Exhibit A

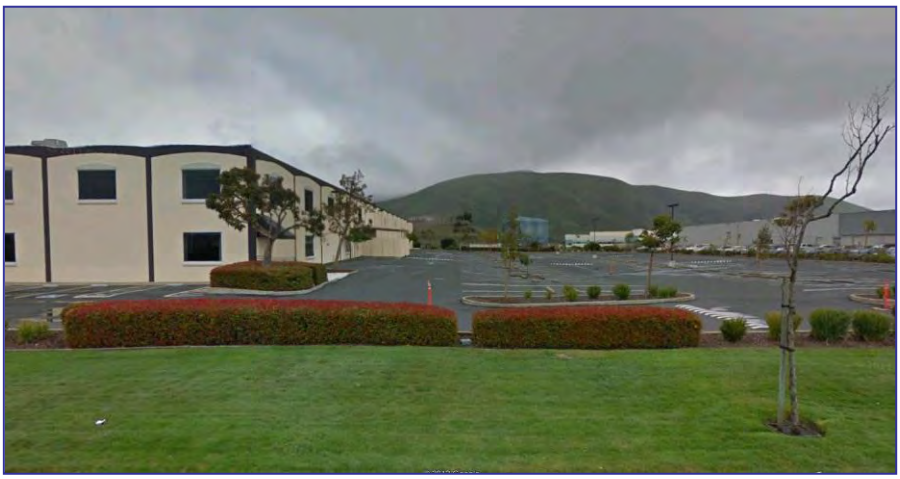
2012 Partial Recirculated EIR

Final EIR and itigation onitoring and Reporting Program are attached. Draft EIR available online at:

http://weblink.ssf.net/weblink/0/doc/133212/Page1.aspx

CITY OF SOUTH SAN FRANCISCO

475 ECCLES AVENUE, SOUTH SAN FRANCISCO, CALIFORNIA
FINAL ENVIRONMENTAL IMPACT REPORT
SCH# 2012082101



PREPARED FOR:

CITY OF SOUTH SAN FRANCISCO
DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT- PLANNING DIVISION
315 MAPLE AVENUE, SOUTH SAN FRANCISCO, CALIFORNIA 94083

PREPARED BY:

ALLISON KNAPP WOLLAM CONSULTING
AllisonKnappConsulting.com
February, 2016

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SCH# 2012082101
FEBRUARY, 2016

BACKGROUND

PROJECT OVERVIEW

BMR-475 Eccles Avenue LLC (BMR), (Applicant) proposes to redevelop approximately 6.1 acres of land in the City of South San Francisco's "East of 101" area into a research and development (R&D) complex. The Project site is located at 475 Eccles Avenue, between Oyster Point and Forbes Boulevards within the Business Technology Park Zone District and the "Business and Technology Park" General Plan Land Use designation which supports R&D projects.

CHRONOLOGY 2012-2016

- An initial study was prepared and circulated with a notice to prepare an environmental impact report and submitted to the State Clearinghouse on August 28, 2012 for a 30-day review (State Clearinghouse (SCH) # 2012082101).
- A Project EIR focusing on traffic and circulation was prepared and circulated for review on October 23, 2012 in accordance with the California Environmental Quality Act (CEQA).
- Two comment letters were received on the document during the public review period, November, and December, 2012, responses were drafted and are attached.
- In April, 2013 the project applicant became aware of an unknown sensitive receptor within the vicinity of the project area. Subsequently, additional analyses were performed to address the receptor's requests, which support the conclusion of the DEIR that impacts would be less than significant. Supplemental studies regarding air quality, noise, hazard risk assessment and hazardous materials analysis were conducted in September, 2013 and revisions to the initial study were drafted and are attached.
- The Applicant requested and was issued a demolition permit and the concrete tilt-up building noted in the 2012 Project Description on the Project site was demolished in December, 2013.
- November 19, 2015 the Applicant sent a letter to the City identifying minor changes to the Project and requesting to move forward with the environmental and entitlement process. The changes to the Project are:
    - There is no longer a building on the Project site;
    - Relocation of a cell tower on the site is no longer proposed;
    - An alternative landscape plan is requested in lieu of roof top landscaping (South San Francisco Municipal Code Section 20.300.07.D2).

ENVIRONMENTAL REVIEW

Preparation of Initial Study and Draft Environmental Impact Report

An initial study and Notice of Preparation (IS/NOP) was prepared for the Project. An initial study is intended to assist in the preparation of an environmental impact report (EIR) by focusing the EIR on the effects determined to be significant, identifying the effects determined not to be significant, explaining the reasons for determining that potentially significant effects would not be significant and identifying the type of EIR to be prepared (California Code of Regulations, Title 14, Chapter 3 Section 15063 (c) (3)).

The initial study was prepared and circulated with a notice that an environmental impact report would be prepared and submitted to the State Clearinghouse on August 28, 2012 for a 30-day review. The initial study identified potential significant and significant unavoidable impacts associated with traffic. The initial study made the findings that all other potential Project impacts were less than significant.

The Project was assigned State Clearinghouse (SCH) # 2012082101. Pursuant to California Code of Regulations (CCR) Section 15161 a Project EIR focusing on traffic and circulation was prepared and circulated for review. The Draft EIR was prepared on behalf of the City of South San Francisco and circulated for review October 23, 2012 in accordance with CEQA. Two comment letters were received on the document during the public review period. The comment letters, from Liberty Gold and CalTrans, and responses are shown in **Attachments A and B**. Responses to these two comments are presented in **Attachment C**.

The City and Project applicant became aware of the presence of a Genentech childcare facility in close proximity to the Project site in April, 2013. Genentech operates a day care facility 125 feet northwest of the Project site, which is a sensitive receptor and was not identified in the initial study (IS) and DEIR for the 475 Eccles Project. This is corrected herein and in response to the identification of the facility, a second air quality, health risk assessment and noise analysis was prepared (ENVIRON, August 28, 2013, see **Attachment D**). The ENVIRON Report was peer reviewed by KB Environmental Sciences and Knapp Consulting (September 10, 2013, see **Attachments E and F**).

Revisions to the Project

Pursuant to California Code of Regulations, Title 14, Chapter 3 Section 15006 (d and h), the purpose of CEQA is to use the initial study to narrow the focus of an environmental impact report and urge applicants to revise projects to eliminate impacts. In accordance with the provisions of CEQA, the Applicant has proposed revisions to the Project, as shown in **EXHIBIT A- Revised Project Description and Modifications to the Initial Study**. The Project proposes additional measures to reduce dust, particulate matter and diesel exposure to the day care center during demolition, grading and construction activities. The measures would reduce noise, air quality and health related impacts to less than significant (see **Attachment F**).

Summary of Findings-Daycare Center Response to Comment

A day care facility is located 125 feet northwest of the Project site on the Genentech Campus at 850 Gateway Boulevard. Therefore there is one sensitive receptor located within a 0.25 mile radius of the Project site. The Project Description was revised by the Applicant to increase measures to reduce demolition and grading impacts to the day care center to less than significant. As noted above, a subsequent air quality, hazard risk assessment and noise assessment was conducted to identify potential impacts to this sensitive receptor.

As a result of construction activities (with implementation of the measures the City requires by law and applicable Tier 2 measures proposed by the Project), the maximum cancer risk for a residential-adult receptor would be 0.04 per million and for a residential-child would be 0.44 per million. The maximum cancer risk for a school child (day care) receptor would be 8.2 per million, below the 10 per million threshold, based upon the construction schedule provided by the Applicant which assumes demolition within a year and construction following approximately two years later, 2015-16. The maximum cancer risk from the Project operations for a school child (day care) receptor would be 0.046 per million, which is below the BAAQMD threshold of 10 per million and the impact of the Project would therefore be less than significant.

The Project's chronic hazard index (H) for diesel particulate matter (DPM) would be less than 0.03 for a residential receptor and 0.02 for a school child (day care) receptor. The chronic HI for DPM would be below the BAAQMD threshold of 1 and the impact of the Project would therefore be less than significant.

The Project's acute HI for acrolein would be less than 0.01 at all receptors. The acute HI for acrolein would be below the BAAQMD threshold of 1 and the impact of the Project would therefore be less than significant.

Removal of any toxic or hazardous materials from the Project site is required by law to comply with the local, state and federal laws outlined in the Setting Section. The Applicant acknowledges these requirements and identifies them as part of the Project as described in Chapter 2 Project Description of the initial study and EIR. The procedures and permitting requirements identified as part of the Project are designed to reduce the potential impacts associated with the handling, storage, transport and removal of toxic and hazardous substances. The Project would have a less than significant impact with respect to exposure from the emission or handling of hazardous materials or wastes on schools or day care facilities or from any environmental contamination posed by the sites listed on the Cortese List.

The Project would expose outdoor day care activities to an approximate worst-case 77 dB. Interior noise levels would attenuate 20 to 25 dB. Noise impacts to sensitive receptors at the day care center would be less than significant.

Summary of Global Comments

The three modifications to the Project identified in the November, 2015 (see **Attachment E**) letter from the Applicant have no substantive effect on the environmental evaluation contained in the

initial study and EIR. The changes identify minor changes to the Project and request to move forward with the environmental and entitlement process. The changes to the Project are:

1) **There is no longer a building on the Project site (see Attachments D and G)**. Demolition of the existing concrete tilt up building on the site was conducted under the auspices of a permit issued by the City Building Division. The demolition was supervised by the City and staged with equipment access points off of Eccles Avenue.
2) **Relocation of a cell tower on the site is no longer proposed (see Attachment D).** The cell tower was removed from the site. Therefore no use permit is required.
3) **An alternative landscape plan is requested in lieu of roof top landscaping pursuant to South San Francisco Municipal Code Section 20.300.07.D2 (see Attachment D).** The Project proposes 27 percent of the site to be in impervious surfaces, and landscaping that exceeds the 20 percent requirement by City ordinance. Changing the location of landscaping would not pose an environmental effect, provided the traffic mitigation measure to provide adequate sight lines along Eccles Avenue, shown in Traffic Mitigation Measure 15, below is implemented as required by the Mitigation and Monitoring Program. Areas throughout the initial study and EIR where rooftop landscaping is mentioned shall be understood to be referring to an alternative landscape plan.

   Traffic Mitigation Measure 15: The applicant shall be responsible for maintaining landscaping along the Eccles Avenue Project frontage between the central and south driveways that will allow exiting drivers to be able to maintain the minimum required 250-foot sight lines at the central and south driveways. The landscape plan shall be revised to show staggered tree planting along this frontage to allow sight lines through the trees as they grow and reach maturity; or, the trees and landscaping shall be maintained to provide a view from 2.5 to 6 feet above grade. The landscape plan shall be revised to note either requirement, show the line-of-sight triangles and not the requirement. These notes shall be on the building plans that are a part of the building permit issuance. The note shall be made on the plans in conformance with the lines of sight required as set forth in Traffic Figure 24 of the EIR to insure that the mitigation is permanently maintained.

4) The timing of demolition was conducted to comport with the estimate provided by the Applicant and identified in the initial study and EIR. The dates of construction have shifted a year or two. The dates were identified as being estimates for illustrative purposes and do not impact the analyses. For example, the air quality analysis used the CalEEMod in 2012 as is the standard practice in 2016. *The Bay Area Air Quality Management District CEQA Guidelines* for preparing air quality, greenhouse gas and hazard risk assessments have not been revised since May, 2012. The October, 2012 initial study and 2013 revision thereto use the latest version of the *Guidelines (*see p 3-12 Initial Study Checklist).

   The dates of construction commencement and completion are not revised throughout the initial study and EIR but are referred to in this response to comments document.

EXHIBIT A: Revised Project Description and CEQA Checklist

Attachment A:	Liberty Gold Letter-11/14/12
Attachment B:	CalTrans Letter-12/14/12
Attachment C:	Liberty Gold and CalTrans Response to Comments
Attachment D:	November, 2015 Letter from Applicant with ENVIRON Air Quality and Noise Analysis
Attachment E:	KB Engineering Peer Review
Attachment F:	Basic and Expanded Air Quality Measures
Attachment G:	September, 2013 Demolition Process Letter
Attachment H:	State Clearinghouse Letter of Compliance

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EXHIBIT A
REVISED OCTOBER, 2013
AGAIN FEBRUARY, 2016

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

Chapter 3 provides a description of the proposed 475 Eccles Avenue R&D Project and the related actions that comprise the Project analyzed in this EIR. CCR Section 15124 requires that the project description in an EIR contain the following information but should not provide extensive detail beyond that needed for evaluation and review of the environmental impact. The Project Description shall contain the/a:

1. Precise location and boundaries of the project on a detailed map and regional map.
2. Statement of the objectives of the project.
3. General description of the characteristics of the project, including the principal engineering proposals and supporting public service facilities.
4. Statement briefly describing the intended use of the EIR to the extent that the information is known by the Lead Agency including a list of agencies expected to use the EIR; permits and other approvals required to implement the project; related environmental review and consultation requirements required by federal , state, or local laws, regulations, or policies and to the fullest extent possible the lead Agency should integrate CEQA review with these related review and consultation requirements.

3.2 PROJECT LOCATION AND SITE CONDITIONS

PROJECT LOCATION

The Project site is located in the City of South San Francisco, south of the City of Brisbane and north of the City of San Bruno. The City of South San Francisco is located on the San Francisco Bay plain and the northern foothills of the Coastal range. The City is located along major transportation routes including U.S. 101, Interstate 380, Interstate 280, and the Union Pacific Railroad (see **Figure 3.1 Project Location**).

The Project site is located within the City of South San Francisco's East of 101 Area. The East of 101 Area consists of roughly 1,700 acres of land, and is bounded by San Francisco Bay on the east and south sides, U.S. 101 and railway lines on the west, and the City of Brisbane on the north. San Francisco International Airport is located approximately 1.75 miles south of the Project site. The Plan Area is mostly developed and has a mix of land uses, including industry, warehousing, retail, offices, hotels, marinas, and bioscience research and development facilities.

Regionally the Project site is accessible from the northwest via the US 101 Oyster Point Boulevard off- and on-ramps and from the south west by the East Grand Avenue exit off of

Highway 101. Locally, the site is accessible from Forbes Boulevard, via East Grand Avenue to the south and from Oyster Point Boulevard to the north.

FIGURE 3.1 PROJECT LOCATION

LAND USE ADJACENT TO THE PROJECT SITE

Surrounding land uses are a mix of light industrial, manufacturing and R&D. Adjacent land uses include open space owned by Southern Pacific Railway that previously contained rail tracks to the north, north-west. Eccles Avenue fronts the site to the east and an adjacent industrial building is located at 472 Eccles Avenue to the south. **Liberty Gold is adjacent to the Project site.** Avis Rent a Car and Yzsumoto and Company (an art supply distributor) are located at 490 Eccles Avenue, east of the site. Industrial structures occupied by Universal Freight Forward and the Dimero Express (USA) Corporation are located further west of the site. The Gateway Specific Plan Area, located west of the Project site, contains mixed use office and R&D land uses.

EAST OF 101 AREA LAND USE HISTORY

Land uses in the East of 101 Area have witnessed a change in land use over the years. The East of 101 Area was part of the first industrial development in South San Francisco about 100 years ago. Since then, the area has undergone many transformations. Pioneering industrial uses, such as steel manufacturing, and meat packaging gave way to industrial park and warehousing and distribution uses that came to dominate the area in the 1950s and 1960s. The recent emergence of modern office buildings and life science campuses mark the third major wave of land use change in the area. Older manufacturing uses, industrial park structures and tilt-up warehousing buildings, such as the building on the Project site, can all be found in the area. Blocks are generally very large in size and the area has a very stark industrial look. Numerous abandoned railroad spurs are present, again as witnessed adjacent to the Project site. Since the late 1990s, developers have preferred to redevelop the older industrial park blocks and construct new mixed office and R&D developments north of East Grand Avenue. Development has resulted in the clean-up of old industrial sites (Brownfield sites), consistent with environmental practices associated with LEED and the Environmental Protection Agency principles and objectives.

In the past half dozen years the East of 101 Area has witnessed expansion of the Genentech R&D facility and master plan from 124 acres to 200 acres of Office/R&D/Manufacturing uses. Hotel, office, mixed-use and R&D have been approved over the past six years throughout the area. Some examples include office and R&D in Oyster Point; and office/ R&D on three sites along East Grand Avenue; and on Forbes Boulevard and Roebling Avenue. R&D is anticipated to reach approximately 7.7 million square feet in the East of 101 Area by 2015 and 8.5 million by 2035.[1] Other land uses in the East of 101 Area include approximately 8 million square feet of manufacturing; 664,000 square feet of commercial/retail; 360,000 square feet of office and 3,385 hotel rooms.[2]

In summary, the East of 101 Area represents a transition from the historic industrial use of the area as witnessed by the mix of bioscience R&D, industry, warehouse, retail, office, marina, and hotels uses. **Three** child care centers are located in the Project area: 599

[1] These figures are for R&D Crane Transportation Group, July, 2012 and are identified in the Traffic and Circulation Section and in the initial study contained in the Appendix.

[2] East of 101 Traffic Model land use classifications and square footage for 2015.

Gateway Boulevard 0.3 miles southwest; 444 Allerton Avenue 0.4 miles southeast; **and 125 feet northwest of the Project site on the Gateway Business Park Campus at 850 Gateway Boulevard. Therefore there is one sensitive receptor located within a 0.25 mile radius of the Project site.**

SITE CONDITIONS

The Project site is a 6.1 acre parcel currently developed with an approximate 152,145 square foot building consisting of an 114,000 square foot building footprint and a mezzanine. Asphalt paved driveways, parking lots and walkway areas surround the site. The frontage of the parcel along Eccles Avenue is sparsely landscaped and the parking areas are minimally landscaped. The single building on the site, ~~is~~ a concrete tilt-up office/warehouse structure that was constructed in the 1960's, ~~is located on the site~~ **was demolished in December, 2013 with the benefit of a demolition permit issued by the City**. The site is relatively level with surface elevations ranging from +68 feet above mean sea level (MSL) in the north eastern parking lot area to +63 feet MSL along the abandoned railroad spur area at the rear (north) of the existing building. A fill slope approximately five feet in height separates the parking lot from the former railroad spur area.

The Project site has been occupied by professional, scientific and technical services and direct selling establishments since 1970 according to various City directories. Users include William Volker & Company, ATC Partners, Ocular Sciences Incorporated identified as professional, scientific and technical services and Otagiri Mercantile a direct selling establishment.

3.3 GENERAL PLAN AND ZONING

GENERAL PLAN DESIGNATION

The Project site is within the area subject to the provisions of the "East of 101" Planning Sub-Area of the City of South San Francisco's General Plan. The General Plan designates the Project site for "Business and Technology Park" uses, and gives the following summary of the Business and Technology Park designation:

> This designation accommodates campus-like environments for corporate headquarters, research and development facilities, and offices. Permitted uses include incubator-research facilities, testing, repairing, packaging, publishing and printing, marinas, shoreline-oriented recreation, and offices, and research and development facilities. Warehousing and distribution facilities and retail are permitted as ancillary uses only. All development is subject to high design and landscape standards. Maximum Floor Area Ratio is 0.5, but increases may be permitted, up to a total FAR of 1.0 for uses such as research and development establishments, which also meet specific transportation demand management (TDM), off-site improvement, or specific design standards.

ZONING CLASSIFICATION

The Project site is zoned "Business and Technology Park" (BTP). The BTP District provides for Research and Development and mirrors the land use designation intent (see above) specifying campus-like development. The City adopted a revised zoning code in 2010 and rezoned specific properties, including the Project site, to bring the General Plan Designations and Zoning Classifications into conformance. A complete list of permitted and conditional uses is identified in Chapter 20.110 of the South San Francisco Municipal Code (www.ssf.net/).

3.4 PROJECT OBJECTIVES

The Applicant has identified objectives of the Project. Specifically the Applicant states that their objective is to "maximize implementation of General Plan policies and provisions that:

- Encourage redevelopment and intensification of development to accommodate land uses such as Research & Development.
- Encourage opportunities for the continued evolution of the City's economy, from manufacturing and warehousing/distribution to high technology and biotechnology.
- Promote small business incubation.
- Encourage the creation of a campus environment in the East of 101 area that targets and accommodates the biotech/R&D industry.
- Promote campus-style biotechnology uses.
- Maximize building heights in the East of 101 area.
- Encourage the use of Transportation Demand Management measures designed to achieve environmental goals by permitting an increased Floor Area Ratio when such measures are included in a project.
- Maximize opportunities for strong and sustainable economic growth that results in high quality jobs, in a manner that respects the environment by redeveloping an infill site that is close to major arterials and existing utilities.
- Feasibly support the provision of environmental enhancements that exceed standard building requirements, such as qualifying for LEED certification."

3.5 PROJECT DESCRIPTION

SITE DESCRIPTION

BMR-475 Eccles Avenue LLC (BMR) is the Applicant for the life science campus and owner of the 6.1 acre[3] Project site. The site is currently developed with an approximately 152,145[4] square foot building consisting of an 114,000 square foot footprint with a mezzanine. Asphalt paved driveways, parking lots and walkway areas surround the site consisting of approximately 152,000 square feet[5] of paved area (see **Figure 3.2 Existing Conditions**).

The concrete tilt-up office/warehouse structure was constructed in the 1960s and was originally designed to house freight forwarding uses. The remainder of the site is primarily surface parking with small sparsely landscaped areas along the Eccles Avenue frontage and edges of the site.

Approximately 276 parking spaces are located on the site; the majority being on the east portion of the site. The southeast side of the site has shared easements to allow truck access with an adjacent property. The building was constructed in 1965, renovated in 1995 and has been vacant since 2006 except for the rooftop communication facility, based on review of City building permit records.

The site is relatively level with surface elevations ranging from +68 feet above mean sea level (MSL) in the northwestern parking lot area to +63 feet MSL along the abandoned railroad spur area at the rear (north) of the existing building. A fill slope approximately five feet in height separates the parking lot from the former railroad spur area (Cleary Geotechnical and Cotton Shires Geotechnical consultants).

