5-Trichlorophenol	ND	10	0.94
2-Chloronaphthalene	ND	10	1.5
2-Nitroaniline	ND	20	1.8
Dimethylphthalate	ND	10	1.5
Acenaphthylene	ND	10	1.5
2,6-Dinitrotoluene	ND	10	1.4
3-Nitroaniline	ND	20	1.0
Acenaphthene	ND	10	1.4
2,4-Dinitrophenol	ND	20	2.1
4-Nitrophenol	ND	20	1.2
Dibenzofuran	ND	10	1.5
2,4-Dinitrotoluene	ND	10	1.5
Diethylphthalate	ND	10	1.6
Fluorene	ND	10	1.5
4-Chlorophenyl-phenylether	ND	10	1.4
4-Nitroaniline	ND	20	1.2
4,6-Dinitro-2-methylphenol	ND	20	1.7
N-Nitrosodiphenylamine	ND	10	1.2
Azobenzene	ND	10	1.6
4-Bromophenyl-phenylether	ND	10	1.2
Hexachlorobenzene	ND	10	1.2
Pentachlorophenol	ND	20	1.3
Phenanthrene	ND	10	1.3
Anthracene	ND	10	1.3
Di-n-butylphthalate	ND	10	1.2

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855467	Batch#:	240099
Matrix:	Water	Prepared:	10/12/16
Units:	ug/L	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Fluoranthene	ND	10	1.6
Pyrene	ND	10	1.3
Butylbenzylphthalate	ND	10	1.4
3,3'-Dichlorobenzidine	ND	20	0.63
Benzo(a)anthracene	ND	10	1.3
Chrysene	ND	10	1.4
bis(2-Ethylhexyl)phthalate	ND	10	1.7
Di-n-octylphthalate	ND	10	1.3
Benzo(b)fluoranthene	ND	10	1.4
Benzo(k)fluoranthene	ND	10	1.5
Benzo(a)pyrene	ND	10	1.1
Indeno(1,2,3-cd)pyrene	ND	10	1.4
Dibenz(a,h)anthracene	ND	10	1.4
Benzo(g,h,i)perylene	ND	10	1.5

Surrogate	%REC	Limits
2-Fluorophenol	80	38-120
Phenol-d5	77	38-120
2,4,6-Tribromophenol	94	46-120
Nitrobenzene-d5	74	51-120
2-Fluorobiphenyl	84	54-120
Terphenyl-d14	87	21-120

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	240099
Units:	ug/L	Prepared:	10/12/16
Diln Fac:	1.000	Analyzed:	10/14/16

Type: BS Lab ID: QC855468

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	64.54	81	46-120
2-Chlorophenol	80.00	68.76	86	48-120
1,4-Dichlorobenzene	80.00	65.17	81	52-120
N-Nitroso-di-n-propylamine	80.00	65.86	82	46-120
1,2,4-Trichlorobenzene	80.00	65.54	82	53-120
4-Chloro-3-methylphenol	80.00	68.15	85	40-120
Acenaphthene	30.00	28.78	96	61-120
4-Nitrophenol	80.00	74.75	93	40-120
2,4-Dinitrotoluene	80.00	75.20	94	64-120
Pentachlorophenol	80.00	71.55	89	47-120
Pyrene	30.00	28.44	95	62-120

Surrogate	%REC	Limits
2-Fluorophenol	86	38-120
Phenol-d5	83	38-120
2,4,6-Tribromophenol	110	46-120
Nitrobenzene-d5	85	51-120
2-Fluorobiphenyl	89	54-120
Terphenyl-d14	95	21-120

Type: BSD Lab ID: QC855469

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	54.14	68	46-120	18	55
2-Chlorophenol	80.00	57.14	71	48-120	18	54
1,4-Dichlorobenzene	80.00	53.79	67	52-120	19	30
N-Nitroso-di-n-propylamine	80.00	56.84	71	46-120	15	25
1,2,4-Trichlorobenzene	80.00	55.93	70	53-120	16	26
4-Chloro-3-methylphenol	80.00	61.72	77	40-120	10	54
Acenaphthene	30.00	26.35	88	61-120	9	25
4-Nitrophenol	80.00	69.50	87	40-120	7	45
2,4-Dinitrotoluene	80.00	68.69	86	64-120	9	32
Pentachlorophenol	80.00	66.05	83	47-120	8	48
Pyrene	30.00	25.71	86	62-120	10	26

Surrogate	%REC	Limits
2-Fluorophenol	69	38-120
Phenol-d5	70	38-120
2,4,6-Tribromophenol	100	46-120
Nitrobenzene-d5	73	51-120
2-Fluorobiphenyl	81	54-120
Terphenyl-d14	86	21-120

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-1	Batch#:	240134
Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	5.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	1,700	170
Phenol	ND	1,700	87
bis(2-Chloroethyl)ether	ND	1,700	63
2-Chlorophenol	ND	1,700	82
1,3-Dichlorobenzene	ND	1,700	60
1,4-Dichlorobenzene	ND	1,700	51
Benzyl alcohol	ND	1,700	78
1,2-Dichlorobenzene	ND	1,700	47
2-Methylphenol	ND	1,700	77
bis(2-Chloroisopropyl) ether	ND	1,700	92
4-Methylphenol	ND	1,700	88
N-Nitroso-di-n-propylamine	ND	1,700	170
Hexachloroethane	ND	1,700	60
Nitrobenzene	ND	1,700	60
Isophorone	ND	1,700	54
2-Nitrophenol	ND	3,300	50
2,4-Dimethylphenol	ND	1,700	69
Benzoic acid	ND	8,400	2,500
bis(2-Chloroethoxy)methane	ND	1,700	58
2,4-Dichlorophenol	ND	1,700	63
1,2,4-Trichlorobenzene	ND	1,700	48
Naphthalene	ND	330	44
4-Chloroaniline	ND	1,700	170
Hexachlorobutadiene	ND	1,700	300
4-Chloro-3-methylphenol	ND	1,700	74
2-Methylnaphthalene	ND	330	49
Hexachlorocyclopentadiene	ND	3,300	300
2,4,6-Trichlorophenol	ND	1,700	70
2,4,5-Trichlorophenol	ND	1,700	44
2-Chloronaphthalene	ND	1,700	280
2-Nitroaniline	ND	3,300	170
Dimethylphthalate	ND	1,700	47
Acenaphthylene	ND	330	43
2,6-Dinitrotoluene	ND	1,700	44
3-Nitroaniline	ND	3,300	170
Acenaphthene	ND	330	60
2,4-Dinitrophenol	ND	3,300	800
4-Nitrophenol	ND	3,300	340
Dibenzofuran	ND	1,700	44
2,4-Dinitrotoluene	ND	1,700	49
Diethylphthalate	ND	1,700	43
Fluorene	ND	330	45
4-Chlorophenyl-phenylether	ND	1,700	49
4-Nitroaniline	ND	3,300	170
4,6-Dinitro-2-methylphenol	ND	3,300	210
N-Nitrosodiphenylamine	ND	1,700	280
Azobenzene	ND	1,700	60
4-Bromophenyl-phenylether	ND	1,700	290
Hexachlorobenzene	ND	1,700	60
Pentachlorophenol	ND	3,300	740
Phenanthrene	ND	330	48
Anthracene	ND	330	60

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-1	Batch#:	240134
Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	5.000		

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	1,700	60
Fluoranthene	ND	330	43
Pyrene	ND	330	47
Butylbenzylphthalate	ND	1,700	60
3,3'-Dichlorobenzidine	ND	3,300	210
Benzo(a)anthracene	ND	330	43
Chrysene	ND	330	60
bis(2-Ethylhexyl)phthalate	ND	1,700	44
Di-n-octylphthalate	ND	1,700	42
Benzo(b)fluoranthene	ND	330	60
Benzo(k)fluoranthene	ND	330	43
Benzo(a)pyrene	ND	330	43
Indeno(1,2,3-cd)pyrene	ND	330	60
Dibenz(a,h)anthracene	ND	330	60
Benzo(g,h,i)perylene	ND	330	43

Surrogate	%REC	Limits
2-Fluorophenol	76	25-120
Phenol-d5	74	36-120
2,4,6-Tribromophenol	71	27-120
Nitrobenzene-d5	71	44-120
2-Fluorobiphenyl	84	47-120
Terphenyl-d14	98	49-120

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-2B	Batch#:	240134
Lab ID:	282049-002	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	670,000	66,000
Phenol	ND	670,000	35,000
bis(2-Chloroethyl)ether	ND	670,000	25,000
2-Chlorophenol	ND	670,000	33,000
1,3-Dichlorobenzene	ND	670,000	24,000
1,4-Dichlorobenzene	ND	670,000	20,000
Benzyl alcohol	ND	670,000	31,000
1,2-Dichlorobenzene	ND	670,000	19,000
2-Methylphenol	ND	670,000	31,000
bis(2-Chloroisopropyl) ether	ND	670,000	37,000
4-Methylphenol	ND	670,000	35,000
N-Nitroso-di-n-propylamine	ND	670,000	66,000
Hexachloroethane	ND	670,000	24,000
Nitrobenzene	ND	670,000	24,000
Isophorone	ND	670,000	22,000
2-Nitrophenol	ND	1,300,000	20,000
2,4-Dimethylphenol	ND	670,000	28,000
Benzoic acid	ND	3,300,000	1,000,000
bis(2-Chloroethoxy)methane	ND	670,000	23,000
2,4-Dichlorophenol	ND	670,000	25,000
1,2,4-Trichlorobenzene	ND	670,000	19,000
Naphthalene	ND	130,000	18,000
4-Chloroaniline	ND	670,000	66,000
Hexachlorobutadiene	ND	670,000	120,000
4-Chloro-3-methylphenol	ND	670,000	29,000
2-Methylnaphthalene	ND	130,000	20,000
Hexachlorocyclopentadiene	ND	1,300,000	120,000
2,4,6-Trichlorophenol	ND	670,000	28,000
2,4,5-Trichlorophenol	ND	670,000	18,000
2-Chloronaphthalene	ND	670,000	110,000
2-Nitroaniline	ND	1,300,000	66,000
Dimethylphthalate	ND	670,000	19,000
Acenaphthylene	ND	130,000	17,000
2,6-Dinitrotoluene	ND	670,000	18,000
3-Nitroaniline	ND	1,300,000	66,000
Acenaphthene	ND	130,000	24,000
2,4-Dinitrophenol	ND	1,300,000	320,000
4-Nitrophenol	ND	1,300,000	140,000
Dibenzofuran	ND	670,000	18,000
2,4-Dinitrotoluene	ND	670,000	19,000
Diethylphthalate	ND	670,000	17,000
Fluorene	ND	130,000	18,000
4-Chlorophenyl-phenylether	ND	670,000	20,000
4-Nitroaniline	ND	1,300,000	66,000
4,6-Dinitro-2-methylphenol	ND	1,300,000	84,000
N-Nitrosodiphenylamine	ND	670,000	110,000
Azobenzene	ND	670,000	24,000
4-Bromophenyl-phenylether	ND	670,000	120,000
Hexachlorobenzene	ND	670,000	24,000
Pentachlorophenol	ND	1,300,000	300,000
Phenanthrene	ND	130,000	19,000

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-2B	Batch#:	240134
Lab ID:	282049-002	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	130,000	24,000
Di-n-butylphthalate	ND	670,000	24,000
Fluoranthene	ND	130,000	17,000
Pyrene	ND	130,000	19,000
Butylbenzylphthalate	ND	670,000	24,000
3,3'-Dichlorobenzidine	ND	1,300,000	86,000
Benzo(a)anthracene	ND	130,000	17,000
Chrysene	ND	130,000	24,000
bis(2-Ethylhexyl)phthalate	ND	670,000	17,000
Di-n-octylphthalate	ND	670,000	17,000
Benzo(b)fluoranthene	ND	130,000	24,000
Benzo(k)fluoranthene	ND	130,000	17,000
Benzo(a)pyrene	ND	130,000	17,000
Indeno(1,2,3-cd)pyrene	ND	130,000	24,000
Dibenz(a,h)anthracene	ND	130,000	24,000
Benzo(g,h,i)perylene	ND	130,000	17,000

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-3B	Batch#:	240134
Lab ID:	282049-003	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	50.00		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	170,000	16,000
Phenol	ND	170,000	8,600
bis(2-Chloroethyl)ether	ND	170,000	6,200
2-Chlorophenol	ND	170,000	8,200
1,3-Dichlorobenzene	ND	170,000	6,000
1,4-Dichlorobenzene	ND	170,000	5,000
Benzyl alcohol	ND	170,000	7,700
1,2-Dichlorobenzene	ND	170,000	4,700
2-Methylphenol	ND	170,000	7,700
bis(2-Chloroisopropyl) ether	ND	170,000	9,100
4-Methylphenol	ND	170,000	8,700
N-Nitroso-di-n-propylamine	ND	170,000	16,000
Hexachloroethane	ND	170,000	6,000
Nitrobenzene	ND	170,000	6,000
Isophorone	ND	170,000	5,400
2-Nitrophenol	ND	330,000	5,000
2,4-Dimethylphenol	ND	170,000	6,900
Benzoic acid	ND	830,000	250,000
bis(2-Chloroethoxy)methane	ND	170,000	5,700
2,4-Dichlorophenol	ND	170,000	6,300
1,2,4-Trichlorobenzene	ND	170,000	4,800
Naphthalene	ND	33,000	4,400
4-Chloroaniline	ND	170,000	16,000
Hexachlorobutadiene	ND	170,000	30,000
4-Chloro-3-methylphenol	ND	170,000	7,300
2-Methylnaphthalene	ND	33,000	4,900
Hexachlorocyclopentadiene	ND	330,000	30,000
2,4,6-Trichlorophenol	ND	170,000	6,900
2,4,5-Trichlorophenol	ND	170,000	4,400
2-Chloronaphthalene	ND	170,000	28,000
2-Nitroaniline	ND	330,000	16,000
Dimethylphthalate	ND	170,000	4,700
Acenaphthylene	ND	33,000	4,200
2,6-Dinitrotoluene	ND	170,000	4,400
3-Nitroaniline	ND	330,000	16,000
Acenaphthene	ND	33,000	6,000
2,4-Dinitrophenol	ND	330,000	80,000
4-Nitrophenol	ND	330,000	34,000
Dibenzofuran	ND	170,000	4,400
2,4-Dinitrotoluene	ND	170,000	4,800
Diethylphthalate	ND	170,000	4,200
Fluorene	ND	33,000	4,400
4-Chlorophenyl-phenylether	ND	170,000	4,900
4-Nitroaniline	ND	330,000	16,000
4,6-Dinitro-2-methylphenol	ND	330,000	21,000
N-Nitrosodiphenylamine	ND	170,000	28,000
Azobenzene	ND	170,000	6,000
4-Bromophenyl-phenylether	ND	170,000	29,000
Hexachlorobenzene	ND	170,000	6,000
Pentachlorophenol	ND	330,000	74,000
Phenanthrene	ND	33,000	4,800