PROPOSED PROJECT

The Applicant is requesting various approvals to demolish the existing building and associated parking, and to construct a new life science campus consisting of two buildings that together would comprise 262,287 square feet, a five-level parking structure and limited surface parking (see **Figure 3.3 Proposed Conditions**). Following is a list of the required approvals.

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[3] The site net square footage is 265,613 square feet for planning and floor area purposes (which excludes the shared access easement).

[4] The site ~~currently~~ **was** developed with approximately 152,145 square feet of building area consisting of ground floor and mezzanine areas in **2012**. **The building was demolished in December, 2013 with City permits.** The analysis contained in the initial study rounded up to 155,000 square feet for geology, hydrology, air quality and other impact analyses.

[5] Approximately 151,613 square feet of site area remains outside the building footprint, rounded to 152,000 square feet. The Civil Engineer indicates that approximately 13 percent of the site (or 35,568 square feet) is landscaped and pervious, leaving approximately 116,432 square feet of paved, impervious surface outside the building footprint.

FIGURE 3.2 EXISTING CONDITIONS 2013
2013 Building Demolished

REQUIRED APPROVALS

LEAD AGENCY

LEGISLATIVE

- Development Agreement. BMR seeks a Development Agreement to vest the approvals of the Project for seven years with a five-year extension (i.e., up to 12 years), provided BMR meets certain milestones in developing the Project.

ADJUDICATIVE

- Conditional Use Permit. The zoning ordinance provides for a base floor area ratio (FAR) of 0.5, which can be increased to 1.0 based upon an approved incentive program, which may be permitted with a Conditional Use Permit. The Project proposes a 1.0 FAR and therefore requires an Incentive Program to be reviewed through the use permit process.

- Transportation Demand Management Program review and approval to achieve a 30 percent mode shift which is part of the incentive program for the 1.0 FAR.

- ~~Conditional Use Permit for the interim relocation of the wireless facility located on the site.~~

- **Consideration of an "Alternative Landscape Plan" in lieu of roof top landscaping pursuant to South San Francisco Municipal Code Section 20.300.07.D2.**

- Design Review approval.

MINISTERIAL

- Grading and Building permits.

- Encroachment permits to work in the public right-of-way.

OTHER AGENCY REQUIRED PERMITS

- Bay Area Air Quality Management District "J Permit" as described in **Chapter 1, Introduction, Section 1.2.B of the initial study** (see **Appendix A**) for removal of asbestos lead based paints.
- Local and State approval of a Stormwater Pollution Prevention Plan.
- San Mateo County Department of Environmental Health (potential) for site remediation (if necessary)

PROPOSED CIRCULATION AND ACCESS

Direct access and circulation to the Project site would remain largely unchanged. The site has four points of access from Eccles Avenue. Vehicular access to the Project site would be obtained via three existing locations off of Eccles Avenue; one driveway would be replaced with curb, gutter and sidewalk. Access points would be midpoint and at the eastern and western edges of the site (see **Figures 3.2 and 3.3**).

PROPOSED UTILITY CONNECTIONS

The Project would connect to the existing utility lines present in the Project area. Utility lines on the Project site would be reconfigured to accommodate the new site plan. A stormwater quality control plan is proposed and is also required by the City Engineering Division and Water Quality Plant. The plan proposes 20 planted water treatment and retention areas.

FIGURE 3.3 PROPOSED CONDITIONS

NEW CONSTRUCTION

BUILDINGS

The Project would construct two buildings to serve the life science industry. Both buildings would be four stories high. The combined gross floor area would be up to 262,287 square feet, resulting in a floor area ratio of approximately 1.0.

Service areas would be enclosed at the rear of each building in a metal skinned structure that would rise to encase a mechanical penthouse at the top of each building. The primary block of the buildings would be curtain wall with aluminum sunshades. The buildings would have an aluminum curtain wall system with dual pane solar glazing. Metal spandrel with painted metal finish and insulation are proposed at opaque areas above ceiling line and from floor level to a height of 3'-7" above finished floor on levels above the first floor. Aluminum sunshades integral to the curtain wall system are proposed. The design includes operable window sashes within each structural bay at each floor. Glass Fiber Reinforced Concrete (GFRC[6]) would be used at balconies and at the entry feature of the buildings. The overall structure behind is a steel frame which the GFRC panels would be attached. Both the fiber

[6] GFRC panels are reinforced with glass fiber to create lightweight panels for the cladding of opaque surfaces on buildings.

and concrete will contain recycled materials. The buildings may be connected by an enclosed bridge. Lastly, the two buildings would have one loading zone each.

PARKING

The Project proposes 655 parking spaces (a ratio of 2.5 spaces per 1,000 square feet of building space) initially. Of these 655 spaces, 551 spaces would be in the parking structure and 104 would be provided in surface parking lots. Up to 53 additional on grade landscaped parking spaces may be added at a later date, based upon City review and approval, which would result in up to 708 spaces for a parking ratio of 2.7 per 1,000 square feet. In order to construct the additional 53 parking spaces, the owner would be required to demonstrate that the requirements of the Transportation Demand Management Program were being met and that there was an unmet parking need. The five-level parking structure would feature colored screens and sculptural stair canopies. A bridge from the parking structure, extending across the central drive, would provide pedestrian access to the central courtyard. Landscaping and screening at the lower level of the parking structure are proposed in addition to the City code required green roof on parking structures (see landscaping discussion below).

GRADING, EXCAVATION AND IMPERVIOUS SURFACES

The Project proposes to balance cut and fill on site, with approximately 2,815 cubic yards of cut followed by 2,720 cubic yards of fill. Maximum depth of cut would be approximately five feet of overall site grading. The maximum depth of cut for deepened footing excavations is approximately 20 feet, although the geotechnical report indicates most footings would be one to five feet in depth (*Updated Geotechnical Investigation Report Life Science Campus, 475 Eccles Avenue, South San Francisco, California*, Cleary Consultants, December, 2011 and June 18, 2012). The total disturbed area is assumed for CEQA purposes to be the entire site, or 266,000 square feet. See **Initial Study, Chapter 3, Section 3.7 Geology and Soils** in **Appendix A**.

Currently the site is developed with 87 percent of the area in impervious surface. The Project would reduce impervious surface an additional 14 percent to a total of 73 percent of the site area. Therefore, the Project would result in 27 percent of the site being porous over existing conditions, which is 13 percent.

LANDSCAPING CONCEPT AND DESIGN

The Project proposes landscaping around the perimeter and interior of the site, including landscaped walkways and parking areas. The Project also proposes ~~rooftop planters with a minimum dimension of 24 inches in width around the perimeter of the roof of the parking structure as required by the City's Zoning Code (Section 20.330.010.L.8)~~ **an alternative landscape plan pursuant to South San Francisco Municipal Code Section 20.300.07.D2 in lieu of rooftop landscaping**.

The two R&D buildings would be separated by a central courtyard featuring a seating area defined by low walls and a water feature using recycled water spilling over quarried stone. Three sections would surround the courtyard, with each containing gardens of a unique character. The exterior area between the buildings would also be designed to support outdoor activity which would extend into the central circular courtyard.

Wind resistant and seacoast plantings are proposed to foster the success of the landscape plan. Trees, shrubs, groundcover and grasses (fescue, flax, blue rye) are proposed. The Project proposes to plant 159 24-inch box trees. Zoning Code Section 20.330.010.L.9 requires one 15-gallon tree to be planted for every five parking spaces. The Project would be required to plant 142 trees (assuming 708 parking spaces) and as proposed would exceed the Code requirements by 11 trees, in addition to the increased size of the trees. The trees that are identified on the landscape plan (bay, laurel, oak, juniper and others) would provide a 15 to 30 foot canopy at maturity and a four to six foot canopy at planting. Medium and low water consumptive plantings are proposed, save for one small area of turf. The proposed tree canopy would serve to reduce the heat island effect of paved surfaces.

Plantings and building treatments are proposed to reduce wind experienced in outdoor areas (Donald Ballanti, Certified Consulting Meteorologist, November 7, 2011). Planters, hedges, low walls and porous fencing are proposed to reduce wind exposure and enhance the outdoor experience.

DEMOLITION AND CONSTRUCTION

PHASING

The Project may proceed in a single phase or in two phases depending on market demand. The parking structure providing 551 spaces and 55 of the surface parking spaces would be built in the first phase should the Project be constructed in two phases. The remaining 49 surface parking spaces would be built as part of the second phase of construction. Parking areas not developed in Phase 1 would have temporary planting consistent with the overall planting design.

Demolition and site preparation are expected to take approximately three months. Construction of the Project, if done in one phase, would take approximately nineteen months, including interior improvements, to complete. A two-phase construction schedule would consist of an initial phase of seventeen months for Building A and the parking garage, and second phase of seventeen months for Building B. These phases may be separated by a few months or several years depending upon market demand.

The CEQA analysis (contained in the initial study and represented in **Chapter 4, Traffic and Circulation of this EIR**) assumes one phase of construction. The assumption represents a reasonable worst case analysis of potential Project impacts with respect to the level of intensity on the site at any given time.

SITE DEMOLITION AND PREPARATION

Site demolition and preparation would follow the same process regardless of whether the Project is constructed in one or two phases and would require approximately three months to complete. Site demolition **of the building** ~~and preparation would be estimated to start in January~~ **occurred in December, 2013**. Removal of the remaining building pads and construction of the Project ~~The applicant's contractor~~ would require the contractor to mobilize the site ~~upon confirmation that PG&E has disconnected the utility services.~~ by installing a jobsite trailer. ~~would be located on the site.~~ An approved Stormwater Pollution and Protection Plan (SWPPP) would be implemented to provide erosion control measures. A temporary construction site fence ~~would be~~ **was** erected **during demolition**. During **removal of the remaining building pads and construction of the Project,** ~~this time~~ additional site characterization would be conducted to assess the oil staining inside the building. A licensed hazardous materials contractor would be on site to conduct the work. Up to five workers would be on site during this process, which would take approximately a week.

Two hydraulic excavators and two skid steer bobcat loaders would ~~start the~~ **be used during all** building demolition process**es**. Site characterization would be completed during the building **pad** demolition phase, and if needed a remediation plan developed and approved by the City (as advisory and informational) through the San Mateo County Department of Environmental Health (see **Section 3.6.D**, below for additional information). One water truck would be on site at all times to minimize construction dust and reclaimed water would be applied to disturbed areas a minimum of twice daily. Approximately seven workers would be involved with the demolition process. Approximately twenty-five to thirty hauling trucks would enter and exit the site daily to off haul waste debris. This process would take approximately one month.

Approximately three weeks would be required to remove the underground utilities such as plumbing, fire line, storm drain and electrical. Excavators, loaders, and a backhoe would be used to conduct this work effort. Underground utilities for the catch basins and storm drains would need to be reworked to conform to civil drawings and grade elevations. Approximately five workers would be on site for this work, which will take approximately one to two weeks.

Upon completion of the storm drain and catch basin surveying, staking would begin to set the grade and grade the site in accordance with the civil drawings. Existing soil and baserock would be graded in accordance with the civil drawings. One piece of equipment and one to three workers would be on site during the grading process. Site grading is estimated to take approximately one to two weeks.

Temporary above-ground irrigation would be installed by one to three workers for the hydroseeding. Subsequently hydroseeding would occur and require two to three workers and approximately one week to complete.

CONSTRUCTION[7]

The following describes a reasonable schedule for construction in two phases and in one phase. Construction is dependent upon market demand and therefore could be delayed substantially. The demolition schedule would be the same for either construction schedule.

ONE PHASE CONSTRUCTION

Under the one-phase construction schedule, site characterization requirements would follow the same protocols for the depth and extent of loose fill. Site improvements for suitable, compacted fill would follow recommendations of the structural engineer. Any site remediation would follow the protocol identified in **Section 3.6.D** below. Similarly, testing and analysis of ground water conditions would determine the proper approach to address any perched and/or static groundwater. Construction of Building A and the parking structure would precede construction of Building B. Construction of Building A is estimated to start in **late 2016** ~~May or June, 2013~~. Building B would be constructed after Building A, with construction starting approximately five weeks later. ~~in July, 2013.~~ The completion of the parking structure and exterior shells of Buildings A and B is estimated to occur in **early 2017** ~~March, 2014~~. Core and tenant improvements for Buildings A and B are estimated to be complete in **late 2017** ~~July, 2014,~~ for an overall construction period of slightly more than one year.

TWO PHASE CONSTRUCTION

If construction proceeds in two phases, Building A on the northeast corner of the Project site and the parking structure would be constructed first, with Building B on the southeast corner of the site to follow in Phase 2.

CONSTRUCTION PHASE 1: Following building demolition, potholing would be performed to determine both the depth and extent of fill on the site at various locations. Additional geotechnical site characterization would be performed by potholing with a backhoe at various locations to determine the depth and extents of fill (Cleary Associates, Cotton Shires Associates). The work would be performed over a week's time. Structural fill and compaction work would be done according to recommendations of the structural engineer as reviewed and approved by Cotton Shires Associates. Groundwater conditions would be examined at this time, monitored and dewatering of the site could occur, if required. Substantial completion of the parking structure and exterior shell of Building A would be estimated for December, 201~~3~~**6** with core and tenant improvements estimated to be completed in **early** 201~~3~~**7**.

CONSTRUCTION PHASE 2: Commencement of construction of Building B is projected to follow the completion of Building A by two months, with an estimated starting date in ~~July, 2014~~ **early 2017**. Potholing, fill analysis and sampling of groundwater would follow the

[7] The estimated start and completion times for construction are illustrative and should be construed as to provide an overall schedule of events. Actual start times would likely vary depending on market conditions. Therefore, it is not certain that construction would commence in a particular month but it is reasonably foreseeable that the length of time to complete the phases of construction would be as shown with minor variations.

same procedures as Phase 1, if relevant. The exterior shell of Building B would be estimated to be completed in ~~June~~, **late** 201~~5~~**7**. Core and tenant improvements would be estimated to be completed in **early** 201~~5~~**8**.

3.6 ENVIRONMENTAL MEASURES INCORPORATED INTO THE PROJECT

The following measures**, or their equivalent,** are proposed as part of the Project, are shown on the architectural drawings (sheet P.A.1.1a), in application materials and identified in the initial study for the Project (**Appendix**). These measures are in addition to the City's standard requirements identified in **Chapter 1 of the initial study** save for Air Quality items 1-3 and are designed to reduce the environmental affect of the Project.

A. AIR QUALITY AND GREEN HOUSE GAS - EMISSION REDUCTION MEASURES

1) **BASIC AND EXPANDED FUGITIVE DUST EMISSIONS REDUCTION MEASURES**. The construction contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic **and expanded** fugitive dust control measures. Therefore, the Project shall include the following requirements in construction contracts:
    - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
    - All haul trucks transporting soil, sand, or other loose material off site shall be covered.
    - 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 use of dry power sweeping is prohibited.
    - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
    - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
    - A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
    - **All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. [Occurs less than three percent of the year.]**
    - **All exposed surfaces (during grading and construction) shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content will be verified by lab samples or moisture probe at two locations on the Project site.**
    - **Vegetative ground cover (e.g., fast-germinating native grass seed) or other plants that offer dust mitigation measures shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.**

- **The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. To the extent feasible, activities shall be phased to reduce the amount of disturbed surfaces at any one time.**
- **All trucks and equipment, including their tires, shall be washed off prior to leaving the site.**
- **Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one (1) percent.**

2) **BASIC AND EXPANDED EXHAUST EMISSIONS REDUCTION MEASURES**. The construction contractor shall implement the following measures during construction to reduce construction-related exhaust emissions:
   - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time **for off-road equipment** to **two (2)** minutes **and for on-road equipment to five (5) minutes.** Clear signage shall be provided for construction workers at all access points.
   - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
   - **All construction equipment, diesel trucks and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM to the maximum extent feasible. To this end, all generators and air compressors used on site shall be electric. All on road trucks used onsite shall be Year Model 2007 or better. Propane or LNG-fueled booms and scissor lifts shall be used.**
   - **Tier 2 or better for 20 percent of horsepower-hours of off-road diesel equipment shall be used during construction and 65 percent of horsepower hours during demolition.**
   - **All contractors shall, to the maximum extent feasible, use equipment that meets the ARB's most recent certification for off-road heavy duty diesel engines.**
   - **No onsite grinding, crushing or shredding of asphalt or debris shall occur onsite.**
   - **Potential future measures that achieve the same or better performance criteria shall be submitted to the City for review and approval prior to initiating any changes.**
   - **Applicant shall provide the City and Genentech with a list of and schedule for demolition, grading and construction equipment and activities.**
   - **A construction superintendent shall be on site during all demolition, grading and construction activities to enforce these regulations.**

3) **COMPLIANCE WITH BAAQMD REGULATION 11, RULE 2 DURING DEMOLITION.** Demolition of existing buildings and structures would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing).

BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities.

The rule requires the notification of BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

4) **COMPLIANCE WITH BAAQMD REGULATION 8, RULE 3 FOR ARCHITECTURAL COATINGS.** Emissions of volatile organic compounds (VOC) due to the use of architectural coatings are regulated by the limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was recently revised to include more stringent VOC limit requirements. The revised VOC architectural coating limits, which became effective on January 1, 2011, are projected to result in a 32 percent reduction of VOC emissions in the Bay Area associated with architectural coating applications.

B. TRANSPORTATION AND GREEN HOUSE GAS REDUCTION MEASURES

The applicant proposes a Transportation Demand Management Program (TDM Program) (475 Eccles Avenue Transportation Demand Management Program, Fehr & Peers, October, 2011). The TDM Program is aimed at a 30 percent mode shift compared to projects that do not include a TDM, to qualify for a 1.0 FAR. The TDM Program is required by law to be reviewed by the City and modified by the Applicant as required by the City to meet the mode shift requirements. Performance audits are also required. The Applicant proposes the following measures, at a minimum, for the TDM Program:

1. Bicycle Parking (racks for visitors and sheltered bicycle parking for employees).
2. Shower and locker facilities (in lease agreement).
3. Preferential Carpool and Vanpool Parking.
4. Passenger loading zones for carpool and vanpool drop-off.
5. Pedestrian Connections.
6. TDM coordinator (in lease agreement).
7. Carpool/Vanpool Matching services (TDM coordinator responsibility).
8. Guaranteed ride home (through Traffic Congestion Relief Alliance).
9. Information Board for TDM Program (in lease agreement).
10. Promotional programs including new employee orientation and TDM Programs (TDM coordinator responsibility).
11. Shuttle bus service to Caltrain**,** ~~and~~ BART**, SSF Ferry** and downtown Dasher, coordinated with Alliance (TDM coordinator responsibility.)
12. Membership in Peninsula Traffic Congestion Relief Alliance.
13. **Subsidized Transit Tickets**

14. **Flexible Work Hours**
15. **On-Site Vanpool Program**
16. **Video Conference Center**
17. **Subsidized park and ride costs at transit stations**

C. Construction and Operational Design Elements Addressing Environmental Sustainability

The LEED design and construction strategies that have been integrated into the planning documents include:

1. The use of a previously developed site without impacts associated with endangered species, flood plain, and adjacency to wetlands or bodies of water.
2. The Project will document and remediate asbestos previous to demolition.
3. A TDM Program that includes the use of public/privates shuttles providing access to major public transportation hubs. In addition to the requirements for bike parking the Project will include shower/changing room amenities for bike users.
4. The Project will provide adequate preferred parking for low-emitting and alternative fuel vehicles. The Project will provide fewer parking spaces than those referenced in local zoning requirements.
5. The Project provides more than 20 percent of the total site area in open space. More than 50 percent of all parking will be under cover to reduce heat island effects for site surfaces.
6. The Project has developed tenant design and construction guidelines including recommendations and requirements for tenant improvements.
7. Indoor plumbing fixtures within the core and shell design and those required by the tenant scope of work will achieve greater than a 30 percent water use reduction.
8. Site landscape and irrigation equipment will provide irrigation efficiencies greater than 50 percent reduction from a standard summer baseline.
9. The Project will provide fundamental and enhanced commissioning (Cx) of MEP energy systems, including a requirement for tenant improvement Enhanced Cx and a 10 month post-occupancy return to verify equipment warranty and operational efficiencies. Current energy model targets anticipate a greater than 15% reduction in energy compared to Title 24 and ASHRAE 90.1. Base building and tenant improvement mechanical and food service equipment will be required to comply with enhanced refrigerant management requirements. The Project will provide adequate areas for the collection and storage of recyclables, and tenants will be required to implement desk-side recycling.
10. The Project has developed a Construction Waste Management plan that targets at least 75% diversion of landfill waste, with a goal of 95% diversion. The Project has integrated requirements into planning specifications and plans to target a greater than 20% recycled and regional content (by cost) in all building materials for the project. The Project will target a greater than 50 percent FSC certified wood content (by cost) in all new wood building materials for the project.
11. The Project will require, and require tenants, all materials installed within the vapor barrier of the Project to comply with LEED/CalGreen VOC & CARB requirements, and specifically contain no-added urea-formaldehyde (NAUF)

products. The Project will conduct, and require tenants to conduct, and Indoor Air Quality Management Plan for Construction Activities that requires contractors to comply with SMACNA IAQ guidelines for best practices during construction.

D. SITE REMEDIATION FOR ASBESTOS, LEAD BASED PAINTS AND RECOGNIZED ENVIRONMENTAL CONDITIONS

The Applicant will, as indicated on the plans and application materials, remove lead based paints and has already removed much of the asbestos containing materials in the building (Certificate of Job Completion, Professional Asbestos and Lead Services, Inc., March-April, 2012, see **Appendix A**). During Project demolition **of the building in December 2013,** minor amounts of asbestos ~~would be~~ **were** removed as electrical equipment ~~is~~**was** removed providing access to the location of the material.

During the Phase 1 Environmental Site Assessment (URS, July 2012) one potential sump was observed on the Project site during the site reconnaissance. The potential sump is on the warehouse floor, and was obstructed with a metal cover. The cover was coated with significant oil staining. Subsequent to the site reconnaissance, facility personnel attempted to remove the cover and photograph the area below. There was an additional metal cover present below that could not be removed. This metal cover was also stained with oil, and the area below could not be assessed. As noted above, this area would be characterized during demolition activities.

The Applicant as shown on the plans will conduct the following remediation which is largely standard procedure. The work would be done during the demolition and site preparation phase of the Project.

TABLE 3.2
HAZARDOUS MATERIALS REMEDIATION MEASURES

Media	Material(s)	Approach
Vault/pit interior concrete Investigation	All	• Mobilize equipment to remove metal cover • Inspect interior concrete for the presence of liquid or significant staining and integrity of the concrete. • Collect sample of any liquid material present or concrete chip sample.
Soil - Investigation	All	• If staining/liquid are present and concrete is in poor condition soil sampling should be conducted. • Apply for boring permit from the San Mateo County Environmental Health Department (SMCEHD). • Advance one soil boring below the pit using a direct push drill rig to 20 feet below ground surface. • Collect soil samples at 1, 5, 10 and 20 feet bgs. • Analyze samples for VOCs, total petroleum hydrocarbons, semi volatile organic compounds (SVOCs) PCBs, and metals. • Report results to the SMCEHD and consult for remediation requirements. • Remediation of contaminated soils can be completed during the demolition stage of the Project.

Media	Material(s)	Approach
Soil Remediation (ex-situ)	Fuels	• Reuse on Site (if concentration is less than 100 ppm). • Haul and Dispose at appropriate landfill. • Capping and vapor barrier. • Treat on site (see below).
Soil Remediation (ex-situ)	VOCs (gasoline fuels, solvents)	• Consult the SMCEHD for requirements. • Haul and Dispose. • Aeration – requires a notification to BAAQMD, daily volumes are limited. • Vapor Stripping – apply vacuum system to covered piles, notify BAAQMD. • Bioremediation - apply bio-treatment materials, moisture and "work" soil piles. • Thermal Desorption – various vendors provide mobile treatment units. • Capping and vapor barrier.
Soil Remediation (ex-situ)	Inorganics (metals)	• Consult BAAQMD and SMCEHD for requirements. • Haul and Dispose. • Chemical Stabilization. • Sorting – reduce waste volume by screening to target contaminant particle size.
Soil Remediation (in-situ)	VOCs	• Consult SMCEHD for requirements. • Soil Vapor Extraction – apply vacuum to vapor wells, notify BAAQMD. • In-situ chemical oxidation. • In-Situ Vitrification – use electricity to melt waste and surrounding soils.
Soil Remediation (in-situ)	SVOCs	• Consult SMCEHD for requirements. • Bioremediation – saturate soils with bio-treatment materials. • Chemical Stabilization – saturate soils with chemicals to immobilize contaminants. • In-Situ Vitrification. • Capping .
Groundwater - Investigation	All	• If contaminants are detected in the 20 foot below ground surface soil sample an additional boring should be completed to groundwater. • Analyze sample for contaminants detected in soil. • Report results to the SMCEHD and consult on remedial alternatives.
Groundwater Remediation	VOCs	• Consult BAAQMD and SMCEHD for requirements. • Pump and Treat – pump from wells, treat and discharge treated water. • Air Sparging – inject air to volatilize contaminants and create aerobic groundwater conditions suitable for natural bioremediation. Generally applied in conjunction with Soil Vapor Extraction to control released volatiles. • Bioremediation – inject bio-treatment materials into affected groundwater. • Chemical Oxidation – inject oxidation chemicals into affected groundwater.
Groundwater Remediation	SVOCs	• Consult BAAQMD for requirements. • Pump and Treat.

Media	Material(s)	Approach
(continued)		• Bioremediation. • Chemical Oxidation.
Groundwater Remediation	Inorganics	• Consult BAAQMD for requirements. • Pump and Treat. • Chemical Immobilization – inject chemicals to precipitate or chemically fix contaminants to soil particles.

The Project submittals note that a Licensed General Contractor with Hazardous Substance Removal Certification from the State of California will inspect and remove the electrical equipment. The qualifications of the contractor will be noted on the plans submitted to the City for issuance of a demolition permit.

MODIFICATIONS TO THE INITIAL STUDY CONTAINED IN APPENDIX A OF THE DEIR.

3.3 AIR QUALITY

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III.	AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:				
	a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
	b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
	c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X	
	d) Expose sensitive receptors to substantial pollutant concentrations?			X	
	e) Create objectionable odors affecting a substantial number of people?			X	

PAGE 3-19 OF THE INITIAL STUDY THROUGH 3-21 IS MODIFIED AS FOLLOWS:

d) Impacts to Sensitive Receptors

Significance Criteria: The significance of impact to sensitive receptors is dependent on the chance of contracting cancer from exposure to toxic air contaminants (TACs) such as DPM or of having adverse health effects from exposure to non-carcinogenic TACs. A project is considered to be significant if the incremental cancer risk at a receptor exceeds 10 in a million.

Three child care centers are located in the Project area: 599 Gateway Boulevard 0.3 miles (1,760 feet) southwest; 444 Allerton Avenue 0.4 miles (1,320 feet) southeast; **and 850 Gateway Boulevard 125 feet northwest of the Project site on the Gateway Business Park Campus. Therefore there is one sensitive receptor located within a 0.25 mile radius of the Project site.** Residential land uses are approximately

2,400 feet (0.45 miles) to the east (west of Route 101). ~~There are no sensitive receptors located within a 0.25 mile radius of the Project site.~~

For cumulative analysis of cancer risk, BAAQMD recommends that the risks from all sources within a 1,000 foot radius of the source or receptor be assessed and compared to a cumulative increased risk threshold of 100 in one million. The non-cancer hazard index significance threshold of 1.0 is defined in the BAAQMD *CEQA Air Quality Guidelines*. For cumulative analysis of non-cancer hazard index, BAAQMD requires that the hazards from all sources within a 1,000 foot radius of the source or receptor be assessed and compared to a cumulative hazard index threshold of 10.

The BAAQMD has established a separate significance threshold for PM2.5 to protect public health as emissions of PM2.5 are associated with health risks. For individual projects, the BAAQMD significant threshold for PM2.5 impacts is an average annual increase of 0.3 $\mu g/m^3$. For cumulative analysis, BAAQMD recommends that the PM2.5 concentrations from all sources within a 1,000 foot radius of the receptor be assessed and compared to a cumulative threshold of an average annual increase of 0.8 $\mu g/m^3$.

CANCER RISK

Cancer risk is defined as the lifetime probability of developing cancer from exposure to carcinogenic substances. Cancer risks are expressed as the chances in one million of contracting cancer, for example, ten cancer cases among one million people exposed.

Following Health Risk Assessment (HRA) guidelines established by California Office of Environmental Health Hazard Assessment (OEHHA) and BAAQMD's *Health Risk Screening Analysis Guidelines*, incremental cancer risks were calculated by applying toxicity factors to modeled TAC concentrations in order to determine the inhalation dose (milligrams per kilogram of body weight per day [mg/kg-day]). See **Appendix A** for details concerning the methodology, assumptions, and basis of calculation for the cancer risks.

CONSTRUCTION RELATED IMPACTS

As a result of construction activities (with implementation of the measures the City requires by law **and the Tier 2 measures or their equivalent proposed by the Project**), the unmitigated maximum cancer risk for a residential-adult receptor would be 0.04 per million and for a residential-child would be 0.44 per million. The unmitigated maximum cancer risk for a school child **(day care)** receptor would be ~~0.03~~ **8.2** per million **based upon the construction schedule provided by the Applicant which assumes demolition within a year and construction following approximately two years later, 2015 through 16**. ***Thus, the unmitigated cancer risk due to construction activities is below the BAAQMD threshold of 10 per million and would be less than significant.***

OPERATIONAL RELATED IMPACTS

The maximum cancer risks from the Project operations for a residential-adult receptor would be 0.41 per million and for a residential-child would be 0.44 per million with

implementation of the measures the City requires by law. The maximum cancer risk **from the Project operations** for a school child **(day care)** receptor would be 0.04**6** per million. ***Thus, the health impacts from Project operations would be below the BAAQMD threshold of 10 per million and less than significant.***

NON-CANCER HEALTH IMPACTS

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental exposure concentration from the Project to a published reference exposure level (REL) that could cause adverse health effects. The RELs are published by OEHHA based on epidemiological research. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated for each organ system. If the overall HI for the highest-impacted organ system is greater than 1.0, then the impact is considered to be significant.

The chronic reference exposure level for DPM was established by the California OEHHA as 5 $\mu g/m^3$. There is no acute REL for DPM. However, diesel exhaust does contain acrolein and other compounds, which do have an acute REL. Based on BAAQMD's DPM speciation data acrolein emissions are approximately 1.3 percent of the total DPM emissions. The acute REL for acrolein was established by the California OEHHA[8] as 2.5 $\mu g/m^3$. See **Appendix A** for details concerning the methodology, assumptions, and basis of calculation for the health index.

The Project's chronic HI for DPM would be less than 0.03 **for a residential receptor and 0.02 for a school child (day care) receptor**. ***The chronic HI for DPM would be below the BAAQMD threshold of 1 and the impact of the Project would therefore be less than significant.***

The Project's acute HI for acrolein would be less than 0.01 **at all receptors**. ***The acute HI for acrolein would be below the BAAQMD threshold of 1 and the impact of the Project would therefore be less than significant.***

PM2.5 CONCENTRATION

Dispersion modeling was also used to estimate exposure of sensitive receptors to Project-related concentrations of PM2.5. Because emissions of PM2.5 are associated with health risks the BAAQMD has established a separate significance threshold to protect public health. The BAAQMD guidance requires inclusion of PM2.5 exhaust emissions only in this analysis (i.e., fugitive dust emissions are addressed under BAAQMD dust control measures and are required by law to be implemented into Project construction, see **Introduction, Chapter 1, Section 1.5.2**). ***The ~~unmitigated~~ maximum annual PM2.5 concentration as a result of Project construction would be less than 0.01 $\mu g/m^3$ for a residential***

[8] California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 2010. http://www.oehha.ca.gov//.

receptor and 0.07 µg/m^3 for a school child (day care) receptor. ***The annual PM2.5 concentration due to implementation of the Project would be below the BAAQMD threshold of 0.3 µg/m^3, and hence is considered less than significant.***

CUMULATIVE IMPACTS

The BAAQMD's *CEQA Air Quality Guidelines* include standards and methods for determining the significance of cumulative health risk impacts. The method for determining cumulative health risk requires the addition of the health risks from permitted sources and major roadways in the vicinity of a project (i.e., within a 1,000-foot radius of the source, also considered the zone of influence for a health risk analysis), then adding the health risks of the Project impacts to determine whether the cumulative health risk thresholds are exceeded.

BAAQMD has developed a geo-referenced database of permitted emissions sources throughout the San Francisco Bay Area, and has developed the *Stationary Source Risk & Hazard Analysis Tool* (dated May, 2011) for estimating cumulative health risks from permitted sources. Five permitted sources are located within 1,000 feet of the Project.

BAAQMD has also developed a geo-referenced database of roadways throughout the San Francisco Bay Area and has developed the *Highway Screening Analysis Tool* (dated May 2011) for estimating cumulative health risks from roadways. BAAQMD *CEQA Air Quality Guidelines* also require the inclusion of surface streets within 1,000 feet of the project with annual average daily traffic (AADT) of 10,000 or greater[9]. No nearby roadways meet the criteria.

Air Quality Table 5 lists the BAAQMD-permitted facility and major roadways within 1,000 feet of the Project. **Air Quality Table 5** also shows the cumulative cancer risk, hazard impact, and PM2.5 concentrations (in µg/m^3) associated with these facilities (developed by BAAQMD), as well as the Project. ***The cumulative impacts are below the BAAQMD significance thresholds. Secondly, given that the Project would not result in increased health impacts exceeding the Project-level thresholds, the Project would also not result in a cumulatively considerable contribution to localized health risk and hazard impacts, resulting in a less than significant cumulative air quality impact.***

AIR QUALITY TABLE 5
CUMULATIVE IMPACTS

Site #	Facility Type	Address	Cancer Risk	Hazard Impact	PM2.5 Concentration
13861	City of SSF Water Quality Plant	955 Gateway Blvd	0.99	<0.01	<0.01
17664	Gallo	440 Forbes Blvd	<0.01	<0.01	<0.01
13778	UPS Supply Chain Solutions	455 Forbes Blvd	2.1	<0.01	<0.01
19547	Chamberlin Associates	200 Oyster Point Blvd	8.5	0.003	0.027

[9] BAAQMD County Surface Street Screening Tables, May 2011 and CEHTP Traffic Linkage Service Demonstration, http://www.ehib.org/traffic_tool.jsp

Site #	Facility Type	Address	Cancer Risk	Hazard Impact	PM2.5 Concentration
18885	Chamberlin Associates	180 Oyster Point Blvd.	1.7	0.001	0.0053
	Permitted Sources Total		13.3	<0.01	0.03
	Proposed Project		~~0.44~~ **8.2**	0.03	~~<0.01~~ **0.07**
Grand Total			~~**13.7**~~ **21.5**	**0.03**	~~**0.03**~~ **0.13**
Significance Thresholds			100	10	0.3
Significant Impact?			No	No	No

3.7 HAZARDS AND HAZARDOUS MATERIALS

THE HAZARDS AND HAZARDOUS MATERIALS CHECKLIST ON PAGE 3-45 OF THE INITIAL STUDY IS REVISED AS FOLLOWS:

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII.	HAZARDS AND HAZARDOUS MATERIALS — Would the Project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			**X**	~~X~~
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e)	For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?			X	
f)	For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?			X	
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

PAGE 3-54 OF THE INITIAL STUDY IS REVISED AS FOLLOWS:

c) and d) Hazardous Materials Presence

Significance Criteria: The Project would have a significant environmental impact if it were to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter mile of an existing or proposed school, or if it was located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 ("Cortese List").

There are no existing or proposed schools ~~or day care centers or facilities~~s within a quarter mile of the Project site. **There is one day care facility approximately 125 feet northwest of the Project at 850 Gateway Boulevard**. The Project site is not listed on the Department of Toxic Substances Control's Cortese List (California Department of Toxic Substance Control, http://www.dtsc.ca.gov/database/Calsites/Cortese_List.cfm and Phase I).

As noted in the Setting Section further assessment would be conducted at the site during demolition activities to determine the presence and/or extent of potential environmental contamination associated with the small area of concrete staining inside the building. The investigation would include removal of the metal cover on the vault/sump and inspection of the interior for the presence of oil or oil staining. The integrity of the concrete in the vault would also be evaluated along with the extent of the staining. Further investigation, in the form of subsurface drilling, could be required to assess if there was a release to the subsurface if there is significant staining beyond that on the surface of the concrete vault and/or there are any issues with the concrete integrity (i.e., if the concrete is damaged and has allowed the staining to progress beyond surface areas).

The work is required by law to comply with the local, state and federal laws outlined in the Setting Section. The Applicant acknowledges these requirements and identifies them as part of the Project as described in Chapter 2 Project Description. The procedures and permitting requirements identified as part of the Project are designed to reduce the potential impacts associated with the handling, storage, transport and removal of toxic and hazardous substances. ***The Project would have a less than significant impact with respect to exposure from the emission or handling of hazardous materials or wastes on schools or day care facilities because the Project will comply with the stated procedures and permitting requirements and because the Project site is not listed on the Cortese List.***

HAZARDS AND HAZARDOUS MATERIALS FINDING ON PAGE 3-55, PARAGRAPH 2 IS REVISED AS FOLLOWS:

Finding: There are no existing or proposed schools ~~or day care centers or facilities~~s within a quarter mile of the Project site. There is one day care facility approximately 125 feet northwest of the Project at 850 Gateway Boulevard. The work is required by law to comply with the local, state and federal laws outlined in the Setting Section. The Applicant acknowledges these requirements and identifies them as part of the Project as described in Chapter 2 Project Description. The procedures and permitting requirements identified as part of the Project are designed to reduce the

potential impacts associated with the handling, storage, transport and removal of toxic and hazardous substances. ***The Project would have a less than significant impact with respect to exposure from the emission or handling of hazardous materials or wastes on schools because the Project will comply with the stated procedures and permitting requirements and because the Project site is not listed on the Cortese List.***

3.12 NOISE

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII.	NOISE — Would the Project:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c)	A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			X	
d)	A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?			X	
e)	For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				X
f)	For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?				X

PAGE 3-67 PARAGRAPH 1 OF THE INITIAL STUDY IS REVISED AS FOLLOWS:

Residential, schools, child care facilities and convalescent facilities are typically considered noise sensitive land uses. The closest sensitive receptor to the site is a **day care facility approximately 125 feet northwest of the Project at 850 Gateway Boulevard. There** are two child care centers **located more than 0.25 miles away;** one at 599 Gateway Boulevard 0.3 miles (1,760 feet) from the site and one at 444 Allerton Avenue 0.4 miles (1,320 feet) from the site. Residential land uses are approximately 2,400 feet (0.45 miles) to the east

(west of Route 101). ~~There are no sensitive receptors located within a 0.25 mile radius of the Project site.~~

IMPACTS

a – d) Exposure of Persons to or Generation of Noise Levels in Excess of Standards, Exposure of Persons to or Generation of Excessive Groundborne Noise Levels, a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing Without the Project.

Significance Criteria: The Project would have a significant environmental impact if it were to result in exposure of persons to or generation of noise levels in excess of standards established in the South San Francisco General Plan or the City's Noise Ordinance.

Page 3-68 paragraph 4 is revised as follows:

Some grading activities, such as the times a hoe ram is in use, would result in the most intrusive level of sound generated by the Project. The closest land uses to the Project are industrial buildings south and north of the Project. Both of these buildings are 50 feet from the property line of the Project to the face of the buildings.[10] Exterior noise levels at these two receptors would be approximately 90 dB for a short period of time (approximately 20 percent) when a hoe ram is used during grading. This activity would be intermittent during the first two months of work on the Project site. Interior sound levels would attenuate approximately 20 dB or to 70 dB, Leq.[11] **Exterior** sound levels reaching the closest sensitive receptor, **the child care facility at 850 Gateway Boulevard** ~~on Allerton Avenue 1,320~~ **125 feet northwest of the Project, would reach 77 dB during the noisiest phases of Project grading. Therefore, during outdoor play time, a non-noise sensitive activity, exterior sound levels would reach 77 dB at the day care play area. Sound reaching the interior of the day care facility would be expected to attenuate 20-25 dB with doors and windows closed. This attenuation factor is assumed for the day care facility as it is newer construction without operable windows; therefore the maximum attenuation of 25 dB would be expected to be achieved bringing the interior ambient noise levels to approximately 52 dB. Classroom environments are typically between 55-60 dB (National Assessments of Noise Control Officials, Office of the Scientific Assistant, Office of Noise Abatement and Control, 1979, revised 1981. U.S. Environmental Protection Agency). Therefore, 52 dB resulting from Project construction would be lower than a typical classroom environment, and would be considered acceptable.** ~~attenuate to background levels; due to the distance as well as the building envelope.~~

Addition of paragraph 5 on page 3-63 is as follows:

---

[10] The noise impacts are very conservative in that the analysis is from the Project property line and do not assume additional attenuation as the work moves further into the interior of the site providing additional attenuation.

[11] Another industrial building is located 120 feet east and across Eccles Avenue from the site. Interior noise levels would attenuate approximately 32 dB to approximately 60 dB. The analysis focuses on the worst case exposure which is the two closest buildings.

South San Francisco Municipal Code Section 8.32.050(d) identifies 90 dB, Lmax as the maximum sound level permitted at a property line. Grading operations may exceed this standard by 1 dB (ENVIRON, 2013). The Chief Building Official may grant an exception to the standard. The Project area does afford opportunity for attenuation given the soft surfaces to the west and northwest of the site and given that the surrounding buildings are sparsely placed reducing the potential for reflection and intensification of sound levels. The 1 dB potential sound level exceedance is considered less than significant.

Addition and modification of paragraph one on page 3-69 and Finding on page 3-70 is as follows:

Construction related interior noise levels would be approximately 10-15 dB less than those experienced during grading. Construction noise levels would also attenuate as the activity moves into the interior of the site, as building shells are erected blocking line of sight, and as quieter activities occur. ***Demolition and construction related noise impacts would be considered a less than significant because the 1) noise associated with grading operations would not be a continuous noise source during an eight hour day and would be expected to be complete within two months; 2) industrial land uses are considered less noise sensitive and are permitted in an environment up to 75 dB which assumes a continuous noise exposure and conditionally permitted in an environment up to 85 dB; 3) the land uses in the area are conducted indoors which affords a 20 dB noise reduction in addition to noise attenuation due to distance from the source; ~~and~~ 4) outdoor land uses such as deliveries, walking to and from a vehicle, loading and unloading operations are infrequent and intermittent which would by nature not expose people to excessive amounts of noise; 5) exterior noise exposure received at the day care facility would reach 77 dB during outdoor play time, a non-noise sensitive land use activity. During noise-sensitive activities, conducted inside the building, noise levels would be expected to attenuate 20-25 dB (to 52-57 dB) requisite for learning, conversing.; and 6) South San Francisco Municipal Code Section 8.32.050(d) identifies 90 dB, Lmax as the maximum sound level permitted at a property line. Grading operations may exceed this standard by 1 dB. The Chief Building Official may grant an exception to the standard. The Project area does afford opportunity for attenuation given the soft surfaces to the west and northwest of the site and given that the surrounding buildings are sparsely placed reducing the potential for reflection and intensification of sound levels. The 1 dB potential sound level exceedance is considered less than significant.***
2606336.1

Attachment A

Liberty Gold Letter – 11/14/12

LIBERTY GOLD FRUIT COMPANY, INC.
500 Eccles Avenue, South San Francisco, California 94080
Mailing address: P.O. Box 2187, South San Francisco, California 94083

November 28, 2012

Billy Gross, Associate Planner
City of South San Francisco
315 Maple Avenue
South San Francisco, Ca 94080

RE: PROJECT PROPOSED 475 ECCLES AVENUE EIR REPORT

Dear Mr. Gross,

Liberty Gold Fruit Co. Inc. is located at 500 Eccles Avenue, across from the intended project at 475 Eccles Avenue. Surprisingly we are not mentioned in the NOP which on page 2-3 describes the properties adjacent to the project.