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-3B	Batch#:	240134
Lab ID:	282049-003	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	50.00		

Analyte	Result	RL	MDL
Anthracene	ND	33,000	6,000
Di-n-butylphthalate	ND	170,000	6,000
Fluoranthene	ND	33,000	4,300
Pyrene	ND	33,000	4,700
Butylbenzylphthalate	ND	170,000	6,000
3,3'-Dichlorobenzidine	ND	330,000	21,000
Benzo(a)anthracene	ND	33,000	4,300
Chrysene	ND	33,000	6,000
bis(2-Ethylhexyl)phthalate	ND	170,000	4,300
Di-n-octylphthalate	ND	170,000	4,200
Benzo(b)fluoranthene	ND	33,000	6,000
Benzo(k)fluoranthene	ND	33,000	4,300
Benzo(a)pyrene	ND	33,000	4,300
Indeno(1,2,3-cd)pyrene	ND	33,000	6,000
Dibenz(a,h)anthracene	ND	33,000	6,000
Benzo(g,h,i)perylene	ND	33,000	4,300

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-4C	Batch#:	240134
Lab ID:	282049-004	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/14/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	33,000	4,700
Phenol	ND	33,000	1,000
bis(2-Chloroethyl)ether	ND	33,000	5,900
2-Chlorophenol	ND	33,000	1,000
1,3-Dichlorobenzene	ND	33,000	5,700
1,4-Dichlorobenzene	ND	33,000	1,000
Benzyl alcohol	ND	33,000	1,100
1,2-Dichlorobenzene	ND	33,000	1,000
2-Methylphenol	ND	33,000	1,400
bis(2-Chloroisopropyl) ether	ND	33,000	1,000
4-Methylphenol	ND	33,000	1,000
N-Nitroso-di-n-propylamine	ND	33,000	1,000
Hexachloroethane	ND	33,000	1,000
Nitrobenzene	ND	33,000	1,100
Isophorone	ND	33,000	1,000
2-Nitrophenol	ND	67,000	1,000
2,4-Dimethylphenol	ND	33,000	1,400
Benzoic acid	ND	170,000	44,000
bis(2-Chloroethoxy)methane	ND	33,000	1,000
2,4-Dichlorophenol	ND	33,000	1,000
1,2,4-Trichlorobenzene	ND	33,000	1,000
Naphthalene	ND	6,700	1,000
4-Chloroaniline	ND	33,000	940
Hexachlorobutadiene	ND	33,000	890
4-Chloro-3-methylphenol	ND	33,000	830
2-Methylnaphthalene	ND	6,700	1,000
Hexachlorocyclopentadiene	ND	67,000	1,400
2,4,6-Trichlorophenol	ND	33,000	1,300
2,4,5-Trichlorophenol	ND	33,000	840
2-Chloronaphthalene	ND	33,000	900
2-Nitroaniline	ND	67,000	1,100
Dimethylphthalate	ND	33,000	1,000
Acenaphthylene	ND	6,700	890
2,6-Dinitrotoluene	ND	33,000	890
3-Nitroaniline	ND	67,000	1,000
Acenaphthene	ND	6,700	1,000
2,4-Dinitrophenol	ND	67,000	6,400
4-Nitrophenol	ND	67,000	7,100
Dibenzofuran	ND	33,000	1,000
2,4-Dinitrotoluene	ND	33,000	960
Diethylphthalate	ND	33,000	1,100
Fluorene	ND	6,700	990
4-Chlorophenyl-phenylether	ND	33,000	960
4-Nitroaniline	ND	67,000	1,000
4,6-Dinitro-2-methylphenol	ND	67,000	7,700
N-Nitrosodiphenylamine	ND	33,000	1,100
Azobenzene	ND	33,000	850
4-Bromophenyl-phenylether	ND	33,000	1,100
Hexachlorobenzene	ND	33,000	1,100
Pentachlorophenol	ND	67,000	13,000
Phenanthrene	ND	6,700	1,100

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-1-4C	Batch#:	240134
Lab ID:	282049-004	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/14/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	6,700	1,100
Di-n-butylphthalate	ND	33,000	1,200
Fluoranthene	ND	6,700	1,000
Pyrene	ND	6,700	1,100
Butylbenzylphthalate	ND	33,000	1,000
3,3'-Dichlorobenzidine	ND	67,000	1,000
Benzo(a)anthracene	ND	6,700	1,000
Chrysene	ND	6,700	1,100
bis(2-Ethylhexyl)phthalate	ND	33,000	1,300
Di-n-octylphthalate	ND	33,000	1,000
Benzo(b)fluoranthene	ND	6,700	900
Benzo(k)fluoranthene	ND	6,700	950
Benzo(a)pyrene	ND	6,700	880
Indeno(1,2,3-cd)pyrene	ND	6,700	880
Dibenz(a,h)anthracene	ND	6,700	930
Benzo(g,h,i)perylene	ND	6,700	1,000

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-2-2B	Batch#:	240134
Lab ID:	282049-005	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	10.00		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	17,000	1,600
Phenol	ND	17,000	860
bis(2-Chloroethyl)ether	ND	17,000	620
2-Chlorophenol	ND	17,000	820
1,3-Dichlorobenzene	ND	17,000	600
1,4-Dichlorobenzene	ND	17,000	500
Benzyl alcohol	ND	17,000	770
1,2-Dichlorobenzene	ND	17,000	470
2-Methylphenol	ND	17,000	760
bis(2-Chloroisopropyl) ether	ND	17,000	910
4-Methylphenol	ND	17,000	870
N-Nitroso-di-n-propylamine	ND	17,000	1,600
Hexachloroethane	ND	17,000	600
Nitrobenzene	ND	17,000	600
Isophorone	ND	17,000	540
2-Nitrophenol	ND	33,000	500
2,4-Dimethylphenol	ND	17,000	680
Benzoic acid	ND	83,000	25,000
bis(2-Chloroethoxy)methane	ND	17,000	570
2,4-Dichlorophenol	ND	17,000	630
1,2,4-Trichlorobenzene	ND	17,000	480
Naphthalene	ND	3,300	440
4-Chloroaniline	ND	17,000	1,600
Hexachlorobutadiene	ND	17,000	3,000
4-Chloro-3-methylphenol	ND	17,000	730
2-Methylnaphthalene	ND	3,300	490
Hexachlorocyclopentadiene	ND	33,000	3,000
2,4,6-Trichlorophenol	ND	17,000	690
2,4,5-Trichlorophenol	ND	17,000	440
2-Chloronaphthalene	ND	17,000	2,700
2-Nitroaniline	ND	33,000	1,600
Dimethylphthalate	ND	17,000	460
Acenaphthylene	ND	3,300	420
2,6-Dinitrotoluene	ND	17,000	440
3-Nitroaniline	ND	33,000	1,600
Acenaphthene	ND	3,300	600
2,4-Dinitrophenol	ND	33,000	8,000
4-Nitrophenol	ND	33,000	3,400
Dibenzofuran	ND	17,000	440
2,4-Dinitrotoluene	ND	17,000	480
Diethylphthalate	ND	17,000	420
Fluorene	ND	3,300	440
4-Chlorophenyl-phenylether	ND	17,000	480
4-Nitroaniline	ND	33,000	1,600
4,6-Dinitro-2-methylphenol	ND	33,000	2,100
N-Nitrosodiphenylamine	ND	17,000	2,800
Azobenzene	ND	17,000	600
4-Bromophenyl-phenylether	ND	17,000	2,900
Hexachlorobenzene	ND	17,000	600
Pentachlorophenol	ND	33,000	7,400
Phenanthrene	ND	3,300	480

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-2-2B	Batch#:	240134
Lab ID:	282049-005	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	10.00		

Analyte	Result	RL	MDL
Anthracene	ND	3,300	600
Di-n-butylphthalate	ND	17,000	600
Fluoranthene	ND	3,300	430
Pyrene	ND	3,300	460
Butylbenzylphthalate	ND	17,000	600
3,3'-Dichlorobenzidine	ND	33,000	2,100
Benzo(a)anthracene	ND	3,300	430
Chrysene	ND	3,300	600
bis(2-Ethylhexyl)phthalate	ND	17,000	430
Di-n-octylphthalate	ND	17,000	420
Benzo(b)fluoranthene	ND	3,300	600
Benzo(k)fluoranthene	ND	3,300	430
Benzo(a)pyrene	ND	3,300	430
Indeno(1,2,3-cd)pyrene	ND	3,300	600
Dibenz(a,h)anthracene	ND	3,300	600
Benzo(g,h,i)perylene	ND	3,300	430

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-2-5B	Batch#:	240134
Lab ID:	282049-006	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	33
Phenol	ND	330	17
bis(2-Chloroethyl)ether	ND	330	12
2-Chlorophenol	ND	330	16
1,3-Dichlorobenzene	ND	330	12
1,4-Dichlorobenzene	ND	330	10
Benzyl alcohol	ND	330	15
1,2-Dichlorobenzene	ND	330	9.4
2-Methylphenol	ND	330	15
bis(2-Chloroisopropyl) ether	ND	330	18
4-Methylphenol	ND	330	17
N-Nitroso-di-n-propylamine	ND	330	33
Hexachloroethane	ND	330	12
Nitrobenzene	ND	330	12
Isophorone	ND	330	11
2-Nitrophenol	ND	660	10
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	500
bis(2-Chloroethoxy)methane	ND	330	11
2,4-Dichlorophenol	ND	330	13
1,2,4-Trichlorobenzene	ND	330	9.6
Naphthalene	ND	66	8.7
4-Chloroaniline	ND	330	33
Hexachlorobutadiene	ND	330	60
4-Chloro-3-methylphenol	ND	330	15
2-Methylnaphthalene	ND	66	9.8
Hexachlorocyclopentadiene	ND	660	60
2,4,6-Trichlorophenol	ND	330	14
2,4,5-Trichlorophenol	ND	330	8.7
2-Chloronaphthalene	ND	330	55
2-Nitroaniline	ND	660	33
Dimethylphthalate	ND	330	9.3
Acenaphthylene	ND	66	8.5
2,6-Dinitrotoluene	ND	330	8.7
3-Nitroaniline	ND	660	33
Acenaphthene	ND	66	12
2,4-Dinitrophenol	ND	660	160
4-Nitrophenol	ND	660	68
Dibenzofuran	ND	330	8.7
2,4-Dinitrotoluene	ND	330	9.6
Diethylphthalate	ND	330	8.5
Fluorene	ND	66	8.9
4-Chlorophenyl-phenylether	ND	330	9.7
4-Nitroaniline	ND	660	33
4,6-Dinitro-2-methylphenol	ND	660	42
N-Nitrosodiphenylamine	ND	330	56
Azobenzene	ND	330	12
4-Bromophenyl-phenylether	ND	330	58
Hexachlorobenzene	ND	330	12
Pentachlorophenol	ND	660	150
Phenanthrene	ND	66	9.5

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-2-5B	Batch#:	240134
Lab ID:	282049-006	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Anthracene	ND	66	12
Di-n-butylphthalate	ND	330	12
Fluoranthene	ND	66	8.6
Pyrene	ND	66	9.3
Butylbenzylphthalate	ND	330	12
3,3'-Dichlorobenzidine	ND	660	43
Benzo(a)anthracene	ND	66	8.6
Chrysene	ND	66	12
bis(2-Ethylhexyl)phthalate	ND	330	8.7
Di-n-octylphthalate	ND	330	8.4
Benzo(b)fluoranthene	ND	66	12
Benzo(k)fluoranthene	ND	66	8.6
Benzo(a)pyrene	ND	66	8.6
Indeno(1,2,3-cd)pyrene	ND	66	12
Dibenz(a,h)anthracene	ND	66	12
Benzo(g,h,i)perylene	ND	66	8.6

Surrogate	%REC	Limits
2-Fluorophenol	139 *	25-120
Phenol-d5	128 *	36-120
2,4,6-Tribromophenol	72	27-120
Nitrobenzene-d5	81	44-120
2-Fluorobiphenyl	86	47-120
Terphenyl-d14	105	49-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-1B	Batch#:	240134
Lab ID:	282049-007	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	33.30		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	11,000	1,100
Phenol	ND	11,000	580
bis(2-Chloroethyl)ether	ND	11,000	420
2-Chlorophenol	ND	11,000	550
1,3-Dichlorobenzene	ND	11,000	400
1,4-Dichlorobenzene	ND	11,000	340
Benzyl alcohol	ND	11,000	520
1,2-Dichlorobenzene	ND	11,000	310
2-Methylphenol	ND	11,000	510
bis(2-Chloroisopropyl) ether	ND	11,000	610
4-Methylphenol	ND	11,000	580
N-Nitroso-di-n-propylamine	ND	11,000	1,100
Hexachloroethane	ND	11,000	400
Nitrobenzene	ND	11,000	400
Isophorone	ND	11,000	360
2-Nitrophenol	ND	22,000	330
2,4-Dimethylphenol	ND	11,000	460
Benzoic acid	ND	55,000	17,000
bis(2-Chloroethoxy)methane	ND	11,000	380
2,4-Dichlorophenol	ND	11,000	420
1,2,4-Trichlorobenzene	ND	11,000	320
Naphthalene	ND	2,200	290
4-Chloroaniline	ND	11,000	1,100
Hexachlorobutadiene	ND	11,000	2,000
4-Chloro-3-methylphenol	ND	11,000	490
2-Methylnaphthalene	ND	2,200	330
Hexachlorocyclopentadiene	ND	22,000	2,000
2,4,6-Trichlorophenol	ND	11,000	460
2,4,5-Trichlorophenol	ND	11,000	290
2-Chloronaphthalene	ND	11,000	1,800
2-Nitroaniline	ND	22,000	1,100
Dimethylphthalate	ND	11,000	310
Acenaphthylene	ND	2,200	280
2,6-Dinitrotoluene	ND	11,000	290
3-Nitroaniline	ND	22,000	1,100
Acenaphthene	ND	2,200	400
2,4-Dinitrophenol	ND	22,000	5,300
4-Nitrophenol	ND	22,000	2,300
Dibenzofuran	ND	11,000	290
2,4-Dinitrotoluene	ND	11,000	320
Diethylphthalate	ND	11,000	280
Fluorene	ND	2,200	300
4-Chlorophenyl-phenylether	ND	11,000	320
4-Nitroaniline	ND	22,000	1,100
4,6-Dinitro-2-methylphenol	ND	22,000	1,400
N-Nitrosodiphenylamine	ND	11,000	1,900
Azobenzene	ND	11,000	400
4-Bromophenyl-phenylether	ND	11,000	1,900
Hexachlorobenzene	ND	11,000	400
Pentachlorophenol	ND	22,000	4,900
Phenanthrene	ND	2,200	320

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-1B	Batch#:	240134
Lab ID:	282049-007	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	33.30		

Analyte	Result	RL	MDL
Anthracene	ND	2,200	400
Di-n-butylphthalate	ND	11,000	400
Fluoranthene	ND	2,200	290
Pyrene	ND	2,200	310
Butylbenzylphthalate	ND	11,000	400
3,3'-Dichlorobenzidine	ND	22,000	1,400
Benzo(a)anthracene	ND	2,200	290
Chrysene	ND	2,200	400
bis(2-Ethylhexyl)phthalate	ND	11,000	290
Di-n-octylphthalate	ND	11,000	280
Benzo(b)fluoranthene	ND	2,200	400
Benzo(k)fluoranthene	ND	2,200	290
Benzo(a)pyrene	ND	2,200	290
Indeno(1,2,3-cd)pyrene	ND	2,200	400
Dibenz(a,h)anthracene	ND	2,200	400
Benzo(g,h,i)perylene	ND	2,200	290

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-2B	Batch#:	240134
Lab ID:	282049-008	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	340	47
Phenol	ND	340	10
bis(2-Chloroethyl)ether	ND	340	60
2-Chlorophenol	ND	340	10
1,3-Dichlorobenzene	ND	340	57
1,4-Dichlorobenzene	ND	340	10
Benzyl alcohol	ND	340	11
1,2-Dichlorobenzene	ND	340	10
2-Methylphenol	ND	340	14
bis(2-Chloroisopropyl) ether	ND	340	10
4-Methylphenol	ND	340	10
N-Nitroso-di-n-propylamine	ND	340	10
Hexachloroethane	ND	340	10
Nitrobenzene	ND	340	11
Isophorone	ND	340	10
2-Nitrophenol	ND	670	10
2,4-Dimethylphenol	ND	340	14
Benzoic acid	ND	1,700	440
bis(2-Chloroethoxy)methane	ND	340	10
2,4-Dichlorophenol	ND	340	10
1,2,4-Trichlorobenzene	ND	340	10
Naphthalene	ND	67	10
4-Chloroaniline	ND	340	9.5
Hexachlorobutadiene	ND	340	8.9
4-Chloro-3-methylphenol	ND	340	8.4
2-Methylnaphthalene	ND	67	10
Hexachlorocyclopentadiene	ND	670	14
2,4,6-Trichlorophenol	ND	340	13
2,4,5-Trichlorophenol	ND	340	8.4
2-Chloronaphthalene	ND	340	9.0
2-Nitroaniline	ND	670	11
Dimethylphthalate	ND	340	10
Acenaphthylene	ND	67	9.0
2,6-Dinitrotoluene	ND	340	9.0
3-Nitroaniline	ND	670	10
Acenaphthene	ND	67	10
2,4-Dinitrophenol	ND	670	65
4-Nitrophenol	ND	670	72
Dibenzofuran	ND	340	10
2,4-Dinitrotoluene	ND	340	9.7
Diethylphthalate	ND	340	11
Fluorene	ND	67	10
4-Chlorophenyl-phenylether	ND	340	9.7
4-Nitroaniline	ND	670	10
4,6-Dinitro-2-methylphenol	ND	670	77
N-Nitrosodiphenylamine	ND	340	11
Azobenzene	ND	340	8.6
4-Bromophenyl-phenylether	ND	340	11
Hexachlorobenzene	ND	340	11
Pentachlorophenol	ND	670	130
Phenanthrene	ND	67	11

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-2B	Batch#:	240134
Lab ID:	282049-008	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Anthracene	ND	67	11
Di-n-butylphthalate	ND	340	12
Fluoranthene	16 J	67	10
Pyrene	16 J	67	11
Butylbenzylphthalate	ND	340	10
3,3'-Dichlorobenzidine	ND	670	10
Benzo(a)anthracene	ND	67	10
Chrysene	ND	67	11
bis(2-Ethylhexyl)phthalate	ND	340	13
Di-n-octylphthalate	ND	340	10
Benzo(b)fluoranthene	11 J	67	9.1
Benzo(k)fluoranthene	ND	67	9.6
Benzo(a)pyrene	ND	67	8.8
Indeno(1,2,3-cd)pyrene	ND	67	8.9
Dibenz(a,h)anthracene	ND	67	9.4
Benzo(g,h,i)perylene	ND	67	10

Surrogate	%REC	Limits
2-Fluorophenol	80	25-120
Phenol-d5	80	36-120
2,4,6-Tribromophenol	89	27-120
Nitrobenzene-d5	70	44-120
2-Fluorobiphenyl	80	47-120
Terphenyl-d14	84	49-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-4B	Batch#:	240134
Lab ID:	282049-009	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	33
Phenol	ND	330	17
bis(2-Chloroethyl)ether	ND	330	12
2-Chlorophenol	ND	330	16
1,3-Dichlorobenzene	ND	330	12
1,4-Dichlorobenzene	ND	330	10
Benzyl alcohol	ND	330	15
1,2-Dichlorobenzene	ND	330	9.4
2-Methylphenol	ND	330	15
bis(2-Chloroisopropyl) ether	ND	330	18
4-Methylphenol	ND	330	17
N-Nitroso-di-n-propylamine	ND	330	33
Hexachloroethane	ND	330	12
Nitrobenzene	ND	330	12
Isophorone	ND	330	11
2-Nitrophenol	ND	660	10
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	500
bis(2-Chloroethoxy)methane	ND	330	11
2,4-Dichlorophenol	ND	330	13
1,2,4-Trichlorobenzene	ND	330	9.6
Naphthalene	ND	66	8.7
4-Chloroaniline	ND	330	33
Hexachlorobutadiene	ND	330	60
4-Chloro-3-methylphenol	ND	330	15
2-Methylnaphthalene	ND	66	9.8
Hexachlorocyclopentadiene	ND	660	60
2,4,6-Trichlorophenol	ND	330	14
2,4,5-Trichlorophenol	ND	330	8.7
2-Chloronaphthalene	ND	330	55
2-Nitroaniline	ND	660	33
Dimethylphthalate	ND	330	9.3
Acenaphthylene	ND	66	8.5
2,6-Dinitrotoluene	ND	330	8.7
3-Nitroaniline	ND	660	33
Acenaphthene	ND	66	12
2,4-Dinitrophenol	ND	660	160
4-Nitrophenol	ND	660	68
Dibenzofuran	ND	330	8.7
2,4-Dinitrotoluene	ND	330	9.6
Diethylphthalate	ND	330	8.4
Fluorene	ND	66	8.9
4-Chlorophenyl-phenylether	ND	330	9.7
4-Nitroaniline	ND	660	33
4,6-Dinitro-2-methylphenol	ND	660	42
N-Nitrosodiphenylamine	ND	330	56
Azobenzene	ND	330	12
4-Bromophenyl-phenylether	ND	330	58
Hexachlorobenzene	ND	330	12
Pentachlorophenol	ND	660	150
Phenanthrene	ND	66	9.5

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-4B	Batch#:	240134
Lab ID:	282049-009	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Anthracene	ND	66	12
Di-n-butylphthalate	ND	330	12
Fluoranthene	ND	66	8.6
Pyrene	ND	66	9.3
Butylbenzylphthalate	ND	330	12
3,3'-Dichlorobenzidine	ND	660	43
Benzo(a)anthracene	ND	66	8.6
Chrysene	ND	66	12
bis(2-Ethylhexyl)phthalate	ND	330	8.7
Di-n-octylphthalate	ND	330	8.4
Benzo(b)fluoranthene	ND	66	12
Benzo(k)fluoranthene	ND	66	8.6
Benzo(a)pyrene	ND	66	8.6
Indeno(1,2,3-cd)pyrene	ND	66	12
Dibenz(a,h)anthracene	ND	66	12
Benzo(g,h,i)perylene	ND	66	8.6

Surrogate	%REC	Limits
2-Fluorophenol	126 *	25-120
Phenol-d5	119	36-120
2,4,6-Tribromophenol	65	27-120
Nitrobenzene-d5	76	44-120
2-Fluorobiphenyl	83	47-120
Terphenyl-d14	103	49-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-5B	Batch#:	240134
Lab ID:	282049-010	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/14/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	33
Phenol	ND	330	17
bis(2-Chloroethyl)ether	ND	330	12
2-Chlorophenol	ND	330	16
1,3-Dichlorobenzene	ND	330	12
1,4-Dichlorobenzene	ND	330	10
Benzyl alcohol	ND	330	15
1,2-Dichlorobenzene	ND	330	9.4
2-Methylphenol	ND	330	15
bis(2-Chloroisopropyl) ether	ND	330	18
4-Methylphenol	ND	330	17
N-Nitroso-di-n-propylamine	ND	330	33
Hexachloroethane	ND	330	12
Nitrobenzene	ND	330	12
Isophorone	ND	330	11
2-Nitrophenol	ND	670	10
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	500
bis(2-Chloroethoxy)methane	ND	330	11
2,4-Dichlorophenol	ND	330	13
1,2,4-Trichlorobenzene	ND	330	9.6
Naphthalene	ND	67	8.8
4-Chloroaniline	ND	330	33
Hexachlorobutadiene	ND	330	60
4-Chloro-3-methylphenol	ND	330	15
2-Methylnaphthalene	ND	67	9.8
Hexachlorocyclopentadiene	ND	670	60
2,4,6-Trichlorophenol	ND	330	14
2,4,5-Trichlorophenol	ND	330	8.8
2-Chloronaphthalene	ND	330	55
2-Nitroaniline	ND	670	33
Dimethylphthalate	ND	330	9.3
Acenaphthylene	ND	67	8.5
2,6-Dinitrotoluene	ND	330	8.8
3-Nitroaniline	ND	670	33
Acenaphthene	ND	67	12
2,4-Dinitrophenol	ND	670	160
4-Nitrophenol	ND	670	69
Dibenzofuran	ND	330	8.7
2,4-Dinitrotoluene	ND	330	9.7
Diethylphthalate	ND	330	8.5
Fluorene	ND	67	8.9
4-Chlorophenyl-phenylether	ND	330	9.7
4-Nitroaniline	ND	670	33
4,6-Dinitro-2-methylphenol	ND	670	42
N-Nitrosodiphenylamine	ND	330	56
Azobenzene	ND	330	12
4-Bromophenyl-phenylether	ND	330	58
Hexachlorobenzene	ND	330	12
Pentachlorophenol	ND	670	150
Phenanthrene	ND	67	9.6
Anthracene	ND	67	12

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Field ID:	B-3-5B	Batch#:	240134
Lab ID:	282049-010	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/14/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	330	12
Fluoranthene	ND	67	8.6
Pyrene	ND	67	9.3
Butylbenzylphthalate	ND	330	12
3,3'-Dichlorobenzidine	ND	670	43
Benzo(a)anthracene	ND	67	8.6
Chrysene	ND	67	12
bis(2-Ethylhexyl)phthalate	ND	330	8.7
Di-n-octylphthalate	ND	330	8.4
Benzo(b)fluoranthene	ND	67	12
Benzo(k)fluoranthene	ND	67	8.7
Benzo(a)pyrene	ND	67	8.7
Indeno(1,2,3-cd)pyrene	ND	67	12
Dibenz(a,h)anthracene	ND	67	12
Benzo(g,h,i)perylene	ND	67	8.6

Surrogate	%REC	Limits
2-Fluorophenol	108	25-120
Phenol-d5	103	36-120
2,4,6-Tribromophenol	57	27-120
Nitrobenzene-d5	62	44-120
2-Fluorobiphenyl	66	47-120
Terphenyl-d14	92	49-120

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855597	Batch#:	240134
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/13/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	33
Phenol	ND	330	17
bis(2-Chloroethyl)ether	ND	330	12
2-Chlorophenol	ND	330	16
1,3-Dichlorobenzene	ND	330	12
1,4-Dichlorobenzene	ND	330	10
Benzyl alcohol	ND	330	15
1,2-Dichlorobenzene	ND	330	9.4
2-Methylphenol	ND	330	15
bis(2-Chloroisopropyl) ether	ND	330	18
4-Methylphenol	ND	330	17
N-Nitroso-di-n-propylamine	ND	330	33
Hexachloroethane	ND	330	12
Nitrobenzene	ND	330	12
Isophorone	ND	330	11
2-Nitrophenol	ND	660	10
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	500
bis(2-Chloroethoxy)methane	ND	330	11
2,4-Dichlorophenol	ND	330	13
1,2,4-Trichlorobenzene	ND	330	9.6
Naphthalene	ND	66	8.7
4-Chloroaniline	ND	330	33
Hexachlorobutadiene	ND	330	60
4-Chloro-3-methylphenol	ND	330	15
2-Methylnaphthalene	ND	66	9.8
Hexachlorocyclopentadiene	ND	660	60
2,4,6-Trichlorophenol	ND	330	14
2,4,5-Trichlorophenol	ND	330	8.7
2-Chloronaphthalene	ND	330	55
2-Nitroaniline	ND	660	33
Dimethylphthalate	ND	330	9.3
Acenaphthylene	ND	66	8.5
2,6-Dinitrotoluene	ND	330	8.8
3-Nitroaniline	ND	660	33
Acenaphthene	ND	66	12
2,4-Dinitrophenol	ND	660	160
4-Nitrophenol	ND	660	68
Dibenzofuran	ND	330	8.7
2,4-Dinitrotoluene	ND	330	9.6
Diethylphthalate	ND	330	8.5
Fluorene	ND	66	8.9
4-Chlorophenyl-phenylether	ND	330	9.7
4-Nitroaniline	ND	660	33
4,6-Dinitro-2-methylphenol	ND	660	42
N-Nitrosodiphenylamine	ND	330	56
Azobenzene	ND	330	12
4-Bromophenyl-phenylether	ND	330	58
Hexachlorobenzene	ND	330	12
Pentachlorophenol	ND	660	150
Phenanthrene	ND	66	9.6
Anthracene	ND	66	12