The site currently has 276 parking places. But since the building at 475 Eccles has been vacant for a number of years, in effect the site behaves as if it has zero parking places. In addition there are other buildings on the street that are either empty or under-utilitized.

Even so, at day's end, there is a significant line of cars on Eccles Avenue waiting to cross onto Oyster Point Blvd. and down onto Highway 101.

Eccles Avenue, just 40 feet wide, was designed to service a corridor of buildings which were mainly warehouse or warehouse/office with a relatively low density of employees.

We who live on Eccles Avenue (when you spend most of your daylight hours at a workplace, you are a resident) have not been subjected to the traffic load currently legally approved for this short street for some years. Were all of the parking spaces currently in existence on Eccles Avenue utilized, it would be patently evident that the proposal of adding a total of 432 parking spaces would be an unacceptable burden to all of us on Eccles Avenue.

Before the planning commission and the city council approve any projects on Eccles Avenue,

LIBERTY GOLD FRUIT COMPANY, INC.
500 Eccles Avenue, South San Francisco, California 94080
Mailing address: P.O. Box 2187, South San Francisco, California 94083

Eccles Avenue needs a separate traffic study to consider the traffic flow with all the current parking spaces utilized. In recent years, a number of additional car trips have been added to the Oyster Point Blvd corridor, to the point where this street is already jammed up at times with vehicles. That exists even with Eccles Avenue's diminished present vehicle traffic. If Eccles Avenue was fully utilized the traffic on Oyster Point Blvd would be significantly degraded.

Furthermore in studying Oyster Point Blvd, one has to add the effect of filling the empty buildings on the north side of Oyster Point Blvd., and the new building that are to come on the empty land near the Oyster Point Blvd/Highway 101 interchange.

Given current conditions, we request that the new project be limited to the same number of spaces now approved for the property – 276 parking spaces.

An employee load beyond that number should be accommodated with a parking site having a separate access to highway 101 and shuttle bus service from that site to 475 Eccles Avenue.

It's easy to grant new developments and more car traffic when the grantor is not impacted by the decision. Please make your decision as if City Hall was located on either Eccles Avenue or Oyster Point Blvd. That's only fair to those of us here now.

Sincerely,

Thomas Battat
President

Telephone: (650) 583-4700 • Fax: (650) 583-4770

Attachment B

Caltrans Letter – 12/14/12

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

December 14, 2012

SM101471
SM-101-22.7
SCH#2012082101

Mr. Billy Gross
City of South San Francisco
Planning Division
315 Maple Avenue
South San Francisco, CA 94083

Dear Mr. Gross:

475 Eccles Avenue Project– Draft Environmental Impact Report

Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the above project. The following comments are based on the Draft Environmental Impact Report (DEIR).

Trip Generation - Traffic Table 19, Project Trip Generation, page 4-37
According to the Institute of Transportation Engineers, Trip Generation 8th Edition, the trip volumes in Table 19 are under-estimated. Peak generated trips for year 2015 AM(PM) should be 243(22) and year 2035 AM(PM) 228(214). Please confirm your numbers and correct as necessary.

Mitigation - Section 4, Existing With Project Impacts, Impact 3, page 4-39
Please provide measures to mitigate the excess traffic volumes on the 300-foot southbound left-turn pocket of the Airport Boulevard/Grand Avenue intersection to accommodate the Existing Plus Project traffic queue of 337-feet.

Fair Share - Please provide a dollar amount for the fair share fee mitigation.

Please feel free to call or email Sandra Finegan at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development – Intergovernmental Review

c: State Clearinghouse

"Caltrans improves mobility across California"

Attachment C

Liberty Gold and Caltrans Response to Comments

RESPONSE TO COMMENTS 475 ECCLES AVENUE
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)

DECEMBER 19, 2012

The 475 Eccles DEIR was circulated for public review (SC#: 2012082101) from October 31, through December 14, 2012. Two comment letters were received on the document and the responses are contained in the following.

LIBERTY GOLD NOVEMBER 28, 2012 LETTER

Response 1. It is acknowledged that Liberty Gold is adjacent to the Project site. Thank you for your comment.

Response 2. It is acknowledged that there is existing congestion during the peak commute periods along Oyster Point Boulevard and at the Oyster Point Boulevard/US101 interchange. Significant additional developments are proposed by the City in the East of 101 area as well as numerous roadway improvements along Oyster Point Boulevard, including a turn lane for additional capacity at the Oyster Point Boulevard/Eccles Boulevard intersection.

The 475 Eccles Draft EIR has evaluated traffic conditions for year 2015 and year 2035 horizons, both with and without the 475 Eccles project. This includes full utilization of all businesses along Eccles Avenue. As detailed in the EIR, there are a few locations that are projected to experience unacceptable operation by 2015 (with or without the 475 Eccles project) and a larger number are projected to experience unacceptable operation by 2035 (again, with or without the 475 Eccles project). Unacceptable operation is expected at some locations (primarily at the US101 freeway interchanges), even with all planned circulation system improvements that are considered feasible by the City and Caltrans. These locations have been fully disclosed in the EIR in conjunction with statements that no mitigation is considered feasible to provide acceptable commute peak hour operation. Decision makers will take this comment and the traffic conditions and projections into consideration when evaluating the Project.

CALTRANS DECEMBER 14, 2012 LETTER

Response 1-Trip Generation. The trip generation rates used to determine 475 Eccles trip generation were developed using Institute of Transportation Engineers (ITE) fitted curve rates from *Trip Generation*, 8th Edition, 2008. The fitted curve rates were not applied assuming the 475 Eccles project was an isolated development. Rather, it was considered part of a more than 7+ million square foot R&D development in the area to the East of the 101 freeway in South San Francisco. The use of a further 20 percent reduction in peak hour trip rates for 2015 conditions and a 25 percent reduction for 2035 conditions due to a City-mandated significant Transportation Demand Management (TDM) program were also determined to be appropriate, as the City traffic model calibration process for this area found that resultant existing condition trip rates needed to be well below what would be projected by applying fitted curve equations to total local area development in conjunction

with additional 20 to 25 percent reductions due to TDM measures. Since the project area is already generating peak hour traffic well below "average" ITE trip rates, future trip rates would only be expected to reduce further as area freeway and surface street congestion increases.

Response 2-Existing "With Project" Impacts at Airport Boulevard/Grand Avenue Intersection. Due to the project's minor AM peak hour impact to the left turn movement on the Airport Boulevard southbound approach to Grand Avenue (2 vehicles added), signal timing adjustments would eliminate any additional queuing while still maintaining an acceptable level of service (LOS D – 40.1 seconds control delay).

Response 3-Fair Share. The City of South San Francisco will identify the exact Fair Share dollar amount required to be paid during the Building Permit process, when the ultimate ratio of office/R&D square footage will be determined.

2041657.1

Attachment D

November, 2015 Letter from Applicant with ENVIRON Air Quality and Noise Analysis

BMR–475 Eccles Avenue LLC

17190 Bernardo Center Drive • San Diego, California 92128
Phone: (858) 485-9840 • Facsimile: (858) 485-9843

VIA U.S.P.S

November 19, 2015

City of South San Francisco
Economic & Community Development Department
PO Box 711
South San Francisco, CA 94083-0711

Attn: Billy Gross

Re: 475 Eccles – Current Status

Dear Billy:

This letter is provided as a current status update regarding 475 Eccles project issues.

Cell Tower: We withdraw our application for a use permit to relocate a cell phone tower. The tower has been removed from the site and no longer factors into any development plans.

Rooftop Planters: BMR submitted an application to amend the zoning ordinance requirements related to the rooftop planters, and provided two alternate amendments for the City's consideration. We would like to place that application on hold. In lieu of pursuing a zoning amendment, we will be seeking approval of an Alternative Landscape Plan pursuant to Municipal Code section 20.300.07.D2.

Building Demolition: Pursuant to a demolition permit issued by the City, the building on the site was demolished, leaving only building pads in place. Demolition was completed at the end of 2013.

Daycare Issues: After the Draft EIR was published, we were contacted by Genentech regarding its daycare at 850 Gateway Boulevard. BMR retained Environ to evaluate in further detail any effect of risks and hazards posed by the 475 Eccles Avenue Project on the Genentech daycare. Environ identified numerous measures to ensure there would be no excessive health risks, to which we agreed. We involved you in these discussions with Genentech, and you have already seen the information we developed. Enclosed is a copy of the package we presented to Genentech, containing (a) BioMed Realty cover memo, (b) Site Logistics and Demolition Summary, (c) Proposed Construction, and (d) Sensitive Receptors Air Quality and Noise

Technical Analysis prepared by Environ. We suggest that the measures Environ recommends be incorporated in the final EIR.

Climate Action Plan Compliance: We have been reviewing the CAP. Its analysis starts with an inventory of 2005 greenhouse gas emissions as the baseline.[1] The CAP then projects what emissions would be in 2020, factoring in the effects of emission reduction programs that had been enacted or implemented in California as of the date the analysis was performed, in what it calls the "Adjusted Business As Usual" (ABAU) scenario.[2] The CAP sets target of reducing GHG emissions to 15% below the 2005 baseline emissions, by 2020.[3] The CAP then calculates how to reduce the ABAU projected emissions down to the target levels. It states a number of measures – many of which are to be imposed upon new development as you noted in October – designed to reduce the ABAU emissions down to the levels necessary to achieve the target.

We acknowledge that the project will be subject to a condition of approval requiring compliance with applicable CAP measures. We request that the condition be worded in such a way that it achieves CAP goals while also recognizing that changes in laws and regulations will result in the project automatically complying with many of the requirements.

We make this request to ensure the project gets credit for reducing emissions below the CAP's ABAU projections when doing so is required by current laws or regulations. For example, the CAP models ABAU building electricity use based upon the 2008 Title 24 energy standards.[4] Therefore, when the CAP states options for reducing or offsetting "50% of modeled building electricity needs[5]," it is speaking of a 50% reduction below the energy demand that would result from construction under the 2008 Energy Code. As you know, much stricter energy-saving requirements were imposed by adoption of the 2013 Energy Code, and even stricter requirements are anticipated shortly.[6] Accordingly, 475 Eccles will achieve some of the reductions below the CAP's modeled building electricity needs merely by complying with current laws and regulations.

In your October 22, 2014 email, you listed the following measures as being applicable to the project:

- Measure 2.1, Action 5 (provide conduit for future electric vehicle charging installations);
- Measure 3.4, Action 1 (encourage high-albedo surfaces, as identified in voluntary CALGreen standards);

---

[1] CAP, p. 27: "The inventory presents GHGs from community-wide activities in the calendar year 2005."
[2] CAP, p. 31: "The adjusted business-as-usual (ABAU) forecast includes a number of reduction programs implemented by the State of California . . ."
[3] CAP, p. 32: "The community reduction target is 15% below baseline (2005) emissions by 2020."
[4] CAP, p. 31: "The energy reductions quantified in the [ABAU] forecast are the mandatory improvements over the 2005 Title 24 code that were established by a 2008 update."
[5] CAP, Measure 4.1, Action 2, on page 55 contains the language quoted in the text.
[6] The 2013 Standards went into effect July 1, 2014. http://www.energy.ca.gov/title24/2013standards/ See http://www.energy.ca.gov/title24/2016standards/ for information about the proposed 2016 standards.

- Measure 4.1, Action 2 (Alternative Energy Facilities, referencing the 50% reduction or offset in modeled building electricity demand, or CALGreen Tier 2 to exceed mandatory efficiency requirements by 20% or more);
- Measure 4.1, Action 3 (install conduit to accommodate wiring for solar); and
- Measure 6.1, Action 2 (Water Demand Reduction, and referencing the Water Efficient Landscape Ordinance).

Of these, only the requirements related to modeled building electricity use, CALGreen Tier 2 requirements and the Water Efficient Landscape Ordinance requirements seem dependent upon the version of regulations that were used in the CAP's ABAU projections. We accordingly suggest the following condition language:

> Comply with applicable Climate Action Plan requirements (Measure 2.1, Action 5; Measure 3.4, Action 1; Measure 4.1, Action 2; Measure 4.1, Action 3; and Measure 6.1, Action 2), using the modeled building electricity use under the 2008 Energy Code, CALGreen Tier 2 requirements, and Water Efficient Landscape Ordinance requirements that were used in the CAP for the Adjusted Business as Usual (ABAU) scenario.

Thank you for your attention to these matters

Best Regards,

Curtis Bain
Senior Project Manager

Enclosures:

BioMed Realty 475 Eccles Demolition and Construction Memo, September 06, 2013
475 Eccles Site Logistics and Demolition Summary, July 29, 2013
475 Eccles Proposed Construction, Attachment 2
Sensitive Receptors Air Quality and Noise Technical Analysis, Environ, August 28, 2013

cc: Salil Payappilly, BioMed Realty
Marie Cooper, Perkins Coie
Jose Cotto, CAS Architects

BioMed Realty, L.P.

17190 Bernardo Center Drive • San Diego, California 92128
Phone: (858) 485-9840 • Facsimile: (858) 485-9843

475 Eccles Demolition and Construction
September 6, 2013

BioMed Realty is planning to demolish the building at 475 Eccles and construct a new life science campus consisting of two buildings that together would comprise 262,287 square feet, a five-level parking structure and surface parking. This report documents the analysis that indicates there will be no significant increase in health risks to the children at the Genetech Daycare Center located at 850 Gateway Boulevard, and no significant noise impacts. This report also provides general information about the project that parents may find useful.

Demolition and Construction Plans

Demolition of the 475 Eccles building is projected to occur over a four-week period in the Fall of 2013. We then anticipate a lull at this site of several years, during which time we will be conducting demolition and construction of another project at 800 and 1000 Gateway Boulevard.[1]. Our estimate for construction at 475 Eccles is that it will start in the Fall of 2016, and continue for approximately two years.

The details of the demolition and construction are contained in the attached site logistics plan (Attachment 1). Construction vehicles will access the site from Eccles Avenue, and the truck route is along Eccles as well. This arrangement puts the construction traffic on the opposite side of the construction site from the Genentech daycare facility. The new buildings that are proposed are depicted in Attachment 2.

Health Risk Assessment

BioMed had a Health Risk Assessment performed by ENVIRON, one of the most respect air quality firms in California. The report that resulted from this analysis is attached (Attachment 3). This report confirms that no significant increases in health risks are projected for the Eccles project. The study used conservative assumptions (summarized in items 1 – 7 below) and determined that the measures BioMed is planning to implement will ensure there are no significant health risk impacts.

1. The analysis assumes that children are at the daycare for 12 hours per day for 245 weekdays per year, and therefore assumes each child is exposed to the full extent of emissions. We understand that many children are present for less time.

[1] The demolition and construction work we intend to perform for 800 and 1000 Gateway is addressed in a separate report. Neither the demolition or construction periods of the two projects are expected to overlap, which will help ensure that the daycare children do not experience emissions from both projects at once.

2. The analysis assumes that a child would arrive at the daycare center at the age of 6 weeks and stay continuously until age 6. Two scenarios were analyzed; one captured the longest projected exposure such a child might face (an infant entering daycare at the start of demolition in Fall 2013 staying through age 4½) , and the second captured the most intense level of projected emissions (an infant entering daycare at the start of construction and staying through the projected 24-month construction period, with all construction emissions concentrated into that period).

3. ENVIRON assumed all children stayed outside all day. We understand that, though windows and doors are often kept open at the daycare center, the children are in fact inside for several hours during the day, which would reduce exposure levels.

4. The analysis employs an air dispersion model recommended by the U.S. Environmental Protection Agency, with meteorological data collected at the San Francisco International Airport. This model is designed to be health protective, i.e., it predicts a conservatively high level of concentrations of pollutants at the daycare.

5. The analysis assumes that demolition and construction activities would occupy a full eight-hour work day, five days a week, without accounting for the short days and holiday breaks that are common in the construction industry.

6. ENVIRON used data from the actual equipment and practices BioMed's demolition contractor will use for the demolition phase and similar equipment we intend to require our contractors to use for the construction phase, rather than allowing use of more common, but older and more polluting equipment or engines.

7. The analysis is based on data regarding the amount of onsite idling time that is typical for construction vehicles statewide, though we intend to prevent onsite idling to the maximum extend feasible for all onsite engines for on-road equipment. (As noted below, BioMed intends to limit off-road equipment located on site to 2-minute idling times, and that 2-minute idling limitation was incorporated into the analysis.)

Even with these conservative (i.e., health protective) assumptions, the analysis demonstrates that the Eccles project is not projected to create significant health risk increases. This is due in large part to the protective measures we intend to employ. These measures are as follows:

- Compliance with all of the Bay Area Air Quality Management District's recommended construction mitigation measures, which are set forth in Appendix D of ENVIRON's report.

- Limit all off-road construction equipment to 2 minute idling while onsite.

- Electrify all generators and air compressors

- Model Year 2007 or better onroad trucks

- Propane or LNG-fueled boom and scissor lifts

- Tier 2 or better for 20% of horsepower-hours of off road diesel equipment during construction; for 65% of horsepower-hours during demolition

- During demolition, no onsite grinding, crushing or shredding of asphalt, concrete or debris

Should BioMed decide to use different measures in the future, we are proposing to the City that we be required to demonstrate, to the satisfaction of the City, that the different measures also result in no significant increase in health risks.

BioMed will provide to Genentech the equipment list for demolition. BioMed will provide an equipment list for construction when such list is available.

Noise

ENVIRON also studied the impact of construction noise on the children at the Genentech Daycare Center. The report concludes that construction noise from the demolition and redevelopment Project at 475 Eccles Avenue is expected to comply with the noise limits established by the City of South San Francisco Municipal Code. BioMed will identify a disturbance coordinator to Genentech before commencing work.

Kevin M. Simonsen
Vice President, Real Estate Legal

Attachment 1: Site Logistics Plan

Attachment 2: Diagram of New Buildings

Attachment 3: ENVIRON Report

475 Eccles Site Logistics & Demolition Summary – 7/29/2013

Restrictions:

The restrictions identified in the Environ Sensitive Receptors Air Quality and Noise Technical Analysis will be adhered to throughout the demolition phase.

Schedule:

The demolition activities will be completed in approximately 4 weeks

Mobilization:

The mobilization consists of the delivery of work trucks, demolition equipment and other small tools required for the demolition of the building.

Demolition Equipment includes:

- PC 360 2012 tier 4 hydraulic excavator
- PC 450 2011 tier 3 hydraulic excavator
- PC 600 2006 tier 3 hydraulic excavator
- 863 Bobcat skid steer tier 2 loader
- 2,000 gal. water truck 2006 tier 2

Site Logistics and Management:

The demolition of the building will begin at approximately 120' from the southeast building corner as depicted in the attached Site Logistics Plan. The demolition of the building structure will generally be performed on the existing concrete floor slab. The east parking lot will be used for incoming and outgoing vehicular traffic.

Demolition:

The demolition contractor will remove sections of the roof structure first and then will remove sections of the adjacent concrete walls.

Once sections of the building have been demolished and are on the concrete floor slab, the components will be sorted. The concrete walls will be broken down as minimally required to remove the reinforcing bars and miscellaneous metals. The sorted materials will be loaded onto hauling trucks. The hauling trucks will drive up on to the concrete floor slab for loading.

Watering of the building structure and demolished components will continue throughout the demolition and will adhere to the BAAQMD requirements.

475 Eccles Logistics Plan
7/29/13

Area Site Plan

475 Eccles Logistics Plan
7/29/13

475 Eccles Ave - Detailed Site Plan

ATTACHMENT 2

475 ECCLES PROPOSED CONSTRUCTION

FIGURE 3.3 PROPOSED CONDITIONS

NEW CONSTRUCTION

BUILDINGS

The Project would construct two buildings to serve the life science industry. Both buildings would be four stories high. The combined gross floor area would be up to 262,287 square feet, resulting in a floor area ratio of approximately 1.0.

Sensitive Receptors Air Quality and Noise Technical Analysis
475 Eccles Avenue, South San Francisco, California

Prepared for:
Perkins Coie, LLP
San Francisco, California

Prepared by:
ENVIRON International Corporation
San Francisco, California

Date:
August 28, 2013

Project Number:
03-32377A

ENVIRON

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Acronyms and Abbreviations

$\mu g/m^3$:	microgram per meter cubed
ARB:	(California) Air Resources Board
ASF:	Age Sensitivity Factor
AT:	Averaging Time
BAAQMD:	Bay Area Air Quality Management District
BMR:	BioMed Realty
C_i:	chemical concentration in air for chemical *i*
Cal/EPA:	California Environmental Protection Agency
CalEEMod:	California Emissions Estimator Model
CEQA:	California Environmental Quality Act
CNEL:	Community Noise Exposure Level
CPF:	cancer potency factor
CRAF:	cancer risk adjustment factors
days/year:	days per year
dBA:	decibel, A-weighted
DBR:	Daily Breathing Rate
DPM:	diesel particulate matter
Draft EIR:	Draft Environmental Impact Report
ED:	Exposure Duration
EF:	Exposure Frequency
ET:	Exposure Time
FHWA:	Federal Highway Administration
g/hp-hr:	gram per horsepower-hour
g/mile:	gram per mile
g/s:	gram per second
HRA:	Health Risk Assessment
IF_{inh}:	Intake Factor, Inhalation
L/kg-day:	liter per kilogram-day
lb:	pound
LCFS:	Low Carbon Fuel Standard
m:	meter

m^3/kg-day:	meters cubed per kilogram-day
m^3/L:	meters cubed per liter
mg/µg:	milligram per microgram
miles/day:	miles per day
mph:	miles per hour
OEHHA:	Office of Environmental Health Hazard Assessment
RCNM:	Roadway Construction Noise Model
SCAQMD:	South Coast Air Quality Management District
SSFMC:	City of South San Francisco Municipal Code
tons/day:	tons per day
TSD:	Technical Support Document
USEPA:	United States Environmental Protection Agency
g/veh-hr:	grams per vehicle-hour
VMT:	vehicle miles traveled

Executive Summary

ENVIRON International Corporation (ENVIRON) prepared a Health Risk Assessment (HRA) to evaluate risk and hazard impacts posed by the construction of the 475 Eccles Avenue Project to sensitive receptors in the area, including the daycare child receptors at Genentech's Daycare at 850 Gateway Boulevard in South San Francisco, California. The objective of this technical report is to determine whether the construction activity will generate significant air quality, health risk, or noise impacts to children attending the daycare. This report demonstrates that certain restrictions BMR is planning to implement will ensure there are no significant increases in health risks as a result of emissions from the Eccles Project, and notes that if BMR substitutes different restrictions in the future, it must demonstrate to the City that impacts remain less than significant.