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855597	Batch#:	240134
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	330	12
Fluoranthene	ND	66	8.6
Pyrene	ND	66	9.3
Butylbenzylphthalate	ND	330	12
3,3'-Dichlorobenzidine	ND	660	43
Benzo(a)anthracene	ND	66	8.6
Chrysene	ND	66	12
bis(2-Ethylhexyl)phthalate	ND	330	8.7
Di-n-octylphthalate	ND	330	8.4
Benzo(b)fluoranthene	ND	66	12
Benzo(k)fluoranthene	ND	66	8.6
Benzo(a)pyrene	ND	66	8.6
Indeno(1,2,3-cd)pyrene	ND	66	12
Dibenz(a,h)anthracene	ND	66	12
Benzo(g,h,i)perylene	ND	66	8.6

Surrogate	%REC	Limits
2-Fluorophenol	121 *	25-120
Phenol-d5	106	36-120
2,4,6-Tribromophenol	70	27-120
Nitrobenzene-d5	80	44-120
2-Fluorobiphenyl	90	47-120
Terphenyl-d14	94	49-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855598	Batch#:	240134
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/13/16

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
Phenol	2,668	2,159	81	42-120
2-Chlorophenol	2,668	2,425	91	45-120
1,4-Dichlorobenzene	2,668	2,355	88	48-120
N-Nitroso-di-n-propylamine	2,668	2,314	87	27-123
1,2,4-Trichlorobenzene	2,668	2,323	87	50-120
4-Chloro-3-methylphenol	2,668	2,687	101	59-120
Acenaphthene	1,001	849.2	85	53-120
4-Nitrophenol	2,668	1,666	62	47-120
2,4-Dinitrotoluene	2,668	2,475	93	55-120
Pentachlorophenol	2,668	1,364	51	32-120
Pyrene	1,001	1,048	105	52-120

Surrogate	**%REC**	**Limits**
2-Fluorophenol	97	25-120
Phenol-d5	80	36-120
2,4,6-Tribromophenol	81	27-120
Nitrobenzene-d5	80	44-120
2-Fluorobiphenyl	89	47-120
Terphenyl-d14	98	49-120

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-1-W	Batch#:	240231
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Prepared:	10/17/16
Diln Fac:	6.250	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Naphthalene	ND	0.6	0.1
Acenaphthylene	ND	0.6	0.1
Acenaphthene	ND	0.6	0.1
Fluorene	0.2 J	0.6	0.1
Phenanthrene	ND	0.6	0.1
Anthracene	ND	0.6	0.1
Fluoranthene	ND	0.6	0.1
Pyrene	0.1 J	0.6	0.1
Benzo(a)anthracene	ND	0.6	0.1
Chrysene	ND	0.6	0.1
Benzo(b)fluoranthene	ND	0.6	0.1
Benzo(k)fluoranthene	ND	0.6	0.1
Benzo(a)pyrene	ND	0.6	0.1
Indeno(1,2,3-cd)pyrene	ND	0.6	0.1
Dibenz(a,h)anthracene	ND	0.6	0.1
Benzo(g,h,i)perylene	ND	0.6	0.1

Surrogate	%REC	Limits
Nitrobenzene-d5	88	45-120
2-Fluorobiphenyl	67	46-120
Terphenyl-d14	30	30-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855973	Batch#:	240231
Matrix:	Water	Prepared:	10/17/16
Units:	ug/L	Analyzed:	10/18/16

Analyte	Result		RL	MDL
Naphthalene	ND		0.1	0.02
Acenaphthylene	ND		0.1	0.02
Acenaphthene	ND		0.1	0.02
Fluorene	ND		0.1	0.02
Phenanthrene	0.03	J	0.1	0.02
Anthracene	0.02	J	0.1	0.02
Fluoranthene	0.03	J	0.1	0.02
Pyrene	0.04	J	0.1	0.02
Benzo(a)anthracene	0.03	J	0.1	0.02
Chrysene	0.03	J	0.1	0.02
Benzo(b)fluoranthene	0.03	J	0.1	0.02
Benzo(k)fluoranthene	0.02	J	0.1	0.02
Benzo(a)pyrene	0.03	J	0.1	0.02
Indeno(1,2,3-cd)pyrene	0.03	J	0.1	0.02
Dibenz(a,h)anthracene	0.03	J	0.1	0.02
Benzo(g,h,i)perylene	0.04	J	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	99	45-120
2-Fluorobiphenyl	89	46-120
Terphenyl-d14	101	30-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	240231
Units:	ug/L	Prepared:	10/17/16
Diln Fac:	1.000	Analyzed:	10/18/16

Type: BS

Lab ID: QC855974

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	1.000	1.092	109	61-120
Pyrene	1.000	1.168	117	53-120

Surrogate	%REC	Limits
Nitrobenzene-d5	96	45-120
2-Fluorobiphenyl	85	46-120
Terphenyl-d14	101	30-120

Type: BSD

Lab ID: QC855975

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Acenaphthene	1.000	0.9872	99	61-120	10	30
Pyrene	1.000	1.105	111	53-120	6	27

Surrogate	%REC	Limits
Nitrobenzene-d5	90	45-120
2-Fluorobiphenyl	80	46-120
Terphenyl-d14	99	30-120

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-1-1	Batch#:	240044
Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Naphthalene	ND	5.0	1.2
Acenaphthylene	3.7 J	5.0	0.99
Acenaphthene	ND	5.0	0.99
Fluorene	ND	5.0	0.99
Phenanthrene	6.6	5.0	0.99
Anthracene	2.5 J	5.0	0.99
Fluoranthene	18	5.0	0.99
Pyrene	33	5.0	0.99
Benzo(a)anthracene	13	5.0	0.99
Chrysene	18	5.0	0.99
Benzo(b)fluoranthene	26	5.0	0.99
Benzo(k)fluoranthene	7.7	5.0	0.99
Benzo(a)pyrene	25	5.0	0.99
Indeno(1,2,3-cd)pyrene	15	5.0	0.99
Dibenz(a,h)anthracene	4.7 J	5.0	0.99
Benzo(g,h,i)perylene	23	5.0	0.99

Surrogate	%REC	Limits
Nitrobenzene-d5	79	40-120
2-Fluorobiphenyl	77	46-120
Terphenyl-d14	116	43-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-1-2B	Batch#:	240044
Lab ID:	282049-002	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Naphthalene	ND	2,500	610
Acenaphthylene	ND	2,500	500
Acenaphthene	ND	2,500	500
Fluorene	ND	2,500	500
Phenanthrene	ND	2,500	500
Anthracene	ND	2,500	500
Fluoranthene	ND	2,500	500
Pyrene	ND	2,500	500
Benzo(a)anthracene	ND	2,500	500
Chrysene	ND	2,500	500
Benzo(b)fluoranthene	ND	2,500	500
Benzo(k)fluoranthene	ND	2,500	500
Benzo(a)pyrene	ND	2,500	500
Indeno(1,2,3-cd)pyrene	ND	2,500	500
Dibenz(a,h)anthracene	ND	2,500	500
Benzo(g,h,i)perylene	ND	2,500	500

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	40-120
2-Fluorobiphenyl	DO	46-120
Terphenyl-d14	DO	43-120

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-1-3B	Batch#:	240044
Lab ID:	282049-003	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Naphthalene	ND	1,000	250
Acenaphthylene	ND	1,000	200
Acenaphthene	ND	1,000	200
Fluorene	ND	1,000	200
Phenanthrene	ND	1,000	200
Anthracene	ND	1,000	200
Fluoranthene	ND	1,000	200
Pyrene	270 J	1,000	200
Benzo(a)anthracene	ND	1,000	200
Chrysene	390 J	1,000	200
Benzo(b)fluoranthene	ND	1,000	200
Benzo(k)fluoranthene	ND	1,000	200
Benzo(a)pyrene	ND	1,000	200
Indeno(1,2,3-cd)pyrene	ND	1,000	200
Dibenz(a,h)anthracene	ND	1,000	200
Benzo(g,h,i)perylene	ND	1,000	200

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	40-120
2-Fluorobiphenyl	DO	46-120
Terphenyl-d14	DO	43-120

J= Estimated value
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-1-4C	Batch#:	240044
Lab ID:	282049-004	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Naphthalene	ND	1,000	240
Acenaphthylene	ND	1,000	200
Acenaphthene	ND	1,000	200
Fluorene	ND	1,000	200
Phenanthrene	ND	1,000	200
Anthracene	ND	1,000	200
Fluoranthene	ND	1,000	200
Pyrene	350 J	1,000	200
Benzo(a)anthracene	ND	1,000	200
Chrysene	ND	1,000	200
Benzo(b)fluoranthene	ND	1,000	200
Benzo(k)fluoranthene	ND	1,000	200
Benzo(a)pyrene	ND	1,000	200
Indeno(1,2,3-cd)pyrene	ND	1,000	200
Dibenz(a,h)anthracene	ND	1,000	200
Benzo(g,h,i)perylene	ND	1,000	200

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	40-120
2-Fluorobiphenyl	DO	46-120
Terphenyl-d14	DO	43-120

J= Estimated value
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-2-2B	Batch#:	240235
Lab ID:	282049-005	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	12.50		

Analyte	Result	RL	MDL
Naphthalene	ND	62	12
Acenaphthylene	ND	62	12
Acenaphthene	ND	62	12
Fluorene	ND	62	12
Phenanthrene	25 J	62	12
Anthracene	ND	62	12
Fluoranthene	70	62	12
Pyrene	85	62	12
Benzo(a)anthracene	62 J	62	12
Chrysene	86	62	12
Benzo(b)fluoranthene	120	62	12
Benzo(k)fluoranthene	31 J	62	12
Benzo(a)pyrene	110	62	12
Indeno(1,2,3-cd)pyrene	59 J	62	12
Dibenz(a,h)anthracene	23 J	62	12
Benzo(g,h,i)perylene	75	62	12

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	40-120
2-Fluorobiphenyl	DO	46-120
Terphenyl-d14	DO	43-120

J= Estimated value
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-2-5B	Batch#:	240044
Lab ID:	282049-006	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Naphthalene	ND	5.0	1.0
Acenaphthylene	ND	5.0	1.0
Acenaphthene	ND	5.0	1.0
Fluorene	ND	5.0	1.0
Phenanthrene	ND	5.0	1.0
Anthracene	ND	5.0	1.0
Fluoranthene	ND	5.0	1.0
Pyrene	ND	5.0	1.0
Benzo(a)anthracene	ND	5.0	1.0
Chrysene	ND	5.0	1.0
Benzo(b)fluoranthene	ND	5.0	1.0
Benzo(k)fluoranthene	ND	5.0	1.0
Benzo(a)pyrene	ND	5.0	1.0
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0
Dibenz(a,h)anthracene	ND	5.0	1.0
Benzo(g,h,i)perylene	ND	5.0	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	74	40-120
2-Fluorobiphenyl	90	46-120
Terphenyl-d14	133 *	43-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-3-1B	Batch#:	240044
Lab ID:	282049-007	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	10.00		

Analyte	Result	RL	MDL
Naphthalene	ND	50	10
Acenaphthylene	ND	50	10
Acenaphthene	ND	50	10
Fluorene	ND	50	10
Phenanthrene	10 J	50	10
Anthracene	ND	50	10
Fluoranthene	14 J	50	10
Pyrene	14 J	50	10
Benzo(a)anthracene	ND	50	10
Chrysene	ND	50	10
Benzo(b)fluoranthene	ND	50	10
Benzo(k)fluoranthene	ND	50	10
Benzo(a)pyrene	ND	50	10
Indeno(1,2,3-cd)pyrene	ND	50	10
Dibenz(a,h)anthracene	ND	50	10
Benzo(g,h,i)perylene	ND	50	10

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	40-120
2-Fluorobiphenyl	DO	46-120
Terphenyl-d14	DO	43-120

J= Estimated value
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-3-2B	Batch#:	240044
Lab ID:	282049-008	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Naphthalene	ND	5.1	1.0
Acenaphthylene	ND	5.1	1.0
Acenaphthene	ND	5.1	1.0
Fluorene	ND	5.1	1.0
Phenanthrene	ND	5.1	1.0
Anthracene	ND	5.1	1.0
Fluoranthene	ND	5.1	1.0
Pyrene	ND	5.1	1.0
Benzo(a)anthracene	ND	5.1	1.0
Chrysene	ND	5.1	1.0
Benzo(b)fluoranthene	ND	5.1	1.0
Benzo(k)fluoranthene	ND	5.1	1.0
Benzo(a)pyrene	ND	5.1	1.0
Indeno(1,2,3-cd)pyrene	ND	5.1	1.0
Dibenz(a,h)anthracene	ND	5.1	1.0
Benzo(g,h,i)perylene	ND	5.1	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	57	40-120
2-Fluorobiphenyl	70	46-120
Terphenyl-d14	136 *	43-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-3-4B	Batch#:	240044
Lab ID:	282049-009	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/13/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Naphthalene	ND	5.0	0.99
Acenaphthylene	ND	5.0	0.99
Acenaphthene	ND	5.0	0.99
Fluorene	ND	5.0	0.99
Phenanthrene	ND	5.0	0.99
Anthracene	ND	5.0	0.99
Fluoranthene	ND	5.0	0.99
Pyrene	ND	5.0	0.99
Benzo(a)anthracene	ND	5.0	0.99
Chrysene	ND	5.0	0.99
Benzo(b)fluoranthene	ND	5.0	0.99
Benzo(k)fluoranthene	ND	5.0	0.99
Benzo(a)pyrene	ND	5.0	0.99
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0
Dibenz(a,h)anthracene	ND	5.0	1.0
Benzo(g,h,i)perylene	ND	5.0	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	70	40-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	137 *	43-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	B-3-5B	Batch#:	240044
Lab ID:	282049-010	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/14/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Naphthalene	ND	5.0	1.0
Acenaphthylene	ND	5.0	1.0
Acenaphthene	ND	5.0	1.0
Fluorene	ND	5.0	1.0
Phenanthrene	ND	5.0	1.0
Anthracene	ND	5.0	1.0
Fluoranthene	ND	5.0	1.0
Pyrene	ND	5.0	1.0
Benzo(a)anthracene	ND	5.0	1.0
Chrysene	ND	5.0	1.0
Benzo(b)fluoranthene	ND	5.0	1.0
Benzo(k)fluoranthene	ND	5.0	1.0
Benzo(a)pyrene	ND	5.0	1.0
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0
Dibenz(a,h)anthracene	ND	5.0	1.0
Benzo(g,h,i)perylene	ND	5.0	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	69	40-120
2-Fluorobiphenyl	77	46-120
Terphenyl-d14	130 *	43-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855244	Batch#:	240044
Matrix:	Soil	Prepared:	10/11/16
Units:	ug/Kg	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Naphthalene	ND	5.0	1.0
Acenaphthylene	ND	5.0	1.0
Acenaphthene	ND	5.0	1.0
Fluorene	ND	5.0	1.0
Phenanthrene	ND	5.0	1.0
Anthracene	ND	5.0	1.0
Fluoranthene	ND	5.0	1.0
Pyrene	ND	5.0	1.0
Benzo(a)anthracene	ND	5.0	1.0
Chrysene	ND	5.0	1.0
Benzo(b)fluoranthene	ND	5.0	1.0
Benzo(k)fluoranthene	ND	5.0	1.0
Benzo(a)pyrene	ND	5.0	1.0
Indeno(1,2,3-cd)pyrene	ND	5.0	1.0
Dibenz(a,h)anthracene	ND	5.0	1.0
Benzo(g,h,i)perylene	ND	5.0	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	89	40-120
2-Fluorobiphenyl	97	46-120
Terphenyl-d14	128 *	43-120