A likely schedule for the 475 Eccles Project has been established. Buildings are scheduled to be demolished consecutively in the late summer of 2013, with no overlap in subsequent construction periods.

ENVIRON also conducted an evaluation of the 800 and 1000 Gateway Boulevard Demolition and Construction Project. This and the 475 Eccles Project are not anticipated to overlap during any construction or demolition period.[1] Accordingly, the analysis was conducted and thresholds were applied to each Project individually, based on its respective schedule.

How was the analysis conducted?

This HRA is based on methodologies that are consistent with Bay Area Air Quality Management District (BAAQMD) methods, California Environmental Protection Agency's (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA) Hot Spot Guidance and United States Environmental Protection Agency (USEPA) recommendations. Based upon this guidance, we used the latest California Air Resources Board (ARB) and USEPA computer models and OEHHA risk assessment and toxicity information to conservatively estimate the excess lifetime cancer risks and noncancer hazard indices (HIs) and $PM_{2.5}$ (particulate matter less than 2.5 microns in aerodynamic diameter) concentrations that might be caused by the Project, as experienced by the sensitive receptors at Genentech's 850 Gateway Boulevard daycare center, as well as other nearby sensitive receptors.

This modeling is state-of-the-art and is a more accurate and realistic approach to assess the Project's impact on the daycare center than real-time measurements could be, since it is not feasible to measure all emissions caused by a project, nor to distinguish which emissions come from any given source among emissions that would be included in measurements taken at the daycare center. Considering the conservative assumptions built into the modeling and analysis, the impacts predicted are expected to be higher than what is actually experienced at the

[1] Demolition for both Eccles and GOP is projected to occur in Q3 of 2013, but the actual days within that quarter that each building is being demolished are not projected to overlap.

daycare. In fact, the BAAQMD describes the methods as "conservative, meaning that the real risks from the source may be lower than the calculations, but it is unlikely they will be higher."[2]

The results of the HRA were compared with the following May 2011 BAAQMD significance thresholds, which are meant to be health protective for sensitive receptors such as infants and children:[3]

- An increase in excess lifetime cancer risk level of greater than 10 in one million;
- An increase in noncancer (i.e., chronic or acute) hazard indices greater than 1.0; or
- An increase in the annual average $PM_{2.5}$ of greater than 0.3 $\mu g/m^3$

In accordance with BAAQMD CEQA guidelines, this HRA evaluates the impacts of construction emissions from demolition and reconstruction of the 475 Eccles Project on the onsite sensitive receptors (i.e., children attending daycare). This includes all off-road equipment such as excavators, graders, and cranes, as well as on-road trucks, including hauling debris or material to/from the site and water trucks for fugitive dust control. Idling of equipment onsite or queuing to get onsite was also evaluated.

Conservative Aspects of the Analysis

This analysis is based upon several conservative assumptions. We understand that circumstances that would produce a lower level of impacts are in fact more likely to occur, but used these assumptions to ensure a protective level of analysis.

First, we assumed the children are at the daycare for 12 hours per day for 245 days per year, and therefore assumed each child is exposed to the full extent of emissions. We have been advised that in fact many children are not present the full twelve hours of operation.

Second, we incorporated breathing rate and cancer risk adjustment factors (CRAFs), as specified by BAAQMD, based on the longest duration a child could stay at the daycare center. We assumed that a child would arrive at the daycare center at the age of 6 weeks and stay continuously until age 6. We understand that it is more common for children to leave the center after a couple of years. To ensure we captured all aspects of the exposure such a child would experience, we analyzed two scenarios. The first scenario captures the longest projected exposure and the second captures the most intense level of projected emissions.

- For the first scenario, we assumed a child arrived at the daycare center at age 6 weeks on the first day of demolition and stayed at the daycare center continuously until the projected end of construction, 4.5 years later. The first scenario does not represent a projection of the construction schedule (since BMR is projecting a multi-year break

[2] http://www.baaqmd.gov/Divisions/Engineering/Air-Toxics/Frequently-Asked-Questions.aspx (accessed July 2013)
[3] A March 2012 Alameda County Superior Court judgment determined that the BAAQMD had failed to evaluate the environmental impacts of the land use development patterns that would result from adoption of the thresholds, and ordered the thresholds set aside. That judgment is currently on appeal; however, the thresholds are backed by a comprehensive study and analysis as documented in Appendix D to the May 2011 BAAQMD CEQA Air Quality Guidelines and are used by the City of South San Francisco in evaluating the 475 Eccles Project.

between demolition and construction) but was analyzed to ensure that the longest exposure period was analyzed. For this first scenario, construction emissions are spread out over a 4.5-year period.

- For the second scenario we assumed a child arrived at the center in the third quarter of 2016 (the projected start of construction) and was exposed during an approximately 24-month period of construction, which is the projected construction duration. This second scenario represents exposure to construction emissions concentrated within a 24-month period.

Third, as a conservative approach, the HRA assumes outdoor exposure throughout the site, with no attenuation for lower pollutant concentrations when children are inside. As such, the children are assumed to be effectively outside all the time. We understand that, though windows and doors are often kept open, the children are in fact inside for several hours during the day, which would reduce exposure levels.

Fourth, we used the USEPA-recommended air dispersion model (AERMOD) with meteorological data collected at the San Francisco International Airport. Using this model with long term wind data collected at a station close to the Project allows us to predict conservative (i.e., higher than expected) concentrations of pollutants at the daycare as USEPA has designed the model to be conservative in predicting ambient air concentrations. However, because the impacts of exposure depend upon continuous, long-term exposure, using long term wind data ensures that all exposure is accounted for over the entire period of exposure, without artificially decreasing (or increasing) exposure due to wind conditions lasting only a few hours or days.

Fifth, we assumed construction operates 8 hours per day, five days per week. We understand that in fact construction may operate fewer hours.

Sixth, we input data from the actual equipment and practices BMR's demolition contractor will use for the demolition phase and the equipment BMR's usual contractors have indicated they will use for the redevelopment phase. We understand that BMR will require use of this or similar equipment when it solicits proposals for the redevelopment. This ensures that our analysis cannot be undercut by inexpensive contractors who use older, more polluting equipment or engines.

In other words, we input default assumptions as modified by the following:

1. Compliance with all BAAQMD recommended construction mitigation measures, which are set forth in Appendix D
2. Limit all offroad trucks to 2 minutes of idling while onsite
3. Electrify all generators
4. Model Year 2007 or better onroad trucks
5. Tier 2 or better for 65% of horsepower-hours of off road diesel equipment during demolition activities and 20% of horsepower-hours during construction activities

6. During demolition, no onsite grinding, crushing or shredding of asphalt, concrete or debris

BMR may propose different means of protecting against health risks, in which case BMR will demonstrate to the satisfaction of the City that the different means also result in no significant impacts.

Seventh, for our analysis, we input standard data regarding the time construction vehicles typically idle their engines onsite. However, we understand BMR will be implementing plans to prevent onsite engine idling to the maximum extent feasible. Off-road construction equipment at the Site will be subject to a 2-minute idling limit.

Summary of Results

With these health-protective measures, this analysis shows no exceedance of health risk thresholds selected by the City of South San Francisco at the 850 Gateway Boulevard Daycare Center, and any other nearby sensitive receptors, for cancer risk, $PM_{2.5}$ concentration, and chronic HI.

While noise from construction activity is not regulated at off-site receptors such as the Daycare at 850 Gateway Boulevard, a noise assessment shows that noise levels at the Daycare Center due to construction at 475 Eccles Avenue would be below the Noise Level Standards established for the Gateway Specific Plan District. Construction noise from the redevelopment Project at 475 Eccles Avenue is expected to comply with the noise limits established by the City of South San Francisco Municipal Code.

The construction plan represented in this report reflects BMR's current best estimate of anticipated demolition and construction activities. As Project plans for future activities are further delineated, BMR may identify other means by which to meet these standards, in which case BMR would demonstrate that impacts remain less than significant.

1 Introduction

ENVIRON International Corporation (ENVIRON) has conducted an analysis of local risk and hazard impacts associated with the proposed development of 457 Eccles Avenue in South San Francisco, CA ("Project" or "Site"). This analysis shadows the Health Risk Assessment (HRA) performed in the 475 Eccles Avenue Draft Environmental Impact Report (DEIR) (Allison Knapp Wollam Consulting 2012), but includes additional sensitive receptors.

This Sensitive Receptors Air Quality Technical Analysis follows the methods described in Appendix A-1 to the DEIR. This analysis aims to be conservative, that is, health protective, so that potential risks are not underestimated. In addition to using the methods of the DEIR, this analysis follows guidance from the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Guidelines (BAAQMD 2012), the California Air Resources Board (ARB), the Office of Environmental Health Hazard Assessment (OEHHA), and the United States Environmental Protection Agency (USEPA).

1.1 Project Understanding

The Project involves demolition of the existing building and construction of a new structure on an approximately 6.1-acre site in the City of South San Francisco, east of US Route 101. The Project sponsor is BioMed Realty (BMR). Demolition of the project is scheduled to begin in the summer of 2013. The start date for construction is not expected to be until the third quarter of 2016. Because of the delay in construction start date, the construction was broken up into phases for the purpose of this health risk assessment.

The construction plan represented in this report reflects BMR's current best estimate of anticipated demolition and construction activities. As Project plans for future activities are further delineated, BMR may identify other means by which to meet these standards, in which case BMR would prepare a revised report demonstrating an equivalent level of protections.

2 Modeling Methodology

This Sensitive Receptors Air Quality Technical Analysis follows the methods of the Project DEIR. The same air dispersion model, AERMOD, was selected, and other parameters were selected to match the modeling performed for the DEIR, as shown in Table 1. AERMOD was run with regulatory default options selected.

Table 1: Model Selection and Options

Parameter	Value Selected	Description
Air dispersion model	AERMOD version 12060	Consistent with Project DEIR
Meteorological data pre-processor	AERMET version 06341	As processed by Allison Knapp Wollam Consulting (2012)
Terrain processor	AERMAP version 11103	Consistent with Project DEIR and USEPA guidance (2005)
Land use type	Rural (no urban area)	Consistent with Project DEIR
Averaging period	Annual	Consistent with Project DEIR
Receptor height	1.8 meters (m)	Consistent with Project DEIR
Building downwash	None	Only volume sources were modeled, so building downwash was not considered
Meteorological data years	2005 through 2009	Consistent with Project DEIR
Meteorological surface data	San Francisco International Airport	Consistent with Project DEIR
Meteorological upper air data	Oakland International Airport	Consistent with Project DEIR

The X/Q ("chi over Q") method of applying emission rates on the post-processing was used for modeling. This means dispersion modeling was conducted using a unit emissions rate of 1 gram per second (g/s) for each emission source.

Annual average air concentrations were estimated using the annual dispersion factors calculated from the model and multiplying them by the respective annual average emissions.

The following equation was used to estimate the concentrations:

$$\text{Average Concentration} = \left(Q_{annual} \times \left(\frac{\chi}{Q} \right)_{annual} \right)_i$$

where:

Q = emission rate of pollutant (g/s)

χ = modeled concentration of pollutant ($\mu g/m^3$)

$\left(\frac{\chi}{Q}\right)$ = dispersion factor ($\mu g/m^3$)/(g/s)

i = stack source

2.1 Source Parameters

Project activities were divided into construction and on-road sources for modeling. Construction sources were modeled as volume sources distributed over the Project Site, with the parameters shown in Table 2. Table 2 also shows the volume source parameters used for on-road activity associated with the Project.

Figure 1 shows the sources modeled. As in the DEIR, the construction site is modeled, as well as US Route 101 in the vicinity of the Project.

Table 2: Source Parameters		
Parameter	**Value Selected**	**Description**
Construction Volume Sources		
Release height	3.05 m	Consistent with Project DEIR
Initial lateral dimension	4.65 m	Length of a 10-m by 10-m volume source divided by 2.15, as per USEPA guidance (USEPA 2004)
Initial vertical dimension	4.15 m	Consistent with Project DEIR
Hours of operation	8 hours daily corresponding to a daytime shift	Based on construction schedule provided by Project sponsor
Haul Truck, Vendor, and Employee Trip Line Sources		
Release height	5 m	SCAQMD 2008
Initial lateral dimension	5.58 m	Consistent with Project DEIR modeling files Length of volume source divided by 2.15, as per USEPA guidance (USEPA 2004). The length of the volume source is based on the width of the roadway.
Initial vertical dimension	1.42 m	Consistent with Project DEIR modeling files
Hours of operation	8 hours daily corresponding to a daytime shift	Based on construction schedule provided by Project sponsor

2.2 Emissions

As explained in the Hazards Identification section of Appendix A-1 of the DEIR, toxic air contaminant emissions identified for the Project arise from "Off-road equipment and haul trucks during construction activities" and "Employees and delivery operations along nearby roadways and at the facility" (Allison Knapp Wollam Consulting 2012).

Consistent with the DEIR, only emissions of diesel particulate matter (DPM) are modeled. Emissions were calculated separately for off-road construction equipment and on-road vehicles as follows. All demolition and construction was presumed to comply with BAAQMD measures, which are set forth in Appendix D.

2.2.1 Construction Equipment Emissions

Demolition equipment emissions were estimated from a demolition equipment list provided by BMR and emission factors from USEPA Tier Standards for nonroad compression-ignition engines (USEPA 2013) and ARB Regulation for In-Use Off-Road Diesel Vehicles (ARB 2007). For construction equipment of unknown tier, average emission factors from ARB's 2011 Off-Road Equipment Model (OFFROAD2011) were used. Instead of diesel generator sets, all electric equipment was assumed to be powered with grid electricity. Load factors for each piece

of equipment are based on the default load factor in the OFFROAD2011 model for in-use off-road diesel equipment (ARB 2011b).

At least 20% of total horsepower-hours for non-demolition related construction equipment will meet the Tier 2 standard for its engine size, as confirmed by BMR. As a construction contractor has not yet been chosen, as a conservative measure, we assumed all other equipment are represented by default emission factors from OFFROAD2011. In the demolition fleet, 65% of all equipment horsepower-hours meet at least the Tier 2 engine standards, so this assumption is reasonable for non-demolition construction activity. Additionally, the default OFFROAD2011 emissions factors are representative of the overall offroad equipment fleet in California, not just the construction fleet. Due to their high usage, most construction equipment is replaced more frequently that non-construction equipment, and therefore is expected to be cleaner than the default, state-wide, fleet.

In all phases of construction, off-road equipment will not idle for longer than 2 minutes, as confirmed by BMR. Due to the more stringent idling time limitation, a 45% reduction in $PM_{2.5}$ emissions was taken in to account, based on the CEQA Guidelines (BAAQMD 2012).

Onsite water truck emissions during the demolition phase were estimated assuming a medium-heavy duty truck (Category T6 in EMFAC2011) operating at an assumed slow speed of 5 miles per hour (mph), and running exhaust emission factors from ARB's Emission FACtor model (EMFAC2011 [ARB 2011c]).

2.2.2 On-Road Equipment Emissions

The on-road sources modeled are haul and vendor trucks.

On-road hauling truck emissions were calculated using the total number of trucks estimated by J.M.O'Neill Inc., demolition contractors to BMR, emission factors from EMFAC2011, and an assumed 20-mile one-way trip length (based on the South Coast Air Quality Management District California Emissions Estimator Model [CalEEMod™] default haul truck trip lengths). The emission factors for running emissions for criteria pollutants were generated with the current version of the EMFAC2011, released on September 30, 2011, and updated in January 2013. This version reflects the emissions benefits of ARB's recent rulemakings including on-road diesel fleet rules, the Pavley Clean Car Standards, and the Low Carbon Fuel Standard (LCFS). The model also includes updated information on California's car and truck fleets and travel activity.

Vendor truck emissions were estimated based on the CalEEMod-generated total number of trips, emission factors from EMFAC2011, and an assumed 7.3-mile one-way trip length (based on the CalEEMod default trip length).

Hauling and vendor trip idling emission factors for criteria pollutants were obtained from the EMFAC2011 Idling Emission Rates database (ARB 2011d). Idling emissions were estimated assuming 5 minutes of onsite idling time per round trip. Trucks visiting the Site will be subject to the idling limits in the diesel ATCM (California Code of Regulations Title 13 §2485). Diesel-fired on-road equipment will not idle for longer than 5 minutes. The default CalEEMod fleet mix was

assumed for vendor, and hauling trucks. In addition, it was assumed all hauling and vendor trucks were diesel-fueled.

Running emissions reported by the model in units of grams of pollutant emitted per vehicle mile traveled (VMT) were used along with trip length to estimate Project running emissions. Idling emissions reported by the model in units of grams of pollutant emitted per vehicle hour were used along with the total idling time across all vehicle trips to estimate Project idling emissions. The methodology used to calculate emissions is presented in Table 3.

Table 3: Construction Equipment Emissions Calculations Methodology		
Source Type	**Methodology and Formula**	**Reference**
Off-Road Construction Equipment	Ec = Σ(EFc * HP * LF * Hr * C) Where: Ec: off-road equipment exhaust emissions (lb) EFc: emission factor (g/hp-hr) from ARB/USEPA Engine standards or OFFROAD2011 emission factors used HP: equipment horsepower provided by BMR or CalEEMod default value LF: equipment load factor from OFFROAD2011 Hr: equipment hours C: unit conversion factor	ARB/USEPA Engine Standards (ARB 2013) OFFROAD2011 (ARB 2011b)
Construction On-Road Mobile Sources Exhaust – Running[1]	ER = Σ(EFR * VMT * C), where VMT = Trip Length * Trip Number Where: ER: running exhaust emissions (lb) EFR[1]: running emission factor (g/mile) from EMFAC2011 VMT: vehicle miles traveled C: unit conversion factor	EMFAC2011 (ARB 2011c)
Construction On-Road Mobile Sources Exhaust – Idling[2]	EI = Σ(EFI * Idling Time * Trip Number * C) Where: EI: vehicle idling emissions (lb) EFI: vehicle idling emission factor (g/veh-hr) from EMFAC2011 C: unit conversion factor	EMFAC2011 (ARB 2011d)

Table 3: Construction Equipment Emissions Calculations Methodology

Notes:

[1] For hauling diesel trucks: EFR = EFHHDT, where EFHHDT is the emission factor from EMFAC2011 for heavy-heavy duty trucks (T7 single construction in EMFAC2011), in g/mile.

For vendor diesel trucks: EFR = EFMHDT, where EFMHDT is a calculated average emission factor from EMFAC2011 assuming a medium-heavy duty fleet mix (i.e. assuming 50% T6 and 50% T7 single construction in EMFAC2011), in g/mile. The calculation involves the following assumptions:

a. All material transporting and soil hauling trucks are heavy-heavy duty trucks. All vendor trucks are medium-heavy duty, the default CalEEMod fleet mix for vendor trips.

b. Trip Length: The one-way trip length is 20 miles for hauling trips and 7.3 miles for vendor trips, the default CalEEMod value.

c. Trip Number: J.M.O'Neill Inc., demolition contractor to BMR, provided the number of trips for haul trucks. The number of vendor trips is calculated using CalEEMod defaults.

[2] For hauling diesel trucks: EFI = EFHHDT, where EFHHDT is the emission factor from EMFAC2011 for heavy-heavy duty trucks (T7 single construction in EMFAC2011), in g/veh-hr.

For vendor diesel trucks: EFI = EFMHDT, where EFMHDT is a calculated average emission factor from EMFAC2011 assuming a medium-heavy duty fleet mix (i.e. assuming 50% T6 and 50% T7 single construction in EMFAC2011), in g/veh-hr. The calculation involves the following assumptions:

a. All material transporting and soil hauling trucks are heavy-heavy duty trucks. All vendor trucks are medium-heavy duty, the default CalEEMod fleet mix for vendor trips.

b. Idling Time: Assuming 5 minutes of onsite idling time per roundtrip.

c. Trip Number: J.M.O'Neill Inc., demolition contractor to BMR, provided the number of trips for haul trucks. The number of vendor trips is calculated using CalEEMod defaults.

2.2.3 Construction Worker Commuting Vehicles

The number of trips by workers was estimated based on CalEEMod defaults. Worker trips are assumed to be in gasoline-powered vehicles only. Based on current Project understanding, if Project-generated worker trips were compared to traffic along surrounding roadways, the corresponding health impacts would be *de minimis*. Therefore, health risk from worker trips was not evaluated in this analysis.

2.3 Receptor Selection

In order to evaluate health impacts to offsite receptors, ENVIRON identified receptors at the locations of surrounding sensitive populations, including any adult daycare centers, child care centers, infant centers, and foster family agencies. A grid of potential receptors at the Genentech Daycare Center, located at 850 Gateway Boulevard, as well as other sensitive receptors were also modeled within the "zone of influence." Boundary and grid receptors at the Daycare Center were modeled with 5 m spacing. A default breathing height of 1.8 meters was used for ground-floor receptors, consistent with the analysis presented in the DEIR. As discussed previously, average annual dispersion factors were estimated for each receptor locations. Modeled receptors are shown in Figures 2 and 3. The types of receptors in the area are discussed in more detail in Section 3.1.