*= Value outside of QC limits; see narrative
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855245	Batch#:	240044
Matrix:	Soil	Prepared:	10/11/16
Units:	ug/Kg	Analyzed:	10/14/16

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	33.55	34.56	103	49-120
Pyrene	33.55	37.08	111	48-120

Surrogate	%REC	Limits
Nitrobenzene-d5	89	40-120
2-Fluorobiphenyl	90	46-120
Terphenyl-d14	97	43-120

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Field ID:	ZZZZZZZZZZ	Batch#:	240044
MSS Lab ID:	282004-002	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/11/16
Basis:	as received	Analyzed:	10/14/16
Diln Fac:	1.000		

Type: MS Lab ID: QC855246

Analyte	MSS Result	Spiked	Result	%REC	Limits
Acenaphthene	<1.010	33.89	30.64	90	43-120
Pyrene	2.447	33.89	34.23	94	18-144

Surrogate	%REC	Limits
Nitrobenzene-d5	79	40-120
2-Fluorobiphenyl	82	46-120
Terphenyl-d14	90	43-120

Type: MSD Lab ID: QC855247

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Acenaphthene	33.82	35.76	106	43-120	16	45
Pyrene	33.82	41.00	114	18-144	18	72

Surrogate	%REC	Limits
Nitrobenzene-d5	98	40-120
2-Fluorobiphenyl	96	46-120
Terphenyl-d14	107	43-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855994	Batch#:	240235
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	**Result**	**RL**	**MDL**
Naphthalene	ND	5.1	1.0
Acenaphthylene	ND	5.1	1.0
Acenaphthene	ND	5.1	1.0
Fluorene	ND	5.1	1.0
Phenanthrene	1.0 J	5.1	1.0
Anthracene	ND	5.1	1.0
Fluoranthene	1.5 J	5.1	1.0
Pyrene	1.8 J	5.1	1.0
Benzo(a)anthracene	1.5 J	5.1	1.0
Chrysene	1.4 J	5.1	1.0
Benzo(b)fluoranthene	1.3 J	5.1	1.0
Benzo(k)fluoranthene	ND	5.1	1.0
Benzo(a)pyrene	1.2 J	5.1	1.0
Indeno(1,2,3-cd)pyrene	1.4 J	5.1	1.0
Dibenz(a,h)anthracene	1.5 J	5.1	1.0
Benzo(g,h,i)perylene	1.5 J	5.1	1.0

Surrogate	**%REC**	**Limits**
Nitrobenzene-d5	80	40-120
2-Fluorobiphenyl	76	46-120
Terphenyl-d14	99	43-120

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8270C-SIM
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855995	Batch#:	240235
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	33.00	35.09	106	49-120
Pyrene	33.00	39.21	119	48-120

Surrogate	%REC	Limits
Nitrobenzene-d5	92	40-120
2-Fluorobiphenyl	88	46-120
Terphenyl-d14	102	43-120

Organochlorine Pesticides

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-1-W	Batch#:	240141
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16
Units:	ug/L	Prepared:	10/13/16
Diln Fac:	10.00	Analyzed:	10/24/16

Analyte	Result	RL	MDL
alpha-BHC	ND	0.5	0.08
beta-BHC	ND	0.5	0.1
gamma-BHC	ND	0.5	0.09
delta-BHC	ND	0.5	0.09
Heptachlor	ND	0.5	0.06
Aldrin	ND	0.5	0.06
Heptachlor epoxide	ND	0.5	0.07
Endosulfan I	ND	0.5	0.07
Dieldrin	ND	1.0	0.2
4,4'-DDE	ND	1.0	0.1
Endrin	ND	1.0	0.2
Endosulfan II	ND	1.0	0.2
Endosulfan sulfate	ND	1.0	0.2
4,4'-DDD	ND	1.0	0.2
Endrin aldehyde	ND	1.0	0.2
4,4'-DDT	ND	1.0	0.2
alpha-Chlordane	ND	0.5	0.1
gamma-Chlordane	ND	0.5	0.1
Methoxychlor	ND	4.8	1.0
Toxaphene	ND	9.6	3.1

Surrogate	%REC	Limits
TCMX	DO	29-149
Decachlorobiphenyl	DO	24-140

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855619	Batch#:	240141
Matrix:	Water	Prepared:	10/13/16
Units:	ug/L	Analyzed:	10/14/16

Analyte	Result	RL	MDL
alpha-BHC	ND	0.05	0.006
beta-BHC	ND	0.05	0.02
gamma-BHC	ND	0.05	0.006
delta-BHC	ND	0.05	0.006
Heptachlor	ND	0.05	0.004
Aldrin	ND	0.05	0.005
Heptachlor epoxide	ND	0.05	0.002
Endosulfan I	ND	0.05	0.003
Dieldrin	ND	0.1	0.007
4,4'-DDE	ND	0.1	0.005
Endrin	ND	0.1	0.01
Endosulfan II	ND	0.1	0.007
Endosulfan sulfate	ND	0.1	0.007
4,4'-DDD	ND	0.1	0.007
Endrin aldehyde	ND	0.1	0.009
4,4'-DDT	ND	0.1	0.005
alpha-Chlordane	ND	0.05	0.005
gamma-Chlordane	ND	0.05	0.02
Methoxychlor	ND	0.5	0.06
Toxaphene	ND	1.0	0.3

Surrogate	%REC	Limits
TCMX	34	29-149
Decachlorobiphenyl	97	24-140

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8081A
Matrix:	Water	Batch#:	240141
Units:	ug/L	Prepared:	10/13/16
Diln Fac:	1.000	Analyzed:	10/14/16

Type: BS   Lab ID: QC855620

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	0.2000	0.2448 b	122	59-144
Heptachlor	0.2000	0.2256 b	113	48-134
Aldrin	0.2000	0.2376 b	119	42-135
Dieldrin	0.2000	0.2500 # b	125	57-144
Endrin	0.2000	0.2469 # b	123	58-147
4,4'-DDT	0.2000	0.2376 b	119	48-143

Surrogate	%REC	Limits
TCMX	82	29-149
Decachlorobiphenyl	124	24-140

Type: BSD   Lab ID: QC855621

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	0.2000	0.2081 b	104	59-144	16	38
Heptachlor	0.2000	0.2147 b	107	48-134	5	45
Aldrin	0.2000	0.2137 b	107	42-135	11	40
Dieldrin	0.2000	0.2797 b	140	57-144	11	42
Endrin	0.2000	0.2736 b	137	58-147	10	43
4,4'-DDT	0.2000	0.2614 b	131	48-143	10	46

Surrogate	%REC	Limits
TCMX	88	29-149
Decachlorobiphenyl	57	24-140

#= CCV drift outside limits; average CCV drift within limits per method requirements
b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-1-1	Batch#:	240127
Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	10.00		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	8.5	1.3
beta-BHC	ND	8.5	1.9
gamma-BHC	ND	8.5	1.5
delta-BHC	ND	8.5	1.3
Heptachlor	ND	8.5	1.1
Aldrin	ND	8.5	1.1
Heptachlor epoxide	ND	8.5	1.1
Endosulfan I	ND	8.5	0.96
Dieldrin	ND	8.5	1.8
4,4'-DDE	ND	17	1.7
Endrin	ND	17	2.1
Endosulfan II	ND	17	2.4
Endosulfan sulfate	ND	17	1.7
4,4'-DDD	ND	17	2.3
Endrin aldehyde	ND	17	2.3
4,4'-DDT	ND	17	1.6
alpha-Chlordane	ND	8.5	0.91
gamma-Chlordane	ND	8.5	0.87
Methoxychlor	ND	85	13
Toxaphene	ND	300	67

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-1-2B	Batch#:	240127
Lab ID:	282049-002	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	200.0		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	170	26
beta-BHC	ND	170	37
gamma-BHC	ND	170	30
delta-BHC	ND	170	26
Heptachlor	ND	170	22
Aldrin	ND	170	21
Heptachlor epoxide	ND	170	21
Endosulfan I	ND	170	19
Dieldrin	ND	170	36
4,4'-DDE	ND	330	33
Endrin	ND	330	41
Endosulfan II	ND	330	47
Endosulfan sulfate	ND	330	33
4,4'-DDD	ND	330	45
Endrin aldehyde	ND	330	45
4,4'-DDT	ND	330	32
alpha-Chlordane	ND	170	18
gamma-Chlordane	ND	170	17
Methoxychlor	ND	1,700	260
Toxaphene	ND	5,900	1,300

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-1-3B	Batch#:	240127
Lab ID:	282049-003	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	200.0		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	170	27
beta-BHC	ND	170	38
gamma-BHC	ND	170	30
delta-BHC	ND	170	27
Heptachlor	ND	170	23
Aldrin	ND	170	22
Heptachlor epoxide	ND	170	22
Endosulfan I	ND	170	19
Dieldrin	ND	170	37
4,4'-DDE	ND	330	33
Endrin	ND	330	42
Endosulfan II	ND	330	48
Endosulfan sulfate	ND	330	34
4,4'-DDD	ND	330	46
Endrin aldehyde	ND	330	46
4,4'-DDT	ND	330	32
alpha-Chlordane	ND	170	18
gamma-Chlordane	ND	170	18
Methoxychlor	ND	1,700	270
Toxaphene	ND	6,000	1,300

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-1-4C	Batch#:	240127
Lab ID:	282049-004	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	100.0		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	85	13
beta-BHC	ND	85	19
gamma-BHC	ND	85	15
delta-BHC	ND	85	13
Heptachlor	ND	85	11
Aldrin	ND	85	11
Heptachlor epoxide	ND	85	11
Endosulfan I	ND	85	9.6
Dieldrin	ND	85	18
4,4'-DDE	ND	160	16
Endrin	ND	160	21
Endosulfan II	ND	160	24
Endosulfan sulfate	ND	160	17
4,4'-DDD	ND	160	23
Endrin aldehyde	ND	160	23
4,4'-DDT	ND	160	16
alpha-Chlordane	ND	85	9.0
gamma-Chlordane	ND	85	8.7
Methoxychlor	ND	850	130
Toxaphene	ND	3,000	660

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-2-2B	Batch#:	240127
Lab ID:	282049-005	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	20.00		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	17	2.7
beta-BHC	ND	17	3.8
gamma-BHC	ND	17	3.0
delta-BHC	ND	17	2.7
Heptachlor	ND	17	2.3
Aldrin	ND	17	2.2
Heptachlor epoxide	ND	17	2.2
Endosulfan I	ND	17	1.9
Dieldrin	ND	17	3.6
4,4'-DDE	ND	33	3.3
Endrin	ND	33	4.2
Endosulfan II	ND	33	4.8
Endosulfan sulfate	ND	33	3.3
4,4'-DDD	ND	33	4.5
Endrin aldehyde	ND	33	4.6
4,4'-DDT	ND	33	3.2
alpha-Chlordane	ND	17	1.8
gamma-Chlordane	ND	17	1.7
Methoxychlor	ND	170	26
Toxaphene	ND	600	130

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-2-5B	Batch#:	240127
Lab ID:	282049-006	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	0.84	0.13
beta-BHC	ND	0.84	0.19
gamma-BHC	ND	0.84	0.15
delta-BHC	ND	0.84	0.13
Heptachlor	ND	0.84	0.11
Aldrin	ND	0.84	0.11
Heptachlor epoxide	ND	0.84	0.11
Endosulfan I	ND	0.84	0.095
Dieldrin	ND	0.84	0.18
4,4'-DDE	ND	1.6	0.16
Endrin	ND	1.6	0.21
Endosulfan II	ND	1.6	0.24
Endosulfan sulfate	ND	1.6	0.17
4,4'-DDD	ND	1.6	0.22
Endrin aldehyde	ND	1.6	0.23
4,4'-DDT	ND	1.6	0.16
alpha-Chlordane	ND	0.84	0.090
gamma-Chlordane	ND	0.84	0.086
Methoxychlor	ND	8.4	1.3
Toxaphene	ND	30	6.6

Surrogate	%REC	Limits
TCMX	69	44-125
Decachlorobiphenyl	83	39-121

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-3-1B	Batch#:	240127
Lab ID:	282049-007	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	20.00		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	17	2.6
beta-BHC	ND	17	3.7
gamma-BHC	ND	17	3.0
delta-BHC	ND	17	2.6
Heptachlor	ND	17	2.2
Aldrin	ND	17	2.1
Heptachlor epoxide	ND	17	2.1
Endosulfan I	ND	17	1.9
Dieldrin	ND	17	3.6
4,4'-DDE	ND	33	3.3
Endrin	ND	33	4.1
Endosulfan II	ND	33	4.7
Endosulfan sulfate	ND	33	3.3
4,4'-DDD	ND	33	4.5
Endrin aldehyde	ND	33	4.5
4,4'-DDT	ND	33	3.2
alpha-Chlordane	ND	17	1.8
gamma-Chlordane	ND	17	1.7
Methoxychlor	ND	170	26
Toxaphene	ND	590	130

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-3-2B	Batch#:	240127
Lab ID:	282049-008	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	0.84	0.13
beta-BHC	ND	0.84	0.19
gamma-BHC	ND	0.84	0.15
delta-BHC	ND	0.84	0.13
Heptachlor	ND	0.84	0.11
Aldrin	ND	0.84	0.11
Heptachlor epoxide	ND	0.84	0.11
Endosulfan I	ND	0.84	0.095
Dieldrin	ND	0.84	0.18
4,4'-DDE	ND	1.6	0.16
Endrin	ND	1.6	0.21
Endosulfan II	ND	1.6	0.24
Endosulfan sulfate	ND	1.6	0.17
4,4'-DDD	ND	1.6	0.23
Endrin aldehyde	ND	1.6	0.23
4,4'-DDT	ND	1.6	0.16
alpha-Chlordane	ND	0.84	0.090
gamma-Chlordane	ND	0.84	0.087
Methoxychlor	ND	8.4	1.3
Toxaphene	ND	30	6.6

Surrogate	%REC	Limits
TCMX	65	44-125
Decachlorobiphenyl	76	39-121

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-3-4B	Batch#:	240127
Lab ID:	282049-009	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	0.86	0.13
beta-BHC	ND	0.86	0.19
gamma-BHC	ND	0.86	0.15
delta-BHC	ND	0.86	0.13
Heptachlor	ND	0.86	0.11
Aldrin	ND	0.86	0.11
Heptachlor epoxide	ND	0.86	0.11
Endosulfan I	ND	0.86	0.097
Dieldrin	ND	0.86	0.18
4,4'-DDE	ND	1.7	0.17
Endrin	ND	1.7	0.21
Endosulfan II	ND	1.7	0.24
Endosulfan sulfate	ND	1.7	0.17
4,4'-DDD	ND	1.7	0.23
Endrin aldehyde	ND	1.7	0.23
4,4'-DDT	ND	1.7	0.16
alpha-Chlordane	ND	0.86	0.091
gamma-Chlordane	ND	0.86	0.088
Methoxychlor	ND	8.6	1.3
Toxaphene	ND	30	6.7

Surrogate	%REC	Limits
TCMX	60	44-125
Decachlorobiphenyl	81	39-121

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Field ID:	B-3-5B	Batch#:	240127
Lab ID:	282049-010	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	1.000		

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	0.84	0.13
beta-BHC	ND	0.84	0.19
gamma-BHC	ND	0.84	0.15
delta-BHC	ND	0.84	0.13
Heptachlor	ND	0.84	0.11
Aldrin	ND	0.84	0.11
Heptachlor epoxide	ND	0.84	0.11
Endosulfan I	ND	0.84	0.095
Dieldrin	ND	0.84	0.18
4,4'-DDE	ND	1.6	0.16
Endrin	ND	1.6	0.21
Endosulfan II	ND	1.6	0.24
Endosulfan sulfate	ND	1.6	0.17
4,4'-DDD	ND	1.6	0.22
Endrin aldehyde	ND	1.6	0.23
4,4'-DDT	ND	1.6	0.16
alpha-Chlordane	ND	0.84	0.090
gamma-Chlordane	ND	0.84	0.086
Methoxychlor	ND	8.4	1.3
Toxaphene	ND	30	6.6

Surrogate	%REC	Limits
TCMX	77	44-125
Decachlorobiphenyl	99	39-121

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855568	Batch#:	240127
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/17/16

Cleanup Method: EPA 3620B

Analyte	Result	RL	MDL
alpha-BHC	ND	0.85	0.10
beta-BHC	ND	0.85	0.21
gamma-BHC	ND	0.85	0.11
delta-BHC	ND	0.85	0.14
Heptachlor	ND	0.85	0.096
Aldrin	ND	0.85	0.10
Heptachlor epoxide	ND	0.85	0.11
Endosulfan I	ND	0.85	0.088
Dieldrin	ND	0.85	0.20
4,4'-DDE	ND	1.7	0.29
Endrin	ND	1.7	0.28
Endosulfan II	ND	1.7	0.25
Endosulfan sulfate	ND	1.7	0.26
4,4'-DDD	ND	1.7	0.36
Endrin aldehyde	ND	1.7	0.17
4,4'-DDT	ND	1.7	0.24
alpha-Chlordane	ND	0.85	0.10
gamma-Chlordane	ND	0.85	0.12
Methoxychlor	ND	8.5	1.6
Toxaphene	ND	30	4.6

Surrogate	%REC	Limits
TCMX	79	44-125
Decachlorobiphenyl	75	39-121

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855569	Batch#:	240127
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/17/16

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.24	9.193	69	44-121
Heptachlor	13.24	8.894	67	45-129
Aldrin	13.24	9.350	71	45-120
Dieldrin	13.24	9.351	71	49-131
Endrin	13.24	9.125	69	43-135
4,4'-DDT	13.24	8.997	68	37-141

Surrogate	%REC	Limits
TCMX	75	44-125
Decachlorobiphenyl	65	39-121

Polychlorinated Biphenyls (PCBs)

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8082
Field ID:	B-1-W	Batch#:	240140
Matrix:	Water	Sampled:	10/11/16
Units:	ug/L	Received:	10/11/16
Diln Fac:	1.000	Prepared:	10/13/16

Type: SAMPLE Analyzed: 10/17/16
Lab ID: 282049-011

Analyte	Result	RL	MDL
Aroclor-1016	ND	0.50	0.16
Aroclor-1221	ND	1.0	0.32
Aroclor-1232	ND	0.50	0.14
Aroclor-1242	ND	0.50	0.16
Aroclor-1248	ND	0.50	0.16
Aroclor-1254	ND	0.50	0.16
Aroclor-1260	ND	0.50	0.13

Surrogate	%REC	Limits
Decachlorobiphenyl	68	28-120

Type: BLANK Analyzed: 10/14/16
Lab ID: QC855616

Analyte	Result	RL	MDL
Aroclor-1016	ND	0.50	0.16
Aroclor-1221	ND	1.0	0.32
Aroclor-1232	ND	0.50	0.14
Aroclor-1242	ND	0.50	0.16
Aroclor-1248	ND	0.50	0.16
Aroclor-1254	ND	0.50	0.16
Aroclor-1260	ND	0.50	0.13

Surrogate	%REC	Limits
Decachlorobiphenyl	93	28-120

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Polychlorinated Biphenyls (PCBs)

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3520C
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Water	Batch#:	240140
Units:	ug/L	Prepared:	10/13/16
Diln Fac:	1.000	Analyzed:	10/14/16

Type: BS Lab ID: QC855617

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	5.000	3.846	77	62-127
Aroclor-1260	5.000	3.134	63	60-135

Surrogate	%REC	Limits
Decachlorobiphenyl	64	28-120

Type: BSD Lab ID: QC855618

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	5.000	4.742	95	62-127	21	29
Aroclor-1260	5.000	3.727	75	60-135	17	40

Surrogate	%REC	Limits
Decachlorobiphenyl	93	28-120

RPD= Relative Percent Difference

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	240071
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/12/16

Field ID:	B-1-1	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-001	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.7	1.2
Aroclor-1221	ND	9.5	3.1
Aroclor-1232	ND	4.7	1.5
Aroclor-1242	ND	4.7	1.4
Aroclor-1248	ND	4.7	1.5
Aroclor-1254	ND	4.7	1.2
Aroclor-1260	9.2	4.7	0.76

Surrogate	%REC	Limits
TCMX	80	46-141
Decachlorobiphenyl	87	25-135

Field ID:	B-1-2B	Diln Fac:	20.00
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-002	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	66	24
Aroclor-1221	ND	130	63
Aroclor-1232	ND	66	31
Aroclor-1242	ND	66	29
Aroclor-1248	ND	66	30
Aroclor-1254	ND	66	24
Aroclor-1260	ND	66	15

Surrogate	%REC	Limits
TCMX	DO	46-141
Decachlorobiphenyl	DO	25-135

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	240071
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/12/16

Field ID:	B-1-3B	Diln Fac:	20.00
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-003	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	67	24
Aroclor-1221	ND	130	64
Aroclor-1232	ND	67	31
Aroclor-1242	ND	67	29
Aroclor-1248	ND	67	31
Aroclor-1254	ND	67	25
Aroclor-1260	ND	67	16

Surrogate	%REC	Limits
TCMX	DO	46-141
Decachlorobiphenyl	DO	25-135

Field ID:	B-1-4C	Diln Fac:	20.00
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-004	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	67	24
Aroclor-1221	ND	130	64
Aroclor-1232	ND	67	31
Aroclor-1242	ND	67	29
Aroclor-1248	ND	67	30
Aroclor-1254	ND	67	24
Aroclor-1260	ND	67	15

Surrogate	%REC	Limits
TCMX	DO	46-141
Decachlorobiphenyl	DO	25-135

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	240071
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/12/16

Field ID:	B-2-2B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/11/16
Lab ID:	282049-005	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.5	3.2
Aroclor-1232	ND	4.8	1.5
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	25	4.8	0.77

Surrogate	%REC	Limits
TCMX	85	46-141
Decachlorobiphenyl	89	25-135

Field ID:	B-2-5B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/11/16
Lab ID:	282049-006	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.5	3.2
Aroclor-1232	ND	4.8	1.5
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	81	46-141
Decachlorobiphenyl	91	25-135

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	240071
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/12/16

Field ID:	B-3-1B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-007	Analyzed:	10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.5	3.2
Aroclor-1232	ND	4.8	1.5
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	81	46-141
Decachlorobiphenyl	89	25-135

Field ID:	B-3-2B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-008	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.6	3.2
Aroclor-1232	ND	4.8	1.6
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	74	46-141
Decachlorobiphenyl	89	25-135

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	240071
Units:	ug/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/12/16

Field ID:	B-3-4B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-009	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.6	3.2
Aroclor-1232	ND	4.8	1.5
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	93	46-141
Decachlorobiphenyl	108	25-135

Field ID:	B-3-5B	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	10/10/16
Lab ID:	282049-010	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.5	3.2
Aroclor-1232	ND	4.8	1.5
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	83	46-141
Decachlorobiphenyl	87	25-135

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855462	Analyzed:	10/12/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.8	1.2
Aroclor-1221	ND	9.6	3.2
Aroclor-1232	ND	4.8	1.6
Aroclor-1242	ND	4.8	1.4
Aroclor-1248	ND	4.8	1.5
Aroclor-1254	ND	4.8	1.2
Aroclor-1260	ND	4.8	0.77

Surrogate	%REC	Limits
TCMX	107	46-141
Decachlorobiphenyl	98	25-135

DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855463	Batch#:	240071
Matrix:	Soil	Prepared:	10/12/16
Units:	ug/Kg	Analyzed:	10/12/16

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	165.8	170.1	103	64-140
Aroclor-1260	165.8	149.3	90	65-146

Surrogate	%REC	Limits
TCMX	90	46-141
Decachlorobiphenyl	95	25-135

Batch QC Report

Low-Level PCBs

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3550B
Project#:	20172194	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	240071
MSS Lab ID:	282007-001	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	ug/Kg	Prepared:	10/12/16
Basis:	as received	Analyzed:	10/12/16
Diln Fac:	1.000		

Type: MS Lab ID: QC855464

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.931	166.3	178.4	107	60-161
Aroclor-1260	<1.916	166.3	154.6	93	42-166

Surrogate	%REC	Limits
TCMX	89	46-141
Decachlorobiphenyl	90	25-135

Type: MSD Lab ID: QC855465

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	166.5	197.5	119	60-161	10	43
Aroclor-1260	166.5	164.7	99	42-166	6	51

Surrogate	%REC	Limits
TCMX	96	46-141
Decachlorobiphenyl	93	25-135

RPD= Relative Percent Difference

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-1-W	Units:	ug/L
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Water	Received:	10/11/16

Analyte	Result		RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	4.5		1.0	0.13	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Arsenic	7.1		1.0	0.25	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Barium	390		1.0	0.30	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Beryllium	0.53	J	1.0	0.13	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Cadmium	0.82	J	1.0	0.12	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Chromium	49		1.0	0.11	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Cobalt	15		1.0	0.16	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Copper	120		1.5	0.50	5.000	240082	10/12/16	10/20/16	EPA 200.8	EPA 6020
Lead	340		1.0	0.094	5.000	240082	10/12/16	10/24/16	EPA 200.8	EPA 6020
Mercury	ND		0.20	0.040	1.000	240317	10/19/16	10/19/16	METHOD	EPA 7470A
Molybdenum	1.8		1.0	0.25	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Nickel	41		1.5	0.50	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Selenium	ND		1.0	0.25	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Silver	0.18	J	1.0	0.097	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020
Thallium	ND		1.0	0.092	5.000	240082	10/12/16	10/20/16	EPA 200.8	EPA 6020
Vanadium	52		1.0	0.24	5.000	240082	10/12/16	10/20/16	EPA 200.8	EPA 6020
Zinc	390		10	2.5	5.000	240082	10/12/16	10/19/16	EPA 200.8	EPA 6020

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 200.8
Project#:	20172194	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC855393	Batch#:	240082
Matrix:	Water	Prepared:	10/12/16
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Antimony	ND	1.0	0.13	10/19/16
Arsenic	ND	1.0	0.25	10/19/16
Barium	ND	1.0	0.30	10/19/16
Beryllium	ND	1.0	0.13	10/19/16
Cadmium	ND	1.0	0.12	10/19/16
Chromium	ND	1.0	0.11	10/19/16
Cobalt	ND	1.0	0.16	10/19/16
Copper	1.1 J	1.5	0.50	10/20/16
Lead	ND	1.0	0.094	10/24/16
Molybdenum	ND	1.0	0.25	10/19/16
Nickel	ND	1.5	0.50	10/20/16
Selenium	ND	1.0	0.25	10/19/16
Silver	ND	1.0	0.097	10/19/16
Thallium	ND	1.0	0.092	10/20/16
Vanadium	ND	1.0	0.24	10/24/16
Zinc	ND	10	2.5	10/19/16

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 200.8
Project#:	20172194	Analysis:	EPA 6020
Matrix:	Water	Batch#:	240082
Units:	ug/L	Prepared:	10/12/16
Diln Fac:	5.000		