The closest sensitive receptor to the Project is the daycare center located at 850 Gateway Boulevard in South San Francisco, California. This is the maximally affected sensitive receptor in this study. Other identified sensitive receptors were found to have impacts from the Project that are lower than the impacts at the 850 Gateway Boulevard Daycare Center.

2.4 Modeling Adjustment Factors

Cal/EPA (2003) recommends applying an adjustment factor to the annual average concentration modeled assuming continuous emissions (i.e., 24 hours per day, 7 days per week), when the actual emissions are less than 24 hours per day and exposures are concurrent with construction activities occurring at the Project. The modeling adjustment factors are discussed below.

Residents are assumed to be exposed to construction emissions 24 hours per day, seven days per week. This assumption is consistent with the modeled annual average air concentration (24 hours per day, 7 days per week). Thus, the annual average concentration need not be adjusted.

The modeled construction impacts were annualized over 24 hours per day, seven days per week. To account for a daycare center operation schedule of 12 hours per day, five days per week ([24 hours/12 hours]*[7 days/5 days]), an adjustment factor of 2.8 was applied to the annual average modeled concentration used in the evaluation of a daycare child. These concentrations represent the theoretical maximum average concentrations over the operating period to which the offsite daycare children might be exposed. The exposure point concentrations for the daycare child receptors are calculated using the following equation:

$$C_i = C_{i,annual} \times MAF$$

Where:

C	=	Exposure point concentration of chemical i ($\mu g/m^3$)
$C_{i,annual}$	=	Annual average concentration of chemical i ($\mu g/m^3$)
MAF	=	Modeling adjustment factor (unitless)

3 Risk Characterization Methods

The following sections discuss in detail the various components required to conduct the HRA.

3.1 Exposure Assessment

Potentially Exposed Populations: This evaluation conservatively considered the following receptor populations:

- Off-site adult resident and child resident
- Off-site daycare child

Sensitive receptors within the "zone of influence" are shown in Figures 2 and 3. The closest residential receptors (located across 101 from the Project) were evaluated in the Draft EIR. This analysis accordingly focusses on daycare attendees who are closer. The closest sensitive receptor to the Project is the Genentech daycare center located at 850 Gateway Boulevard in South San Francisco, California. This is the maximally affected sensitive receptor in this study. Thus, daycare child is identified as the potential exposure population at this location. All other nearby sensitive receptors are also daycare centers. Because the Genentech daycare center is the maximally affected sensitive receptor by the Project of all sensitive receptors in this analysis, this analysis concludes that if impacts to the Genentech daycare population are less than significant, impacts will be less than significant for sensitive daycare receptors further away.

Two scenarios were considered for children at the 850 Gateway Boulevard daycare center. In the first scenario, a child's exposure to construction activity at 475 Eccles Avenue began with the demolition of the Site, in 2013. In the second scenario, a child's exposure to construction activity at 475 Eccles Avenue began when Project construction begins, in 2016. The results of these scenarios are discussed separately in Section 4.

Exposure Assumptions: The exposure parameters used to estimate excess lifetime cancer risks for all potentially exposed populations for the construction scenario were obtained using risk assessment guidelines from Cal/EPA (2003) and BAAQMD (2010), unless otherwise noted, and are presented in Table 4a for the first scenario and in Table 4b for the second scenario.

Calculation of Intake: The dose estimated for each exposure pathway is a function of the concentration of a chemical and the intake of that chemical. The intake factor for inhalation, IF_{inh}, was calculated as follows:

$$IF_{inh} = \frac{DBR * ET * EF * ED * CF}{AT}$$

Where:

IF_{inh}	=	Intake Factor for Inhalation (m^3/kg-day)
DBR	=	Daily Breathing Rate (L/kg-day)
ET	=	Exposure Time (hours/24 hours)
EF	=	Exposure Frequency (days/year)

ED = Exposure Duration (years)

AT = Averaging Time (days)

CF = Conversion Factor, 0.001 (m^3/L)

The chemical intake or dose is estimated by multiplying the inhalation intake factor, IF_{inh}, by the chemical concentration in air, C_i. When coupled with the chemical concentration, this calculation is mathematically equivalent to the dose algorithm given OEHHA Hot Spots guidance (Cal/EPA 2003).

Table 4a: Exposure Parameters – Scenario 1

Exposure Parameter	Units	Adult Resident	Child Resident	Day Care Child
Daily Breathing Rate (DBR) [1]	[L/kg-day]	302	581	581
Exposure Time (ET) [2]	[hours/24 hours]	24	24	12
Exposure Frequency (EF) [3]	[days/year]	350	350	245
Exposure Duration (ED) [4]	[years]	4.5	4.5	4.5
Averaging Time (AT)	[days]	25550	25550	25550
Intake Factor, Inhalation (IF_{inh})	[m^3/kg-day]	0.019	0.036	0.013

Equation used:
IFinh = DBR * ET * EF * ED * CF / AT
CF = 0.001 (m^3/L)

Abbreviations:
BAAQMD = Bay Area Air Quality Management District
kg = kilogram
L = Liter
m^3 = cubic meters

Notes:
1. Daily breathing rates reflect default breathing rates from BAAQMD 2010.
2. Exposure times reflect default exposure times for residents from BAAQMD 2010. Based on information provided by the client, the hours of operation for the daycare center are 6:30 am-6:30 pm.
3. Exposure frequencies reflect default exposure frequencies for residents from BAAQMD 2010. The daycare child receptor is assumed to be at the daycare center while the parents are at work; 245 days reflects the default exposure frequency for a worker from BAAQMD 2010.
4. Exposure durations reflect the actual schedule of 4.5 years for demolition plus project construction.

Source:
Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

Table 4b: Exposure Parameters – Scenario 2				
Exposure Parameter	**Units**	**Adult Resident**	**Child Resident**	**Day Care Child**
Daily Breathing Rate (DBR) [1]	[L/kg-day]	302	581	581
Exposure Time (ET) [2]	[hours/24 hours]	24	24	12
Exposure Frequency (EF) [3]	[days/year]	350	350	245
Exposure Duration (ED) [4]	[years]	1.5	1.5	1.5
Averaging Time (AT)	[days]	25550	25550	25550
Intake Factor, Inhalation (IF_{inh})	[m^3/kg-day]	0.0062	0.012	0.0042

Equation used:
IFinh = DBR * ET * EF * ED * CF / AT
CF = 0.001 (m^3/L)

Abbreviations:
BAAQMD = Bay Area Air Quality Management District
kg = kilogram
L = Liter
m^3 = cubic meters

Notes:
1. Daily breathing rates reflect default breathing rates from BAAQMD 2010.
2. Exposure times reflect default exposure times for residents from BAAQMD 2010. Based on information provided by the client, the hours of operation for the daycare center are 6:30 am-6:30 pm.
3. Exposure frequencies reflect default exposure frequencies for residents from BAAQMD 2010. The daycare child receptor is assumed to be at the daycare center while the parents are at work; 245 days reflects the default exposure frequency for a worker from BAAQMD 2010.
4. Exposure durations reflect the actual schedule of 1.5 years for project construction.

Source:
Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

3.2 Toxicity Assessment

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories—cancer and non-cancer endpoints. Toxicity values used to estimate the likelihood of adverse effects occurring in humans at different exposure levels are identified as part of the toxicity assessment component of a risk assessment.

For cancer risk and chronic noncancer calculations, ENVIRON used the toxicity values for DPM which are summarized in Table 5.

Table 5: Carcinogenic and Chronic Noncarcinogenic Toxicity Values			
Analysis	**Chemical**	**Cancer Potency Factor**	**Chronic Reference Exposure Level**
Cancer Risk and Chronic HI	Diesel PM	1.1 $(mg/kg\text{-}day)^{-1}$	5 $\mu g/m^3$

Abbreviations:
[mg/kg-day]-1: per milligram per kilogram-day
µg/m3: micrograms per cubic meter
ARB: Air Resources Board
HI: Hazard Index
OEHHA: Office of Environmental Health Hazard Assessment
PM: Particulate Matter

Source:
California Environmental Protection Agency (Cal/EPA). 2012. OEHHA/ARB Consolidated Table of Approved Risk Assessment Health Values. May 3.

3.3 Cancer Risk Adjustment Factors

The estimated excess lifetime cancer risks were adjusted using the age sensitivity factors (ASFs) recommended in the Cal/EPA OEHHA Technical Support Document (TSD) (Cal/EPA 2009) and the cancer risk adjustment factors (CRAFs) recommended by BAAQMD (2010). This approach accounts for an "anticipated special sensitivity to carcinogens" of infants and children. Cancer risk estimates are weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to two years of age and by a factor of three for exposures that occur from two years through 15 years of age. No weighting factor (i.e., an ASF of one, which is equivalent to no adjustment) is applied to ages 16 to 70 years. Table 6a shows the CRAFs used for adult and child residents and daycare children for a construction period lasting approximately 4.5 years in the first scenario. Table 6b shows the CRAFs used for adult and child residents and daycare children for a construction period lasting approximately 1.5 years in the second scenario.

Table 6a: Cancer Risk Adjustment Factors – Scenario 1		
Receptor	**Cancer Risk Adjustment Factor (CRAF)**	**Note**
Resident Adult	1.0	1, 2
Resident Child	6.5	1, 3
Daycare Child	5.9	1, 4

Notes:
1. Based on BAAQMD 2010.
2. A resident adult is assumed to be 16 years old and above.
3. A resident child is assumed to be exposed from the third trimester of pregnancy to 4.25 years of age.
4. Based on information provided by the client, the daycare center accepts children from 6 weeks to 6 years old. Therefore, CRAF for a daycare child is conservatively estimated assuming exposure occurs from age 6 weeks to 4.6 years old.

Abbreviations:
BAAQMD: Bay Area Air Quality Management District

Sources:
Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

Table 6b: Cancer Risk Adjustment Factors – Scenario 2

Receptor	Cancer Risk Adjustment Factor (CRAF)	Note
Resident Adult	1.0	1, 2
Resident Child	10	1, 3
Daycare Child	10	1, 4

Notes:
1. Based on BAAQMD 2010.
2. A resident adult is assumed to be 16 years old and above.
3. A resident child is assumed to be exposed at some point from the third trimester of pregnancy to two years old.
4. Based on information provided by the client, the daycare center accepts children from 6 weeks to 6 years old. Therefore, CRAF for a daycare child is conservatively estimated assuming exposure occurs at some point from age 6 weeks to two years old.

Abbreviations:
BAAQMD: Bay Area Air Quality Management District

Sources:
Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

3.4 Risk Characterization

Risks and hazards associated with the Project fall into two categories, cancer risks and noncancer hazards. Each of these is discussed separately below.

3.4.1 Estimation of Cancer Risks

Excess lifetime cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF).

The equation used to calculate the potential excess lifetime cancer risk for the inhalation pathway is as follows:

$$Risk_{inh} = C_i \times CF \times IF_{inh} \times CPF \times CRAF$$

Where:

$Risk_{inh}$ = Cancer Risk; the incremental probability of an individual developing cancer as a result of inhalation exposure to a particular potential carcinogen (unitless)

C_i = Annual Average Air Concentration for Chemical i ($\mu g/m^3$)

CF = Conversion Factor (mg/µg)

IF_{inh} = Intake Factor for Inhalation (m^3/kg-day)

CPF_i = Cancer Potency Factor for Chemical i (mg chemical/kg body weight-day)$^{-1}$

CRAF = Caner Risk Adjustment Factor (unitless)

3.4.2 Estimation of Chronic Noncancer Hazard Quotients/Indices

The potential for exposure to result in adverse chronic noncancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) to the noncancer chronic reference exposure level (cREL) for each chemical. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient (HQ). To evaluate the potential for adverse chronic noncancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding a HI. DPM is the only pollutant evaluated for chronic non-cancer hazard in this HRA; therefore the HQ for DPM is the same as the overall HI.

$$HQ_i = C_i / cREL_i$$

$$HI = \sum HQ_i$$

Where:

HQ_i = Chronic hazard quotient for chemical i

HI = Hazard index

C_i = Annual average concentration of chemical i ($\mu g/m^3$)

$cREL_i$ = Chronic noncancer reference exposure level for chemical i ($\mu g/m^3$)

4 Risk Results

At the maximally affected sensitive receptor, the Genentech daycare center located at 850 Gateway Boulevard in South San Francisco, California, the cancer risk from Project sources is higher in the second scenario, in which a six-week-old child's exposure to Project construction begins in 2016, with Project building activities. With the default OFFROAD2011 emission factors, impacts are 10.8 in a million (significant), however in light of relatively clean demolition construction fleet it is reasonable to project that at least 20% of the fleet horsepower-hours will be Tier 2 for building construction, so the results will be below 10 in one million.

For a six-week-old child whose exposure to Project demolition begins in 2013 (the first scenario), the cancer risk from Project sources is 5.2 in one million.

The annual average $PM_{2.5}$ concentration at this receptor is 0.073 $\mu g/m^3$, and the chronic HI is 0.015. These results are below the thresholds in the BAAQMD 2011 guidance.

5 Noise Analysis

The Project Site is located within the City of South San Francisco, where it is subject to noise rules established by the City of South San Francisco Municipal Code (SSFMC). Chapter 8.32 of the SSFMC identifies noise level standards, allowable increases above these standards, and exemptions or restrictions that are specific to certain types of activities or events. The noise level standards are based on Land Use Categories, as defined by the City's zoning code. The Project is in a "Business Technology Park," and as such is grouped with Land Use Category C-1. Table 7 summarizes the Noise Level Standards within the SSFMC:

Table 7: Noise Level Standards

Land Use Category	Time	Sound Level Limit (decibel, A-weighted [dBA])
R-E, R-1 and R-2 zones or any single-family or duplex residential in a specific plan district	10:00 p.m.—7:00 a.m.	50
	7:00 a.m.—10:00 p.m.	60
R-3 and D-C zones or any multiple-family residential or mixed residential/commercial in any specific plan district	10:00 p.m.—7:00 a.m.	55
	7:00 a.m.—10:00 p.m.	60
C-1, P-C, Gateway and Oyster Point Marina specific plan districts or any commercial use in any specific plan district	10:00 p.m.—7:00 a.m.	60
	7:00 a.m.—10:00 p.m.	65
M-1, P-1	Anytime	70

From the South San Francisco Municipal Code, Chapter 8.32, Table 8.32.030, as adapted from "The Model Community Noise Control Ordinance", Office of Noise Control, California Department of Health.

As stated in SSFMC 8.32.030, the limits found in Table 7 are not to be exceeded according to the following:

- Limit (in Table 7) for a cumulative period of more than 30 minutes in any hour
- Limit + 5 dBA for a cumulative period of more than 15 minutes in any hour
- Limit + 10 dBA for a cumulative period of more than 5 minutes in any hour
- Limit + 15 dBA for a cumulative period of more than 1 minute in any hour
- Limit + 20 dBA for no period of time

In addition to the noise level standards identified in Table 7, Chapter 8.32.050, titled Special Provisions, identifies provisions that relate to noise emitted from events such as performances,

vehicle horns, utilities, and construction. SSFMC 8.32.050(d) states that construction is permitted between 8 a.m. and 8 p.m. on weekdays, between 9 a.m. and 8 p.m. on weekends, and between 10 a.m. and 6 p.m. on holidays, provided at least one of the following noise limitations is met:

- 8.32.050(d)(1): No individual piece of equipment shall produce a noise level exceeding ninety dB at a distance of twenty-five feet. If the device is housed within a structure or trailer on the property, the measurement shall be made outside the structure at a distance as close to twenty-five feet from the equipment as possible.
- 8.32.050(d)(2): The noise level at any point outside of the property plane of the project shall not exceed ninety dB (Ord. 1088 § 1, 1990)

The SSFMC therefore allows for construction noise to exceed to the Noise Level Standards identified in Table 7 provided construction equipment meets the criteria outlined in 8.32.050(d).

5.1 Existing Acoustic Environment

The existing acoustic environment in the vicinity of the Project Site is typical of a commercial or light industrial area, where primary noise sources include traffic and light industrial activity. Chapter 9.3 of the South San Francisco General Plan identifies City-wide Community Noise Exposure Levels (CNEL) based on proximity and exposure to roads, rail, and industrial sources. The CNEL is a 24-hour average sound level with a 5-dBA penalty added to sounds between the hours of 7 p.m. and 10 p.m. (evening), and a 10-dBA penalty applied to sounds between the hours of 10 p.m. and 7 a.m. (nighttime). The CNEL is commonly used in the State of California to evaluate noise levels based on the expected human response to noise.

Figure 9-2 in Chapter 9.3 of the 1999 South San Francisco General Plan identifies CNEL noise contours (i.e., sound level isopleths) for road, rail, and transit sources throughout the entire City, projected to 2006. The Project Site lies within close proximity to a 60 dBA CNEL contour line. Note that this CNEL value is an estimate only, and is based on projections from 1999 to 2006. Therefore actual levels in 2013 may be higher or lower than 60 dBA CNEL, and will depend on current traffic volumes, road conditions, train activity, intervening structures, and other variables. Regardless, and in lieu of ambient sound level measurements, these data provide a reasonable best guess for estimating existing ambient conditions.

5.2 Construction Equipment and Noise Levels

Construction equipment and related noise levels at 475 Eccles Avenue will vary over the life of the Project, as well as within the Site. To estimate sound levels from various equipment within the Site, ENVIRON used the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). RCNM allows the user to select from a list of construction equipment and identify the distance between the equipment and the receiver. The calculated sound levels are presented as either L_{10} or Lmax levels. The L_{10} is the sound level exceeded 10 percent of a given time period, the Lmax is the maximum sound level over the given time period. The Lmax was used in this assessment because it can be compared directly with the SSFMC 8.32.050(d) limits for construction equipment (i.e., the limits identified in SSFMC 8.32.050(d) are interpreted as not-to-be-exceeded, and therefore maximum, noise levels).

Table 8 presents a list of equipment expected during construction at the Project Site and sound levels from each type of equipment at 25 feet.

Table 8: Construction Equipment Summary Table			
Construction Equipment	**FHWA RCNM Construction Equivalent [a]**	**Sound Level at 25 feet (dBA) [b]**	**SSFMC Construction Noise Limit at 25 feet (dBA)**
Excavator	Excavator	87	90
Skid Steer Loader	Front end loader	85	
Water Truck	Dump Truck	82	
Backhoe	Backhoe	84	
Street Sweeper	Vacuum Street Sweeper	88	
Metal Torches	Welder/torch	80	
Compressors	Compressor (air)	84	
Rubber Tired Dozers	Dozer	88	
Tractor/Loader/Backhoe	Tractor	90	
Grader	Grader	91	
Crane	Crane	87	
Forklift	Front End Loader	85	
Pavers	Paver	83	
Roller	Roller	86	

Notes:

[a] RCNM does not contain sound levels for all types of construction equipment, and so reasonable/worst-case estimates have been made for equipment specified for the Project where no RCNM values exist

[b] Sound levels reported as L_{max} at 25 feet from construction equipment, comparable with the SSFMC construction noise equipment limit in SSFMC 8.23.050(d)

5.3 Compliance Assessment

Compliance with the SSFMC construction noise limits was evaluated for all major equipment expected at the Project Site[4]. Equipment details were provided by BMR and include types, capacities, and expected duration of use.

As shown in Table 8, noise from most Project-related construction equipment is expected to comply with SSFMC construction noise limits. Noise from the grader is predicted to emit sound levels that exceed the SSFMC limit by 1 dBA at 25 feet. This relatively small increase above the SSFMC limit is considered is well within the expected margin of error associated with most noise-prediction tools, including RCNM (typically +/- 2 dBA or more). Therefore, construction equipment for the Project is expected to operate within applicable SSFMC noise limit.

5.4 Construction Noise Exemptions

SSFMC Section 8.32.060 allows for exceptions to the sound level limits provided in the Code if it can be demonstrated that meeting the sounds level limits is impractical or unreasonable. Such an exemption may be granted for a period of no longer than 6 months.

Therefore, should any construction equipment at the Project Site be found to exceed the limits in SSFM 8.32.050(d), and no practical or reasonable means to mitigate is available, the contractor may apply for an exemption to the SSFMC limits.

5.5 Construction Noise at Child Care Center

The SSFMC does not require that construction activity comply with the Noise Level Standards at off-site locations. Regardless, an assessment of construction noise was completed for the Genentech 2nd Generation Child Care Center, located approximately 125 feet to the northwest of the Project Site. The Child Care Center is located within the Gateway Specific Plan District, and is therefore subject to the Noise Level Standards for this Land Use Category (i.e., 65 dBA during daytime hours).

Table 9 provides a comparison between the approximate highest levels of construction noise predicted at the Child Care Center (77 dBA due to the grader operating at a distance of 125 feet) and the Noise Level Standards at the Child Care Center, including allowable short-term exceedances.

The data in Table 9 suggest the source of the highest levels of construction noise (i.e., a grader) must operate for not more than 5 minutes at maximum capacity, at 125 feet from the Child Care Center in order to stay below levels in the SSFMC for C-1 Land Uses. The SSFMC requirements for C-1 Land Uses are not a regulatory standard for Project construction. It is unlikely that construction equipment would operate under this scenario, and as such it is unlikely that the Noise Level Standards at the Child Care Center would be exceeded (i.e., the grader is likely to operate under varying load levels, and throughout the site). This is consistent with the conclusion of the Draft EIR that "grading operations would not be a continuous noise source

[4] Major equipment includes large equipment such as those identified in Table 8. The assessment does not include noise from minor activities such as hammering, etc., that would be expected to emit noise at much lower levels.

during an eight hour day." In addition, grading operations "would be expected to be complete within a month" (Allison Knapp Wollam Consulting 2012).

It is worth re-stating that construction noise is not subject to the Noise Level Standards during the daytime hours outlined in SSFMC 8.32.050(d). The assessment of construction noise received at the Child Care Center has been completed to demonstrate that sound levels from the Project Site are expected to be within the Noise Level Standards applicable to the Land Use Category at the Child Care Center.