Type: BS Lab ID: QC855394

Analyte	Spiked	Result	%REC	Limits	Analyzed
Antimony	100.0	98.45	98	80-120	10/20/16
Arsenic	100.0	112.1	112	80-120	10/20/16
Barium	100.0	99.55	100	80-120	10/19/16
Beryllium	100.0	105.6	106	80-120	10/20/16
Cadmium	100.0	99.15	99	80-120	10/20/16
Chromium	100.0	103.3	103	80-121	10/20/16
Cobalt	100.0	107.9	108	80-123	10/20/16
Copper	100.0	109.6	110	80-130	10/20/16
Lead	100.0	98.15	98	80-122	11/03/16
Molybdenum	100.0	102.2	102	80-120	10/20/16
Nickel	100.0	108.2	108	80-129	10/20/16
Selenium	100.0	113.1	113	80-126	10/20/16
Silver	100.0	101.2	101	79-120	10/20/16
Thallium	50.00	49.73	99	80-120	10/20/16
Vanadium	100.0	104.2	104	80-120	10/20/16
Zinc	100.0	108.8	109	80-130	10/20/16

Type: BSD Lab ID: QC855395

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	97.40	97	80-120	1	20	10/20/16
Arsenic	100.0	109.1	109	80-120	3	20	10/20/16
Barium	100.0	100.6	101	80-120	1	20	10/19/16
Beryllium	100.0	103.0	103	80-120	3	20	10/20/16
Cadmium	100.0	96.25	96	80-120	3	20	10/20/16
Chromium	100.0	102.6	103	80-121	1	20	10/20/16
Cobalt	100.0	106.9	107	80-123	1	20	10/20/16
Copper	100.0	111.7	112	80-130	2	20	10/20/16
Lead	100.0	97.65	98	80-122	1	20	11/03/16
Molybdenum	100.0	99.10	99	80-120	3	20	10/20/16
Nickel	100.0	107.2	107	80-129	1	23	10/20/16
Selenium	100.0	107.1	107	80-126	5	20	10/20/16
Silver	100.0	99.30	99	79-120	2	20	10/20/16
Thallium	50.00	48.65	97	80-120	2	20	10/20/16
Vanadium	100.0	102.9	103	80-120	1	20	10/20/16
Zinc	100.0	112.3	112	80-130	3	20	10/20/16

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 200.8
Project#:	20172194	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Batch#:	240082
MSS Lab ID:	281885-003	Sampled:	10/06/16
Matrix:	Water	Received:	10/06/16
Units:	ug/L	Prepared:	10/12/16
Diln Fac:	5.000		

Type: MS   Lab ID: QC855396

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Antimony	0.1480	100.0	98.75	99	75-120	10/20/16
Arsenic	5.395	100.0	113.2	108	80-120	10/20/16
Barium	65.50	100.0	162.8	97	80-122	10/19/16
Beryllium	<0.1302	100.0	107.0	107	80-121	10/20/16
Cadmium	<0.1229	100.0	99.85	100	80-120	10/20/16
Chromium	3.190	100.0	105.5	102	80-122	10/20/16
Cobalt	<0.1576	100.0	105.8	106	80-121	10/20/16
Copper	<0.5000	100.0	109.5	109	76-124	10/20/16
Lead	0.3345	100.0	100.2	100	80-120	11/03/16
Molybdenum	0.7035	100.0	101.7	101	80-120	10/20/16
Nickel	<0.5000	100.0	104.8	105	79-126	10/20/16
Selenium	<0.2529	100.0	109.6	110	77-125	10/20/16
Silver	<0.09734	100.0	101.7	102	66-120	10/20/16
Thallium	0.1215	50.00	49.63	99	80-120	10/20/16
Vanadium	11.48	100.0	113.1	102	80-121	10/20/16
Zinc	13.49	100.0	119.8	106	75-126	10/20/16

Type: MSD   Lab ID: QC855397

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	98.40	98	75-120	0	20	10/20/16
Arsenic	100.0	112.4	107	80-120	1	26	10/20/16
Barium	100.0	158.0	93	80-122	3	28	10/19/16
Beryllium	100.0	103.4	103	80-121	3	23	10/20/16
Cadmium	100.0	99.75	100	80-120	0	21	10/20/16
Chromium	100.0	104.2	101	80-122	1	30	10/20/16
Cobalt	100.0	103.5	103	80-121	2	25	10/20/16
Copper	100.0	108.4	108	76-124	1	29	10/20/16
Lead	100.0	98.30	98	80-120	2	20	11/03/16
Molybdenum	100.0	100.0	99	80-120	2	20	10/20/16
Nickel	100.0	104.7	105	79-126	0	30	10/20/16
Selenium	100.0	107.1	107	77-125	2	28	10/20/16
Silver	100.0	100.6	101	66-120	1	29	10/20/16
Thallium	50.00	49.43	99	80-120	0	20	10/20/16
Vanadium	100.0	110.5	99	80-121	2	31	10/20/16
Zinc	100.0	117.8	104	75-126	2	27	10/20/16

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240317
Lab ID:	QC856329	Prepared:	10/19/16
Matrix:	Water	Analyzed:	10/19/16
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.040

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240317
Matrix:	Water	Prepared:	10/19/16
Units:	ug/L	Analyzed:	10/19/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC856330	2.500	2.480	99	80-120		
BSD	QC856331	2.500	2.528	101	80-120	2	24

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240317
Field ID:	ZZZZZZZZZZ	Sampled:	10/12/16
MSS Lab ID:	282092-004	Received:	10/13/16
Matrix:	Water	Prepared:	10/19/16
Units:	ug/L	Analyzed:	10/19/16
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC856332	<0.04000	2.500	2.544	102	60-130		
MSD	QC856333		2.500	2.598	104	60-130	2	34

RPD= Relative Percent Difference

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-1-1	Basis:	as received
Lab ID:	282049-001	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.25 J	1.9	0.047	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Arsenic	3.9	0.24	0.066	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Barium	76	0.24	0.064	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Beryllium	0.15 J	0.24	0.034	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Cadmium	0.13 J	0.24	0.052	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Chromium	21	0.24	0.071	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Cobalt	4.3	0.24	0.057	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Copper	13	0.60	0.096	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	28	0.24	0.035	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Mercury	0.083	0.017	0.0031	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.29 J	0.39	0.13	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Nickel	24	0.37	0.12	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Selenium	0.40 J	1.9	0.067	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Silver	0.066 J	0.24	0.024	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Thallium	0.099 J	0.24	0.032	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Vanadium	17	0.42	0.14	25.00	240337	10/19/16	10/24/16	EPA 3050B	EPA 6020
Zinc	67	0.96	0.23	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-1-2B	Basis:	as received
Lab ID:	282049-002	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.23 J	2.0	0.077	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Arsenic	4.6	0.25	0.071	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Barium	57	0.25	0.052	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Beryllium	0.24 J	0.25	0.036	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	0.21 J	0.25	0.056	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	15	0.25	0.076	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cobalt	5.3	0.25	0.061	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Copper	31	0.64	0.10	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	34	0.25	0.069	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Mercury	0.35	0.016	0.0029	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.39 J	0.42	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Nickel	31	0.40	0.13	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Selenium	0.39 J	2.0	0.072	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Silver	0.060 J	0.25	0.026	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.059 J	0.25	0.052	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	22	0.64	0.15	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Zinc	91	1.0	0.25	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-1-3B	Basis:	as received
Lab ID:	282049-003	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.23 J	2.0	0.050	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Arsenic	6.0	0.25	0.070	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Barium	58	0.25	0.052	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Beryllium	0.34	0.25	0.036	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cadmium	0.18 J	0.25	0.056	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	29	0.25	0.075	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	18	0.25	0.060	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	24	0.64	0.10	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	12	0.25	0.068	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Mercury	0.36	0.017	0.0030	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.49	0.41	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Nickel	41	0.40	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.24 J	2.0	0.071	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Silver	0.061 J	0.25	0.026	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.067 J	0.25	0.051	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	32	0.45	0.15	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	76	1.0	0.25	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-1-4C	Basis:	as received
Lab ID:	282049-004	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.36 J	1.9	0.070	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Arsenic	7.2	0.23	0.064	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Barium	60	0.23	0.048	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Beryllium	0.28	0.23	0.033	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	0.56	0.23	0.051	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	20	0.23	0.069	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	34	0.23	0.055	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	71	0.58	0.093	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	56	0.23	0.062	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Mercury	0.73	0.018	0.0032	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	1.2	0.38	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Nickel	38	0.36	0.12	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.30 J	1.9	0.065	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Silver	0.22 J	0.23	0.024	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.058 J	0.23	0.047	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	22	0.41	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	230	7.5	1.8	200.0	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-2-2B	Basis:	as received
Lab ID:	282049-005	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	1.9 J	2.0	0.078	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Arsenic	14	0.25	0.072	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Barium	220	0.25	0.054	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Beryllium	0.56	0.25	0.037	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	0.65	0.25	0.057	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	47	0.25	0.077	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	14	0.25	0.062	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	110	0.66	0.11	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	250	1.7	0.56	200.0	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	0.43	0.017	0.0031	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	2.8	0.25	0.079	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Nickel	72	0.41	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.43 J	2.0	0.074	25.00	240337	10/19/16	10/28/16	EPA 3050B	EPA 6020
Silver	0.20 J	0.25	0.027	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.097 J	0.25	0.053	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	34	0.46	0.15	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	270	8.4	2.1	200.0	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-2-5B	Basis:	as received
Lab ID:	282049-006	Sampled:	10/11/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.13 J	2.0	0.078	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Arsenic	4.8	0.66	0.072	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Barium	91	0.25	0.054	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Beryllium	0.38	0.25	0.037	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	2.2	0.25	0.057	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	29	0.25	0.077	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	9.9	0.25	0.062	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	17	0.66	0.11	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	4.5	0.25	0.070	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	0.042	0.016	0.0030	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.58	0.25	0.079	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Nickel	55	0.41	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	1.2 J	2.0	0.074	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Silver	0.34	0.25	0.029	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Thallium	0.16 J	0.25	0.053	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	41	0.46	0.15	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	40	1.1	0.26	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-3-1B	Basis:	as received
Lab ID:	282049-007	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.59 J	2.0	0.073	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Arsenic	5.6	0.61	0.067	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Barium	130	0.25	0.050	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Beryllium	0.49	0.25	0.035	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	0.23 J	0.25	0.053	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	37	0.25	0.072	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	16	0.25	0.058	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	37	0.61	0.098	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	110	0.25	0.065	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	2.1	0.083	0.015	5.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.74	0.25	0.074	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Nickel	59	0.38	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.16 J	2.0	0.069	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Silver	0.11 J	0.25	0.025	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.11 J	0.25	0.049	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	30	0.43	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	61	0.98	0.24	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-3-2B	Basis:	as received
Lab ID:	282049-008	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result		RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.20	J	2.0	0.050	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Arsenic	8.4		0.64	0.071	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Barium	180		0.25	0.052	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Beryllium	0.70		0.25	0.036	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cadmium	0.21	J	0.25	0.029	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Chromium	39		0.25	0.076	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	12		0.25	0.061	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	24		0.64	0.10	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	7.8		0.25	0.069	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	0.045		0.015	0.0028	1.000	240492	10/24/16	10/24/16	METHOD	EPA 7471A
Molybdenum	0.67		0.25	0.077	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Nickel	48		0.40	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.85	J	2.0	0.072	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Silver	0.20	J	0.25	0.026	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.13	J	0.25	0.052	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	35		0.45	0.15	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	60		1.0	0.25	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-3-4B	Basis:	as received
Lab ID:	282049-009	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.095 J	2.0	0.073	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Arsenic	4.5	0.61	0.067	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Barium	61	0.25	0.050	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Beryllium	0.43	0.25	0.035	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cadmium	ND	0.25	0.027	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Chromium	31	0.25	0.072	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Cobalt	12	0.25	0.058	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Copper	14	0.61	0.098	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	5.2	0.25	0.065	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	0.027	0.016	0.0029	1.000	240714	10/28/16	10/28/16	METHOD	EPA 7471A
Molybdenum	0.30 J	0.40	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Nickel	47	0.38	0.13	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Selenium	0.074 J	2.0	0.069	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Silver	0.044 J	0.25	0.025	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.079 J	0.25	0.049	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	22	0.43	0.14	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Zinc	33	0.98	0.24	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282049	Project#:	20172194
Client:	Kleinfelder	Location:	Mandela Pkwy. Hotel
Field ID:	B-3-5B	Basis:	as received
Lab ID:	282049-010	Sampled:	10/10/16
Matrix:	Soil	Received:	10/11/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.13 J	1.9	0.071	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Arsenic	7.3	0.60	0.066	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Barium	110	0.24	0.048	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Beryllium	0.49	0.24	0.034	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cadmium	0.31	0.24	0.052	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Chromium	32	0.24	0.070	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Cobalt	4.3	0.24	0.056	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Copper	15	0.60	0.095	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Lead	4.0	0.24	0.064	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Mercury	0.065	0.016	0.0029	1.000	240714	10/28/16	10/28/16	METHOD	EPA 7471A
Molybdenum	0.57	0.24	0.071	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Nickel	40	0.37	0.12	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Selenium	0.25 J	1.9	0.067	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Silver	0.094 J	0.24	0.024	25.00	240337	10/19/16	10/25/16	EPA 3050B	EPA 6020
Thallium	0.073 J	0.24	0.048	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020
Vanadium	26	0.60	0.14	25.00	240337	10/19/16	10/21/16	EPA 3050B	EPA 6020
Zinc	40	0.95	0.23	25.00	240337	10/19/16	10/31/16	EPA 3050B	EPA 6020

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3050B
Project#:	20172194	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	25.00
Lab ID:	QC856408	Batch#:	240337
Matrix:	Soil	Prepared:	10/19/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Analyzed
Antimony	ND	2.0	0.051	11/01/16
Arsenic	ND	0.26	0.087	11/01/16
Barium	ND	0.25	0.070	11/01/16
Beryllium	ND	0.25	0.037	11/01/16
Cadmium	ND	0.25	0.057	11/01/16
Chromium	ND	0.25	0.077	11/01/16
Cobalt	ND	0.25	0.062	11/01/16
Copper	ND	0.29	0.097	11/01/16
Lead	ND	0.25	0.038	11/01/16
Molybdenum	ND	0.43	0.14	11/01/16
Nickel	ND	0.26	0.075	10/31/16
Selenium	ND	2.0	0.074	10/31/16
Silver	ND	0.25	0.029	10/31/16
Thallium	ND	0.25	0.035	11/01/16
Vanadium	ND	0.46	0.15	11/01/16
Zinc	0.66 J	1.6	0.53	11/01/16