Table 9: Construction Noise at Nearest Noise Sensitive Receiver

Receiver	Noise Level Standard – C-1 (dBA)					Maximum Construction Noise Event [a]
	Dayime Sound Level Limits (dBA)	Standard + 5 (not to be exceeded for more than 15 minutes)	Standard + 10 (not to be exceeded for more than 5 minutes)	Standard + 15 (not to be exceeded for more than 1 minute)	Standard + 20 (not to be exceeded at any time)	
Genentech 2nd Generation Child Care Center	65	70	75	80	85	77

Notes:
[a] Maximum construction noise event based on RCNM L_{max} calculation of a grader operating at 125 feet

5.6 Conclusion

Construction noise from the demolition and redevelopment Project at 475 Eccles Avenue is expected to comply with the noise limits established by the City of South San Francisco Municipal Code.

6 References

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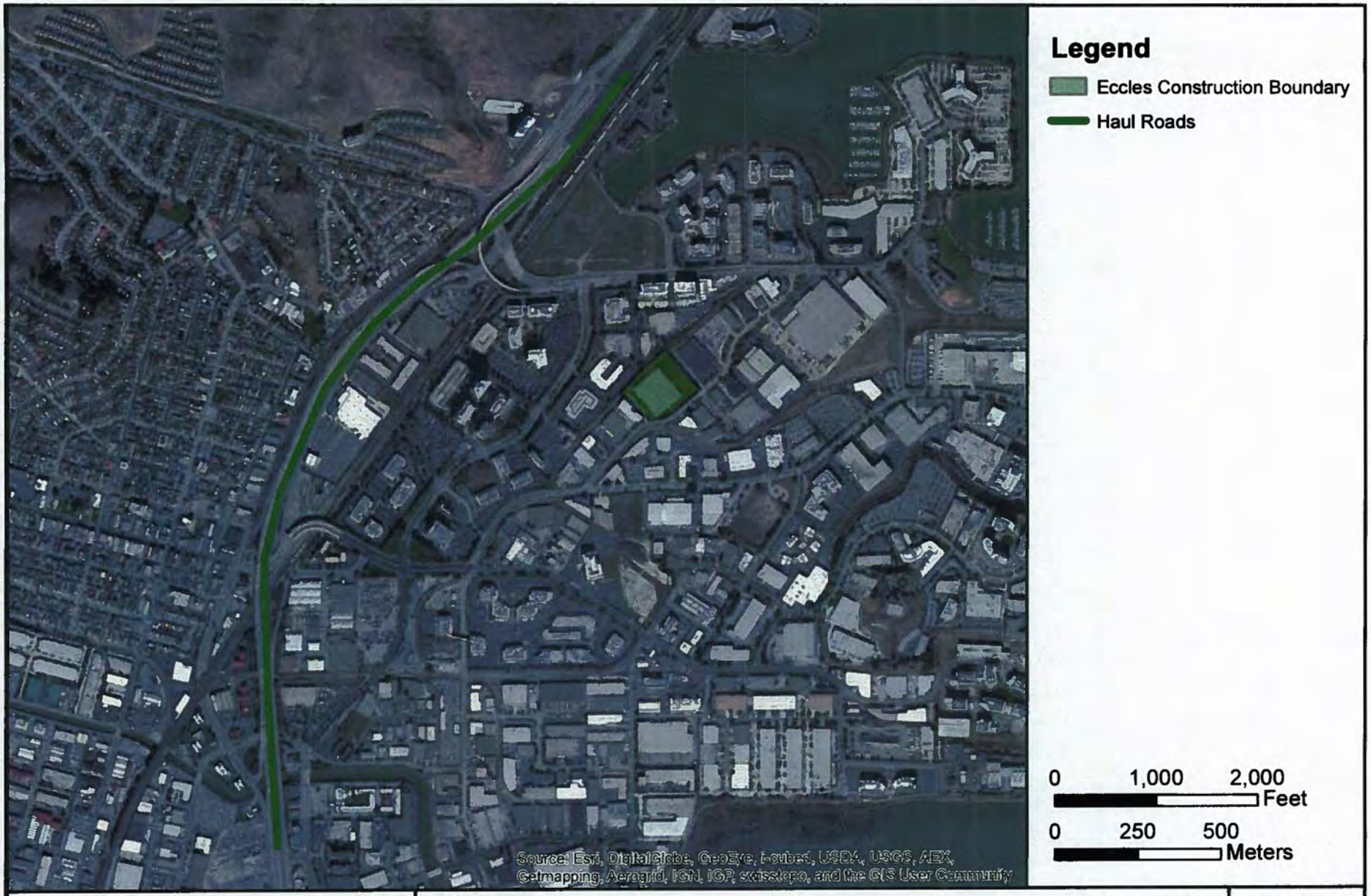
Figures



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Modeled Sources
475 Eccles Avenue, South San Francisco, California

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Figure
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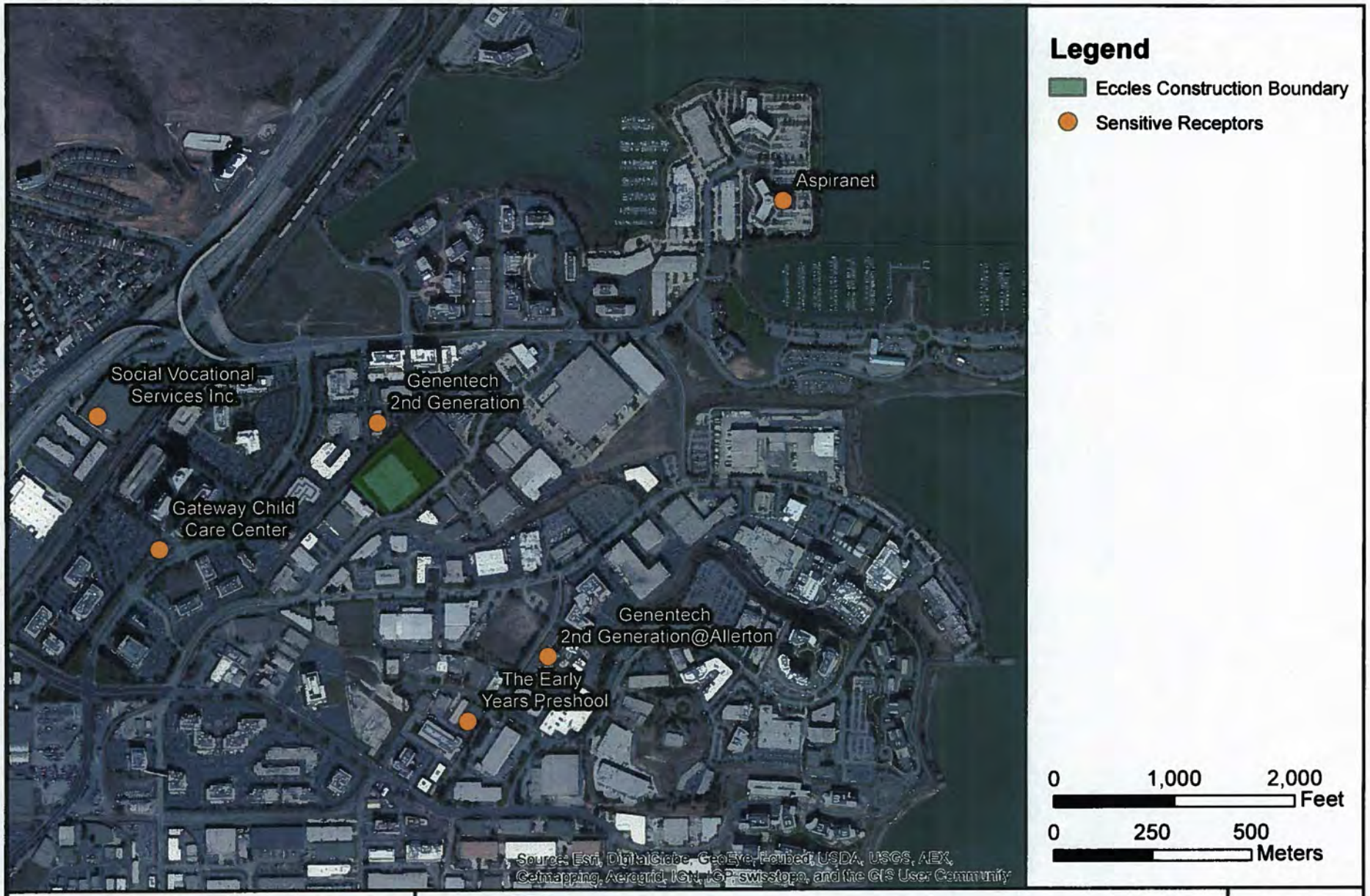

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Sensitive Receptors
475 Eccles Avenue, South San Francisco, California

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Figure 2

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Receptors over 850 Gateway Boulevard
475 Eccles Avenue, South San Francisco, California

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Figure
3

Appendix A

Construction Equipment List

475 Eccles Avenue
Construction Equipment List

Phase ID	Phase	Project Equipment	OFFROAD Equipment	HP	OFFROAD HP Bin	Tier HP Bin	LF	Quantity	Total Hours	Calendar Year	Construction Year	Scenario	Fuel	Engine Tier	DPF	Model ID	Unique ID
1	Demolition	PC 360 2012 tier 4 hydraulic excavator	Excavators	257	500	300	0.382	1	309.3	2013	1	Project	Diesel	4	0	Eccles	1
1	Demolition	PC 450 2011 tier 3 hydraulic excavator	Excavators	345	500	600	0.382	1	309.3	2013	1	Project	Diesel	3	0	Eccles	2
1	Demolition	PC 600 2006 tier 3 hydraulic excavator	Excavators	385	500	600	0.382	1	309.3	2013	1	Project	Diesel	3	0	Eccles	3
1	Demolition	863 Bobcat skid steer tier 2 loader	Skid Steer Loaders	73	120	75	0.369	2	928	2013	1	Project	Diesel	2	0	Eccles	4
1	Demolition	Backhoe	Tractors/Loaders/Backhoes	75	120	100	0.369	2	928	2013	1	Project	Diesel	OFFROAD	0	Eccles	5
1	Demolition	Street sweeper	Sweepers/Scrubbers	88	120	100	0.456	1	464	2013	1	Project	Diesel	OFFROAD	0	Eccles	6
1	Demolition	Bobcat	Tractors/Loaders/Backhoes	75	120	100	0.369	1	464	2013	1	Project	Diesel	OFFROAD	0	Eccles	7
1	Demolition	Misc. Equipment (metal torches)	Other Construction Equipment	46	50	50	0.302	1	464	2013	1	Project	Diesel	OFFROAD	0	Eccles	8
1	Demolition	Misc. Equipment (metal cut offs)	Other Construction Equipment	5	50	11	0.415	1	464	2013	1	Project	Diesel	OFFROAD	0	Eccles	9
1	Demolition	Compressors	Other Construction Equipment	78	120	100	0.322	1	464	2013	1	Project	Diesel	OFFROAD	0	Eccles	10
2	Site Preparation	Rubber Tired Dozers	Rubber Tired Dozers	358	500	600	0.395	3	240	2016	4	Project	Diesel	2	0	Eccles	11
2	Site Preparation	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	75	120	100	0.369	4	320	2016	4	Project	Diesel	2	0	Eccles	12
3	Grading	Excavators	Excavators	157	175	175	0.382	1	160	2016	4	Project	Diesel	2	0	Eccles	13
3	Grading	Graders	Graders	162	175	175	0.409	1	160	2016	4	Project	Diesel	2	0	Eccles	14
3	Grading	Rubber Tired Dozers	Rubber Tired Dozers	358	500	600	0.395	1	160	2016	4	Project	Diesel	2	0	Eccles	15
3	Grading	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	75	120	100	0.369	3	480	2016	4	Project	Diesel	2	0	Eccles	16
4	Building Construction	Cranes	Cranes	208	250	300	0.288	1	1610	2016	4	Project	Diesel	2	0	Eccles	17
4	Building Construction	Forklifts	Forklifts	149	175	175	0.201	3	5520	2016	4	Project	Diesel	2	0	Eccles	18
4	Building Construction	Generator Sets	Other Construction Equipment	84	120	100	0.496	1	0	2016	4	Project	Electric	2	0	Eccles	19
4	Building Construction	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	75	120	100	0.369	3	4830	2016	4	Project	Diesel	2	0	Eccles	20
4	Building Construction	Welders	Other Construction Equipment	46	50	50	0.302	1	1840	2016	4	Project	Diesel	2	0	Eccles	21
5	Paving	Pavers	Pavers	89	120	100	0.415	2	320	2017	5	Project	Diesel	2	0	Eccles	22
5	Paving	Paving Equipment	Paving Equipment	82	120	100	0.355	2	320	2017	5	Project	Diesel	2	0	Eccles	23
5	Paving	Rollers	Rollers	84	120	100	0.375	2	320	2017	5	Project	Diesel	2	0	Eccles	24
6	Architectural Coating	Air Compressors	Other Construction Equipment	78	120	100	0.322	1	120	2017	5	Project	Diesel	2	0	Eccles	25

Appendix B

Construction Emissions Data (electronic files)

Appendix C

Air Dispersion Modeling Files (electronic files)

Appendix D

BAAQMD-Recommended Mitigation Measures

Mitigation Measures for Fugitive Dust and VOC Control: Consistent with guidance from the BAAQMD, the following specifications are required for control of fugitive dust and volatile organic compound (VOC) emissions:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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 use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. 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.
7. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
8. Vegetative ground cover (e.g., fast-germinating native grass seed) or other plants that offer dust mitigation measures shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
9. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. To the extent feasible, activities shall be phased to reduce the amount of disturbed surfaces at any one time.
10. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
11. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
12. The project applicant shall post a publicly visible sign with the telephone number and person to contact at the City of South San Francisco regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
13. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

Mitigation Measures for Diesel Exhaust Control: Consistent with guidance from the BAAQMD as well as additional commitments from BMR, the following specifications are required for control of diesel exhaust emissions:

1. 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.
2. Construction equipment idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes (as opposed to the 5 minutes required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
3. To the maximum extent feasible, all construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.
4. To the maximum extent feasible, all contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines.

Attachment E

KB Engineering Peer Review

475 Eccles Avenue Life Sciences Campus
Genentech Daycare Center
Sensitive Receptor Health Risk Assessment Peer Review
September 10, 2013

Background

On August 22, 2012 an Initial Study[1] was submitted for the 475 Eccles Avenue Life Sciences Campus. The Project involves demolition of the existing building and construction of a new structure on an approximately 6.1-acre site in the City of South San Francisco, east of US Route 101. The Project sponsor is BioMed Realty (BMR). Demolition is scheduled to begin in late 2013. The start date for construction is not expected to be until the third quarter of 2016.

As part of the Initial Study a health risk assessment (HRA) was conducted to examine the potential air quality impacts due to construction and operation of the Project. The Initial Study found impacts which were less than significant. However, the analysis did not include the Genentech Daycare Center, located at 850 Gateway Boulevard.

On August 28, 2013 a HRA was submitted for the Genentech Daycare Center.[2] The HRA for the Genentech Daycare Center was conducted by Environ, in a manner similar to the 475 Eccles Avenue Initial Study (i.e., source characteristics, seasonal emissions, meteorological data, terrain data, etc.). In accordance with Bay Area Air Quality Management Guidance (BAAQMD) *CEQA Air Quality Guidelines* (dated May 2011) and California Office of Environmental Health Hazard Assessment (OEHHA)[3] guidelines, the HRA evaluated the impacts of construction emissions from demolition and construction of the Life Sciences Campus on sensitive receptors (i.e., children attending daycare). This included off-road equipment such as excavators, graders, and cranes, as well as on-road trucks, including hauling debris or material to/from the site and water trucks for fugitive dust control. Idling of equipment onsite or queuing to get onsite was also evaluated. A grid of potential receptors (a total of 231 receptors) at the Genentech Daycare Center was modeled. Boundary and grid receptors at the Genentech Daycare Center were modeled with five meter spacing.

Results

Two scenarios were considered for children at the Genentech Daycare Center. In the first scenario, a child's exposure to construction activity at 475 Eccles Avenue begins with the demolition of the site, in 2013. In the second scenario, a child's exposure to construction activity at 475 Eccles Avenue commences when Project construction begins, in 2016. The results of these scenarios are discussed separately.

The following summarizes the Environ results. For scenario 1, the cancer risk from the Project is 5.2 in a million. For scenario 2, potential impacts are 10.8 in a million (greater than the significance threshold of 10). However in light of relatively clean demolition construction fleet it is reasonable to project that at least 20 percent of the fleet horsepower-hours will be Tier 2

[1] City of South San Francisco, 475 Eccles Avenue Initial Study, August 22, 2012.
[2] Environ, Sensitive Receptors Air Quality and Noise Technical Analysis, 475 Eccles Avenue, August 28, 2013.
[3] California Office of Environmental Health Hazards Assessment *Air Toxics Hot Spot Program Risk Assessment Guideline*, August 2003 and Toxicity Criteria Database, 2010. http://www.oehha.ca.gov/air/hot_spots/index.html.

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(federal emission standards) for building construction, so the results will be below 10 in a million. The annual average PM2.5 concentration is 0.073 µg/m^3 (less than the significance threshold of 0.3 µg/m^3), and the chronic Hazard Index (HI) is 0.015 (less than the significance threshold of 1). The results require a set of mitigation measures as documented further in this document.

The results have been peer reviewed and conclusions have been verified. The peer review consisted of verifying the modeling inputs, the emission estimates, the analysis methodology, the resultant modeling concentrations, the location of maximum concentrations, and the resultant health impacts. The peer review assessed the health impacts for the Genentech Daycare Center based on the inclusion of the sensitive receptors into the Initial Study analysis as well as verification of the Environ analysis.

There were a number of variations between the HRA for the Initial Study and the Environ analysis (e.g., treating the construction activities as an area versus volume sources, use of CALEEMod versus NONROAD2011/EMFAC2011 for emission estimates, data to determine terrain inputs, etc.). These variations affected the results to various degrees. However, the basic conclusions were consistent (i.e., the need for mitigation measures to reduce health impact to less than significant).

The following summarizes the results based on the inclusion of the sensitive receptors into the Initial Study analysis. For scenario 1, the cancer risk from the Project is 6.4 in a million and 4.9 in a million (with tier 2 equipment). For scenario 2, the potential impacts are 10.9 in a million (greater than the significance threshold of 10). Assuming a tier 2 fleet for building construction, results are 8.2 in a million (less than significant). The annual average PM2.5 concentration and the chronic HI are less than significant.

Thus, based on the emission reduction measures as part of the Project and additional incorporation of tier 2 construction equipment[4], the Project would have a less than significant impact on the Genentech Daycare Center.

Of note, the HRA models tend to be conservative, both in terms of the estimated exposure and the toxic effects of the substances to which people are exposed; that is, the models tend to overestimate the adverse health impacts. In fact, the BAAQMD describes the methods as "conservative, meaning that the real risks from a source may be lower than the calculations, but it is unlikely the risks will be higher."[5]

Emission Reduction Measures

The following measures are to be included as part of the Project. These measures are in addition to the City's standard requirements identified in Initial Study and are designed to reduce the environmental effect of the Project.

Mitigation Measures for Fugitive Dust and VOC Control: Consistent with guidance from the BAAQMD, the following specifications are required for control of fugitive dust and volatile organic compound (VOC) emissions:

[4] Tier 2 or better for 65 percent of horsepower-hours of off road diesel equipment during demolition activities and 20 percent of horsepower-hours of off road diesel equipment during construction activities.
[5] BAAQMD, Frequently Asked Questions - Toxic Air Contaminants, http://www.baaqmd.gov/Divisions/Engineering/Air-Toxics/Frequently-Asked-Questions.aspx

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1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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 use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. 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.
7. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. [Occurs less than three percent of the year.]
8. Vegetative ground cover (e.g., fast-germinating native grass seed) or other plants that offer dust mitigation measures shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
9. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. To the extent feasible, activities shall be phased to reduce the amount of disturbed surfaces at any one time.
10. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
11. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
12. The project applicant shall post a publicly visible sign with the telephone number and person to contact at the City of South San Francisco regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
13. Use low VOC coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

Compliance with BAAQMD Regulation 11, Rule 2 during Demolition: Demolition of existing buildings and structures would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos containing waste material generated or handled during these activities. The rule requires the notification of BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

Compliance with BAAQMD Regulation 8, Rule 3 for Architectural Coatings: Emissions of volatile organic compounds (VOC) due to the use of architectural coatings are regulated by the

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limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was recently revised to include more stringent VOC limit requirements. The revised VOC architectural coating limits, which became effective on January 1, 2011, are projected to result in a 32 percent reduction of VOC emissions in the Bay Area associated with architectural coating applications.

Mitigation Measures for Diesel Exhaust Control: Consistent with guidance from the BAAQMD as well as additional commitments from BMR, the following specifications are required for control of diesel exhaust emissions:

1. 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.

2. Construction equipment idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes (as opposed to the 5 minutes required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

3. To the maximum extent feasible, all construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

4. To the maximum extent feasible, all contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines.

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Attachment F

Basic and Expanded Air Quality Measures

1) **BASIC AND EXPANDED FUGITIVE DUST EMISSIONS REDUCTION MEASURES**. The construction contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures. Therefore, the Project shall include the following requirements in construction contracts:
    - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
    - All haul trucks transporting soil, sand, or other loose material off site shall be covered.
    - 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 use of dry power sweeping is prohibited.
    - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
    - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
    - A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
    - **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.**
    - **All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. [Occurs less than three percent of the year.]**
    - **Vegetative ground cover (e.g., fast-germinating native grass seed) or other plants that offer dust mitigation measures shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.**
    - **The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. To the extent feasible, activities shall be phased to reduce the amount of disturbed surfaces at any one time.**
    - **All trucks and equipment, including their tires, shall be washed off prior to leaving the site.**
    - **Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one (1) percent.**

2) **BASIC AND EXPANDED EXHAUST EMISSIONS REDUCTION MEASURES**. The construction contractor shall implement the following measures during construction to reduce construction-related exhaust emissions:
    - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to **two (2)** minutes Clear signage shall be provided for construction workers at all access points.
    - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
    - **All construction equipment, diesel trucks and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and**

PM to the maximum extent feasible. To this end, all generators and air compressors used on site shall be electric. All on road trucks used onsite shall be Year Model 2007 or better. Propane or LNG-fueled booms and scissor lifts shall be used.

- **Tier 2 or better for 20 percent of horsepower-hours of off-road diesel equipment shall be used during construction and 65 percent of horsepower hours during demolition.**
- **All contractors shall, to the maximum extent feasible, use equipment that meets the ARB's most recent certification for off-road heavy duty diesel engines.**
- **No onsite grinding, crushing or shredding of asphalt or debris shall occur onsite.**
- **Potential future measures that achieve the same or better performance criteria shall be submitted to the City for review and approval prior to initiating any changes.**
- **Applicant shall provide the City and Genentech with a list of and schedule for demolition, grading and construction equipment and activities.**
- **A construction superintendent shall be on site during all demolition, grading and construction activities to enforce these regulations.**

3) **COMPLIANCE WITH BAAQMD REGULATION 11, RULE 2 DURING DEMOLITION.** Demolition of existing buildings and structures would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities.

   The rule requires the notification of BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

4) **COMPLIANCE WITH BAAQMD REGULATION 8, RULE 3 FOR ARCHITECTURAL COATINGS.** Emissions of volatile organic compounds (VOC) due to the use of architectural coatings are regulated by the limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was recently revised to include more stringent VOC limit requirements. The revised VOC architectural coating limits, which became effective on January 1, 2011, are projected to result in a 32 percent reduction of VOC emissions in the Bay Area associated with architectural coating applications.

B. TRANSPORTATION AND GREEN HOUSE GAS REDUCTION MEASURES

The applicant proposes a Transportation Demand Management Program (TDM Program) (475 Eccles Avenue Transportation Demand Management Program, Fehr & Peers, October, 2011). The TDM Program is aimed at a 30 percent mode shift compared to projects that do not include a

TDM, to qualify for a 1.0 FAR. The TDM Program is required by law to be reviewed by the City and modified by the Applicant as required by the City to meet the mode shift requirements. Performance audits are also required. The Applicant proposes the following measures, at a minimum, for the TDM Program:

1. Bicycle Parking (racks for visitors and sheltered bicycle parking for employees).
2. Shower and locker facilities (in lease agreement).
3. Preferential Carpool and Vanpool Parking.
4. Passenger loading zones for carpool and vanpool drop-off.
5. Pedestrian Connections.
6. TDM coordinator (in lease agreement).
7. Carpool/Vanpool Matching services (TDM coordinator responsibility).
8. Guaranteed ride home (through Traffic Congestion Relief Alliance).
9. Information Board for TDM Program (in lease agreement).
10. Promotional programs including new employee orientation and TDM Programs (TDM coordinator responsibility).
11. Shuttle bus service to Caltrain and BART and downtown Dasher, coordinated with Alliance (TDM coordinator responsibility.)
12. Membership in Peninsula Traffic Congestion Relief Alliance.

C. CONSTRUCTION AND OPERATIONAL DESIGN ELEMENTS ADDRESSING ENVIRONMENTAL SUSTAINABILITY

The LEED design and construction strategies that have been integrated into the planning documents include:

1. The use of a previously developed site without impacts associated with endangered species, flood plain, and adjacency to wetlands or bodies of water.
2. The Project will document and remediate asbestos previous to demolition.
3. A TDM Program that includes the use of public/privates shuttles providing access to major public transportation hubs. In addition to the requirements for bike parking the Project will include shower/changing room amenities for bike users.
4. The Project will provide adequate preferred parking for low-emitting and alternative fuel vehicles. The Project will provide fewer parking spaces than those referenced in local zoning requirements.
5. The Project provides more than 20 percent of the total site area in open space. More than 50 percent of all parking will be under cover to reduce heat island effects for site surfaces.
6. The Project has developed tenant design and construction guidelines including recommendations and requirements for tenant improvements.
7. Indoor plumbing fixtures within the core and shell design and those required by the tenant scope of work will achieve greater than a 30 percent water use reduction.
8. Site landscape and irrigation equipment will provide irrigation efficiencies greater than 50 percent reduction from a standard summer baseline.
9. The Project will provide fundamental and enhanced commissioning (Cx) of MEP energy systems, including a requirement for tenant improvement Enhanced Cx and a 10 month post-occupancy return to verify equipment warranty and operational efficiencies. Current

energy model targets anticipate a greater than 15% reduction in energy compared to Title 24 and ASHRAE 90.1. Base building and tenant improvement mechanical and food service equipment will be required to comply with enhanced refrigerant management requirements. The Project will provide adequate areas for the collection and storage of recyclables, and tenants will be required to implement desk-side recycling.

10. The Project has developed a Construction Waste Management plan that targets at least 75% diversion of landfill waste, with a goal of 95% diversion. The Project has integrated requirements into planning specifications and plans to target a greater than 20% recycled and regional content (by cost) in all building materials for the project. The Project will target a greater than 50 percent FSC certified wood content (by cost) in all new wood building materials for the project.
11. The Project will require, and require tenants, all materials installed within the vapor barrier of the Project to comply with LEED/CalGreen VOC & CARB requirements, and specifically contain no-added urea-formaldehyde (NAUF) products. The Project will conduct, and require tenants to conduct, and Indoor Air Quality Management Plan for Construction Activities that requires contractors to comply with SMACNA IAQ guidelines for best practices during construction.

Attachment G

September 2013 Demolition Process Letter

BioMed Realty, L.P.

17190 Bernardo Center Drive • San Diego, California 92128
Phone: (858) 485-9840 • Facsimile: (858) 485-9843

475 Eccles Demolition and Construction
September 6, 2013

BioMed Realty is planning to demolish the building at 475 Eccles and construct a new life science campus consisting of two buildings that together would comprise 262,287 square feet, a five-level parking structure and surface parking. This report documents the analysis that indicates there will be no significant increase in health risks to the children at the Genetech Daycare Center located at 850 Gateway Boulevard, and no significant noise impacts. This report also provides general information about the project that parents may find useful.

Demolition and Construction Plans

Demolition of the 475 Eccles building is projected to occur over a four-week period in the Fall of 2013. We then anticipate a lull at this site of several years, during which time we will be conducting demolition and construction of another project at 800 and 1000 Gateway Boulevard.[1]. Our estimate for construction at 475 Eccles is that it will start in the Fall of 2016, and continue for approximately two years.

The details of the demolition and construction are contained in the attached site logistics plan (Attachment 1). Construction vehicles will access the site from Eccles Avenue, and the truck route is along Eccles as well. This arrangement puts the construction traffic on the opposite side of the construction site from the Genentech daycare facility. The new buildings that are proposed are depicted in Attachment 2.

Health Risk Assessment

BioMed had a Health Risk Assessment performed by ENVIRON, one of the most respect air quality firms in California. The report that resulted from this analysis is attached (Attachment 3). This report confirms that no significant increases in health risks are projected for the Eccles project. The study used conservative assumptions (summarized in items 1 – 7 below) and determined that the measures BioMed is planning to implement will ensure there are no significant health risk impacts.

1. The analysis assumes that children are at the daycare for 12 hours per day for 245 weekdays per year, and therefore assumes each child is exposed to the full extent of emissions. We understand that many children are present for less time.

[1] The demolition and construction work we intend to perform for 800 and 1000 Gateway is addressed in a separate report. Neither the demolition or construction periods of the two projects are expected to overlap, which will help ensure that the daycare children do not experience emissions from both projects at once.

2. The analysis assumes that a child would arrive at the daycare center at the age of 6 weeks and stay continuously until age 6. Two scenarios were analyzed; one captured the longest projected exposure such a child might face (an infant entering daycare at the start of demolition in Fall 2013 staying through age 4½) , and the second captured the most intense level of projected emissions (an infant entering daycare at the start of construction and staying through the projected 24-month construction period, with all construction emissions concentrated into that period).

3. ENVIRON assumed all children stayed outside all day. We understand that, though windows and doors are often kept open at the daycare center, the children are in fact inside for several hours during the day, which would reduce exposure levels.

4. The analysis employs an air dispersion model recommended by the U.S. Environmental Protection Agency, with meteorological data collected at the San Francisco International Airport. This model is designed to be health protective, i.e., it predicts a conservatively high level of concentrations of pollutants at the daycare.

5. The analysis assumes that demolition and construction activities would occupy a full eight-hour work day, five days a week, without accounting for the short days and holiday breaks that are common in the construction industry.

6. ENVIRON used data from the actual equipment and practices BioMed's demolition contractor will use for the demolition phase and similar equipment we intend to require our contractors to use for the construction phase, rather than allowing use of more common, but older and more polluting equipment or engines.

7. The analysis is based on data regarding the amount of onsite idling time that is typical for construction vehicles statewide, though we intend to prevent onsite idling to the maximum extend feasible for all onsite engines for on-road equipment. (As noted below, BioMed intends to limit off-road equipment located on site to 2-minute idling times, and that 2-minute idling limitation was incorporated into the analysis.)

Even with these conservative (i.e., health protective) assumptions, the analysis demonstrates that the Eccles project is not projected to create significant health risk increases. This is due in large part to the protective measures we intend to employ. These measures are as follows:

- Compliance with all of the Bay Area Air Quality Management District's recommended construction mitigation measures, which are set forth in Appendix D of ENVIRON's report.

- Limit all off-road construction equipment to 2 minute idling while onsite.

- Electrify all generators and air compressors

- Model Year 2007 or better onroad trucks

- Propane or LNG-fueled boom and scissor lifts

- Tier 2 or better for 20% of horsepower-hours of off road diesel equipment during construction; for 65% of horsepower-hours during demolition

- During demolition, no onsite grinding, crushing or shredding of asphalt, concrete or debris

Should BioMed decide to use different measures in the future, we are proposing to the City that we be required to demonstrate, to the satisfaction of the City, that the different measures also result in no significant increase in health risks.

BioMed will provide to Genentech the equipment list for demolition. BioMed will provide an equipment list for construction when such list is available.

Noise

ENVIRON also studied the impact of construction noise on the children at the Genentech Daycare Center. The report concludes that construction noise from the demolition and redevelopment Project at 475 Eccles Avenue is expected to comply with the noise limits established by the City of South San Francisco Municipal Code. BioMed will identify a disturbance coordinator to Genentech before commencing work.

Kevin M. Simonsen
Vice President, Real Estate Legal

Attachment 1: Site Logistics Plan

Attachment 2: Diagram of New Buildings

Attachment 3: ENVIRON Report

Attachment H

State Clearinghouse Letter of Compliance

Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Ken Alex
Director

December 11, 2012

Mr. Billy Gross
City of South San Francisco
315 Maple Avenue
South San Francisco, CA 94083

Subject: 475 Eccles Avenue
SCH#: 2012082101

Dear Mr. Billy Gross:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on December 10, 2012, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

December 14, 2012

DEC 18 2012

Mr. Billy Gross
City of South San Francisco
315 Maple Avenue
South San Francisco, CA 94083

Subject: 475 Eccles Avenue
SCH#: 2012082101

Dear Mr. Billy Gross:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on December 10, 2012. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2012082101) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
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December 14, 2012

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SCH#2012082101

late
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Mr. Billy Gross
City of South San Francisco
Planning Division
315 Maple Avenue
South San Francisco, CA 94083

Dear Mr. Gross:

475 Eccles Avenue Project– Draft Environmental Impact Report

Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the above project. The following comments are based on the Draft Environmental Impact Report (DEIR).

Trip Generation - Traffic Table 19, Project Trip Generation, page 4-37
According to the Institute of Transportation Engineers, Trip Generation 8th Edition, the trip volumes in Table 19 are under-estimated. Peak generated trips for year 2015 AM(PM) should be 243(22) and year 2035 AM(PM) 228(214). Please confirm your numbers and correct as necessary.

Mitigation - Section 4, Existing With Project Impacts, Impact 3, page 4-39
Please provide measures to mitigate the excess traffic volumes on the 300-foot southbound left-turn pocket of the Airport Boulevard/Grand Avenue intersection to accommodate the Existing Plus Project traffic queue of 337-feet.

Fair Share - Please provide a dollar amount for the fair share fee mitigation.

Please feel free to call or email Sandra Finegan at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development – Intergovernmental Review

c: State Clearinghouse

"Caltrans improves mobility across California"

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATIONS AND MITIGATION MONITORING PROGRAM

LESS THAN SIGNIFICANT IMPACTS WITH MITIGATION IMPACTS AND MITIGATIONS			MITIGATION MONITORING IMPLEMENTATION /MONITORING
#	IMPACT	MITIGATION	PARTY/ AGENCY/TIMING
4	The Project would increase existing AM Peak Hour volumes on the U.S. 101 Northbound Off-Ramp to East Grand Avenue/Executive Drive by 1.9 percent, where current volumes already exceed capacity limits. The off-ramp volume of 1,618 vehicles under Existing without Project conditions would be increased to 1,649 vehicles under Existing with Project conditions at a location with an off-ramp diverge capacity of 1,500 vehicles per hour.	The applicant shall provide a fair share contribution for a second off-ramp lane connection to the U.S. 101 freeway at the U.S. 101 Northbound Off-Ramp to East Grand Avenue/Executive Drive. Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.
8	The Project would increase vehicle queuing at Oyster Point Boulevard/Dubuque Avenue/U.S. 101 Northbound On-Ramp during the AM Peak Hour by 1.7 percent in the through lanes on the eastbound Oyster Point Boulevard approach to Dubuque Avenue at a location with unacceptable 2015 Without Project 95th percentile queuing. These levels are determined to be unacceptable by the City of South San Francisco and Caltrans under 2015 with Project conditions. The eastbound through movement queue per lane would increase from 336 up to 341 feet in a location with only 250 feet of storage per lane.	The applicant shall provide a fair-share contribution to go towards adjusting the signal light timing at the Oyster Point Boulevard/Dubuque Avenue intersection. Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.
9.A	The Project would increase year 2015 AM peak hour without Project traffic volumes by 2.3 percent at the U.S. 101 Southbound Off-Ramp to Oyster Point Boulevard/Gateway Boulevard Intersection which would increase backups extending to the freeway mainline. There would be more frequency with vehicles backing up to the freeway mainline.	The applicant shall provide a fair-share contribution to adjust the signal timing and restripe the Oyster Point Boulevard/Gateway Boulevard intersection eastbound approach from a left, two through lanes and a combined through/right turn lane to a left, two through lanes and an exclusive right turn	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.

LESS THAN SIGNIFICANT IMPACTS WITH MITIGATION IMPACTS AND MITIGATIONS #	IMPACT	MITIGATION	MITIGATION MONITORING IMPLEMENTATION /MONITORING PARTY/ AGENCY/TIMING
		lane. Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	
11	The Project would increase year 2035 without Project traffic volumes by 2.1 percent at the Oyster Point Boulevard/Eccles Avenue intersection. The increase would occur during the AM Peak Hour and would result in a significant impact at an intersection projected to operate unacceptably at LOS F during year 2035 without Project conditions.	The applicant shall provide a fair share contribution to provide an exclusive right turn lane on the eastbound Oyster Point Boulevard approach at the Oyster Point Boulevard /Eccles Avenue intersection. Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.
12.A	The Project would unacceptably increase year 2035 without Project AM peak hour vehicle queuing at the Oyster Point Boulevard/Gateway Boulevard/U.S.101 Southbound Flyover Off-Ramp intersection in the through lanes on the eastbound Oyster Point Boulevard approach. Project traffic would increase volumes by 1.5 percent, which would already be experiencing unacceptable 2035 without Project 95th percentile queuing. The eastbound queues would increase from 1,163 up to 1,187 feet in a location with only 900 feet of storage in the existing through lanes. The increase is above levels determined to be acceptable by the City of South San Francisco.	The applicant shall provide a fair share contribution to adjust the signal timing; restripe the eastbound Oyster Point Boulevard approach to provide an exclusive left turn lane, two exclusive through lanes and an exclusive right turn lane; and restripe the exclusive right turn lane on the eastbound U.S.101 flyover off-ramp approach to allow through movements. This will also require provision of a third eastbound departure lane for eastbound through traffic from the off-ramp. Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.
12.B	The Project would unacceptably increase year 2035 without Project AM peak hour vehicle queuing at the Oyster Point Boulevard/Dubuque Avenue /U.S.101 Northbound Off-Ramp intersection in the through lanes on the eastbound Oyster Point Boulevard approach. Project traffic would increase volumes by 1.4 percent, which would already be experiencing	The applicant shall provide a fair share contribution to restripe the exclusive through lane on the westbound Oyster Point Boulevard approach adjacent to the dual right turn lanes to also allow right turn movements; and to adjust signal timing at the Oyster Point Boulevard/Dubuque Avenue/U.S. 101 Northbound On-Ramp.	• City Engineer determines the fair share financial contribution. • Applicant pays the full share contribution prior to issuance of the Certificate of Occupancy by the City. • Monitored by the City Engineer.

LESS THAN SIGNIFICANT IMPACTS WITH MITIGATION IMPACTS AND MITIGATIONS			MITIGATION MONITORING IMPLEMENTATION /MONITORING
#	IMPACT	MITIGATION	PARTY/ AGENCY/TIMING
	unacceptable 2035 without Project queuing. The eastbound queues would increase from 638 up to 640 feet in a location with only 250 feet of storage. The Project would also unacceptably increase volumes by 1.3 percent during the PM Peak Hour in the right turn lanes on the westbound Oyster Point Boulevard approach to the U.S. 101 northbound on-ramp at a location with unacceptable 2015 "without Project" queuing. The westbound right turn queue would increase from 1,148 up to 1,156 feet in a location with only 840 feet of storage. The increase is above levels determined to be acceptable by the City of South San Francisco.	Improvements are shown in *Traffic Figure 22, Year 2015 Mitigated Intersection Lane Geometrics and Control.*	
15	Project-related traffic would access Eccles Avenue via three driveways where safety impacts would result at the southern and central driveway connections due to sight line issues.	The applicant shall be responsible maintaining landscaping along the Eccles Avenue Project frontage between the central and south driveways that will allow exiting drivers being able to maintain the minimum required 250-foot sight lines at the central and south driveways. The landscape plan shall be revised to show staggered tree planting along this frontage to allow sight lines through the trees as they grow and reach maturity; or, the trees and landscaping shall be maintained to provide a view from 2.5 to 6 feet above grade. The landscape plan shall be revised to note either requirement, show the line-of-sight triangles and not the requirement. These notes shall be on the building plans that are a part of the building permit issuance. The note shall be made on the plans in conformance with the lines of sight	• Applicant shall make the notes on the plans submitted as part of the building permit review process in conformance with mitigation 15. Applicant or designee shall maintain landscaping for the life of the Project as specified. • Notes shall be shown on plans that are approved for building permits. • Monitored by the Project Planner as part of the permit process.

LESS THAN SIGNIFICANT IMPACTS WITH MITIGATION IMPACTS AND MITIGATIONS			MITIGATION MONITORING IMPLEMENTATION /MONITORING
#	IMPACT	MITIGATION	PARTY/ AGENCY/TIMING
		required as set forth in Traffic Figure 24 to insure that the mitigation is permanently maintained.	
16	On-site circulation would adequately conform to City guidelines and good traffic engineering practice with the exception of the first internal intersection at the southern driveway which could result in right-of-way conflicts.	The applicant shall provide stop sign control on the southbound parking aisle approach to the south driveway adjacent to the southeast corner of the garage, show the stop sign on the building permit plans and emplace the sign prior to issuance of a certificate of occupancy.	• Applicant shall make the notes on the plans submitted as part of the building permit review process in conformance with mitigation 16. • Prior to issuance of a certificate of occupancy the stop sign shall be in place. • Monitored by the Project Planner as part of the permit process.

SIGNIFICANT AND UNAVOIDABLE IMPACTS IMPACTS WITH NO MITIGATION AVAILABLE	
#	IMPACT
9B	The Project would increase year 2015 AM peak hour without Project traffic volumes by 2.3 percent at the U.S. 101 Southbound Off-Ramp (Flyover) diverge to the Oyster Point Boulevard/Gateway Boulevard Intersection. The Project would increase off-ramp volumes from 1,762 up to 1,803 vehicles with 2015 without Project volumes already exceeding the 1,500 vehicles per hour diverge capacity limit.
13.A	The Project would increase the frequency of backups extending to the freeway mainline at the U.S. 101 Southbound Off-Ramp to Oyster Point Boulevard/Gateway Boulevard Intersection during the AM Peak Hour. The Project would increase volumes at this off-ramp by 1.4 percent compared to Year 2035 without Project volumes. Traffic would backup to the freeway mainline more frequently.
13.B	The Project would increase the frequency of backups extending to the freeway mainline at the U.S. 101 Northbound Off-Ramp to East Grand Avenue/Executive Drive Intersection during the AM Peak Hour. The Project would increase volumes at this off-ramp by 1.3 percent compared to Year 2035 without Project volumes. Traffic would back up to the freeway mainline more frequently.
13.C	Implementation of the Project would increase year 2035 AM peak hour without Project traffic volumes by 1.4 percent at the U.S. 101 Southbound Off-Ramp (Flyover) diverge to the Oyster Point Boulevard/Gateway Boulevard Intersection. The Project would increase off-ramp volumes from 2,454 up to 2,488 vehicles with 2035 without Project volumes already exceeding 1,500 vehicles per hour capacity of the off-ramp.
13.D	The Project would increase PM peak hour on-ramp volumes by more than 1 percent on the U.S. 101 Northbound One-Lane On-Ramp from the Oyster Point Boulevard/Dubuque Avenue Intersection. Volumes would be increased by 1.1 percent (from 2,572 up to 2,601 vehicles) with Year 2035 without Project volumes already exceeding the on-ramp capacity of 2,200 vehicles per hour.