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3050B
Project#:	20172194	Analysis:	EPA 6020
Matrix:	Soil	Batch#:	240337
Units:	mg/Kg	Prepared:	10/19/16
Diln Fac:	25.00		

Type: BS Lab ID: QC856409

Analyte	Spiked	Result	%REC	Limits	Analyzed
Antimony	25.25	25.73	102	80-120	10/31/16
Arsenic	25.25	27.60	109	80-121	10/28/16
Barium	25.25	26.97	107	80-121	10/31/16
Beryllium	12.63	12.87	102	80-120	10/31/16
Cadmium	25.25	26.78	106	80-120	10/31/16
Chromium	25.25	30.42	120	80-131	10/31/16
Cobalt	25.25	28.70	114	80-132	10/31/16
Copper	25.25	28.45	113	80-137	10/31/16
Lead	25.25	27.27	108	80-125	10/31/16
Molybdenum	25.25	26.10	103	80-120	10/31/16
Nickel	25.25	29.04	115	77-141	10/31/16
Selenium	25.25	27.13	107	80-129	10/31/16
Silver	2.525	2.838	112	80-122	10/31/16
Thallium	25.25	26.87	106	80-120	10/31/16
Vanadium	25.25	22.35	89	80-128	10/28/16
Zinc	25.25	27.95	111	80-133	10/31/16

Type: BSD Lab ID: QC856410

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	26.60	28.16	106	80-120	4	20	10/31/16
Arsenic	26.60	28.59	108	80-121	2	21	10/28/16
Barium	26.60	29.47	111	80-121	4	20	10/31/16
Beryllium	13.30	14.11	106	80-120	4	20	10/31/16
Cadmium	26.60	28.30	106	80-120	0	20	10/31/16
Chromium	26.60	33.58	126	80-131	5	25	10/31/16
Cobalt	26.60	32.33	122	80-132	7	24	10/31/16
Copper	26.60	30.93	116	80-137	3	27	10/31/16
Lead	26.60	29.52	111	80-125	3	20	10/31/16
Molybdenum	26.60	27.97	105	80-120	2	20	10/31/16
Nickel	26.60	31.77	119	77-141	4	29	10/31/16
Selenium	26.60	30.63	115	80-129	7	22	10/31/16
Silver	2.660	2.785	105	80-122	7	20	10/31/16
Thallium	26.60	28.64	108	80-120	1	20	10/31/16
Vanadium	26.60	22.81	86	80-128	3	24	10/28/16
Zinc	26.60	32.27	121	80-133	9	23	10/31/16

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	EPA 3050B
Project#:	20172194	Analysis:	EPA 6020
Field ID:	B-1-1	Diln Fac:	25.00
MSS Lab ID:	282049-001	Batch#:	240337
Matrix:	Soil	Sampled:	10/10/16
Units:	mg/Kg	Received:	10/11/16
Basis:	as received	Prepared:	10/19/16

Type: MS Lab ID: QC856411

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Antimony	0.2470	26.04	10.18	38	21-120	10/31/16
Arsenic	3.930	26.04	32.41	109	75-122	10/31/16
Barium	76.39	26.04	116.8	155 *	54-148	10/31/16
Beryllium	0.1513	13.02	13.71	104	80-120	10/31/16
Cadmium	0.1287	26.04	26.61	102	80-120	10/31/16
Chromium	20.75	26.04	54.40	129	60-158	10/31/16
Cobalt	4.320	26.04	32.94	110	73-142	10/31/16
Copper	12.87	26.04	40.22	105	59-150	10/31/16
Lead	27.50	26.04	52.96	98	68-137	10/28/16
Molybdenum	0.2856	26.04	24.32	92	71-120	10/31/16
Nickel	24.25	26.04	58.39	131	57-161	10/31/16
Selenium	0.4012	26.04	28.18	107	75-128	10/31/16
Silver	0.06599	2.604	2.902	109	77-120	10/31/16
Thallium	0.09880	26.04	26.72	102	76-120	10/31/16
Vanadium	16.90	26.04	42.83	100	65-150	10/28/16
Zinc	66.83	26.04	81.33	56	44-158	10/31/16

Type: MSD Lab ID: QC856412

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	25.77	11.57	44	21-120	14	29	10/31/16
Arsenic	25.77	31.61	107	75-122	2	24	10/31/16
Barium	25.77	77.89	6 *	54-148	40 *	28	10/31/16
Beryllium	12.89	13.21	101	80-120	3	20	10/31/16
Cadmium	25.77	27.23	105	80-120	3	20	10/31/16
Chromium	25.77	57.28	142	60-158	6	36	10/31/16
Cobalt	25.77	33.05	111	73-142	1	34	10/31/16
Copper	25.77	37.85	97	59-150	5	52	10/31/16
Lead	25.77	60.82	129	68-137	14	32	10/28/16
Molybdenum	25.77	24.33	93	71-120	1	20	10/31/16
Nickel	25.77	55.40	121	57-161	5	47	10/31/16
Selenium	25.77	27.05	103	75-128	3	20	10/31/16
Silver	2.577	2.897	110	77-120	1	20	10/31/16
Thallium	25.77	26.55	103	76-120	0	20	10/31/16
Vanadium	25.77	39.01	86	65-150	9	28	10/28/16
Zinc	25.77	72.99	24 *	44-158	11	33	10/31/16

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240492
Lab ID:	QC857018	Prepared:	10/24/16
Matrix:	Soil	Analyzed:	10/24/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.017	0.0031

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240492
Matrix:	Soil	Prepared:	10/24/16
Units:	mg/Kg	Analyzed:	10/24/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC857019	0.1984	0.2305	116	80-120		
BSD	QC857020	0.2083	0.2425	116	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240714
Lab ID:	QC857912	Prepared:	10/28/16
Matrix:	Soil	Analyzed:	10/28/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.016	0.0030

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240714
Matrix:	Soil	Prepared:	10/28/16
Units:	mg/Kg	Analyzed:	10/28/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC857913	0.1953	0.2337	120	80-120		
BSD	QC857914	0.2119	0.2515	119	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	240714
MSS Lab ID:	282536-012	Sampled:	10/24/16
Matrix:	Soil	Received:	10/24/16
Units:	mg/Kg	Prepared:	10/28/16
Basis:	as received	Analyzed:	10/28/16

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC857915	0.08220	0.1984	0.3084	114	69-142		
MSD	QC857916		0.2016	0.3142	115	69-142	1	36

RPD= Relative Percent Difference

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194		
Field ID:	B-1-W	Units:	ug/L
Lab ID:	282049-011	Sampled:	10/11/16
Matrix:	Filtrate	Received:	10/11/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Antimony	1.1	1.0	0.13	5.000	241017	11/04/16	11/07/16	EPA 6020
Arsenic	4.0	1.0	0.25	5.000	241017	11/04/16	11/07/16	EPA 6020
Barium	200	1.0	0.30	5.000	241017	11/04/16	11/07/16	EPA 6020
Beryllium	ND	1.0	0.13	5.000	241017	11/04/16	11/07/16	EPA 6020
Cadmium	ND	1.0	0.33	5.000	241017	11/04/16	11/07/16	EPA 6020
Chromium	0.52 J	1.0	0.11	5.000	241017	11/04/16	11/07/16	EPA 6020
Cobalt	1.2	1.0	0.16	5.000	241017	11/04/16	11/07/16	EPA 6020
Copper	ND	2.5	0.50	5.000	241017	11/04/16	11/07/16	EPA 6020
Lead	1.3	1.0	0.094	5.000	241017	11/04/16	11/07/16	EPA 6020
Mercury	ND	0.20	0.040	1.000	240268	10/18/16	10/18/16	EPA 7470A
Molybdenum	2.4	1.0	0.32	5.000	241017	11/04/16	11/07/16	EPA 6020
Nickel	4.3	1.5	0.50	5.000	241017	11/04/16	11/07/16	EPA 6020
Selenium	ND	1.0	0.25	5.000	241017	11/04/16	11/07/16	EPA 6020
Silver	ND	1.0	0.097	5.000	241017	11/04/16	11/07/16	EPA 6020
Thallium	ND	1.0	0.092	5.000	241017	11/04/16	11/07/16	EPA 6020
Vanadium	3.3 J	5.0	0.57	1.000	241017	11/04/16	11/08/16	EPA 6010B
Zinc	12 J	23	7.6	5.000	241017	11/04/16	11/07/16	EPA 6020

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240268
Matrix:	Water	Prepared:	10/18/16
Units:	ug/L	Analyzed:	10/18/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC856127	2.500	2.543	102	80-120		
BSD	QC856128	2.500	2.582	103	80-120	2	24

RPD= Relative Percent Difference

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240268
Field ID:	ZZZZZZZZZZ	Sampled:	10/06/16
MSS Lab ID:	281918-024	Received:	10/07/16
Matrix:	Water	Prepared:	10/18/16
Units:	ug/L	Analyzed:	10/18/16
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC856129	<0.04000	2.500	2.604	104	60-130		
MSD	QC856130		2.500	2.528	101	60-130	3	34

RPD= Relative Percent Difference

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240268
Lab ID:	QC856131	Prepared:	10/18/16
Matrix:	Filtrate	Analyzed:	10/18/16
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.040

ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194		
Type:	BLANK	Units:	ug/L
Lab ID:	QC859108	Batch#:	241017
Matrix:	Filtrate	Prepared:	11/04/16

Analyte	Result	RL	MDL	Diln Fac	Analyzed	Analysis
Antimony	ND	1.0	0.13	5.000	11/07/16	EPA 6020
Arsenic	ND	1.0	0.25	5.000	11/07/16	EPA 6020
Barium	ND	1.0	0.30	5.000	11/07/16	EPA 6020
Beryllium	ND	1.0	0.13	5.000	11/07/16	EPA 6020
Cadmium	ND	1.0	0.33	5.000	11/07/16	EPA 6020
Chromium	ND	1.0	0.11	5.000	11/07/16	EPA 6020
Cobalt	ND	1.0	0.16	5.000	11/07/16	EPA 6020
Copper	ND	2.5	0.50	5.000	11/07/16	EPA 6020
Lead	ND	1.0	0.094	5.000	11/07/16	EPA 6020
Molybdenum	ND	1.0	0.32	5.000	11/07/16	EPA 6020
Nickel	ND	1.5	0.50	5.000	11/07/16	EPA 6020
Selenium	ND	1.0	0.25	5.000	11/07/16	EPA 6020
Silver	ND	1.0	0.097	5.000	11/07/16	EPA 6020
Thallium	ND	1.0	0.092	5.000	11/07/16	EPA 6020
Vanadium	ND	5.0	0.57	1.000	11/08/16	EPA 6010B
Zinc	11 J	23	7.6	5.000	11/07/16	EPA 6020

J= Estimated value
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Dissolved California Title 22 Metals

Lab #:	282049	Location:	Mandela Pkwy. Hotel
Client:	Kleinfelder	Prep:	METHOD
Project#:	20172194		
Matrix:	Filtrate	Batch#:	241017
Units:	ug/L	Prepared:	11/04/16

Type: BS Lab ID: QC859109

Analyte	Spiked	Result	%REC	Limits	Diln Fac	Analyzed	Analysis
Antimony	50.00	47.27	95	80-120	5.000	11/07/16	EPA 6020
Arsenic	50.00	50.15	100	80-120	5.000	11/07/16	EPA 6020
Barium	50.00	49.02	98	80-120	5.000	11/07/16	EPA 6020
Beryllium	50.00	47.17	94	80-120	5.000	11/07/16	EPA 6020
Cadmium	50.00	48.36	97	80-120	5.000	11/07/16	EPA 6020
Chromium	50.00	49.84	100	80-121	5.000	11/07/16	EPA 6020
Cobalt	50.00	50.50	101	80-123	5.000	11/07/16	EPA 6020
Copper	50.00	47.97 b	96	80-130	5.000	11/07/16	EPA 6020
Lead	50.00	50.55	101	80-122	5.000	11/07/16	EPA 6020
Molybdenum	50.00	47.81	96	80-120	5.000	11/07/16	EPA 6020
Nickel	50.00	51.65	103	80-129	5.000	11/07/16	EPA 6020
Selenium	50.00	52.20	104	80-126	5.000	11/07/16	EPA 6020
Silver	50.00	49.15	98	79-120	5.000	11/07/16	EPA 6020
Thallium	25.00	23.65	95	80-120	5.000	11/07/16	EPA 6020
Vanadium	50.00	50.36	101	80-120	1.000	11/08/16	EPA 6010B
Zinc	50.00	50.50	101	80-130	5.000	11/07/16	EPA 6020

Type: BSD Lab ID: QC859110

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed	Analysis
Antimony	50.00	46.12	92	80-120	2	20	5.000	11/07/16	EPA 6020
Arsenic	50.00	49.21	98	80-120	2	20	5.000	11/07/16	EPA 6020
Barium	50.00	47.51	95	80-120	3	20	5.000	11/07/16	EPA 6020
Beryllium	50.00	48.25	96	80-120	2	20	5.000	11/07/16	EPA 6020
Cadmium	50.00	46.28	93	80-120	4	20	5.000	11/07/16	EPA 6020
Chromium	50.00	50.50	101	80-121	1	20	5.000	11/07/16	EPA 6020
Cobalt	50.00	51.00	102	80-123	1	20	5.000	11/07/16	EPA 6020
Copper	50.00	45.11 b	90	80-130	6	20	5.000	11/07/16	EPA 6020
Lead	50.00	49.99	100	80-122	1	20	5.000	11/07/16	EPA 6020
Molybdenum	50.00	48.78	98	80-120	2	20	5.000	11/07/16	EPA 6020
Nickel	50.00	51.80	104	80-129	0	23	5.000	11/07/16	EPA 6020
Selenium	50.00	48.95	98	80-126	6	20	5.000	11/07/16	EPA 6020
Silver	50.00	48.00	96	79-120	2	20	5.000	11/07/16	EPA 6020
Thallium	25.00	23.51	94	80-120	1	20	5.000	11/07/16	EPA 6020
Vanadium	50.00	48.00	96	80-120	5	20	1.000	11/08/16	EPA 6010B
Zinc	50.00	48.94	98	80-130	3	20	5.000	11/07/16	EPA 6020

b= See narrative
RPD= Relative Percent Difference