

INITIAL STUDY

**AIRGAS FACILITY
RELOCATION PROJECT**

City of
Redwood City

November 2011

TABLE OF CONTENTS

	<u>PAGE</u>
SECTION 1 INTRODUCTION AND PURPOSE.....	1
SECTION 2 PROJECT INFORMATION.....	2
SECTION 3 PROJECT DESCRIPTION	5
SECTION 4 ENVIRONMENTAL SETTING & CHECKLIST.....	7
4.1 Aesthetics.....	7
4.2 Agricultural Resources.....	14
4.3 Air Quality.....	16
4.4 Biological Resources.....	20
4.5 Cultural Resources.....	23
4.6 Geology and Soils.....	25
4.7 Greenhouse Gas Emissions.....	28
4.8 Hazards and Hazardous Materials.....	31
4.9 Hydrology and Water Quality.....	36
4.10 Land Use.....	42
4.11 Mineral Resources.....	45
4.12 Noise.....	46
4.13 Population and Housing.....	51
4.14 Public Services.....	53
4.15 Recreation.....	55
4.16 Transportation.....	56
4.17 Utilities and Service Systems.....	58
4.18 Mandatory Findings of Significance.....	61
SECTION 5 CHECKLIST SOURCES.....	62
SECTION 6 REFERENCES.....	63
SECTION 7 LEAD AGENCY AND CONSULTANTS.....	65
 <u>TECHNICAL APPENDICES</u>	
A. Geotechnical Report	
B. Hazardous Materials Risk Modeling Analysis	
C. Noise Analysis	
D. Traffic Analysis	

FIGURES

Figure 1 Regional Map.....3
Figure 2 Vicinity Map4
Figure 3 Site Plan.....6
Figure 4 Aerial.....43

TABLES

Table 1 Number of Ambient Air Quality Criteria Standards Violations (2007-2009)... 16
Table 2 Pervious and Impervious Surfaces On-Site (in square feet)..... 40
Table 3 Land Use Compatibility Guidelines for Community Noise in Redwood City..... 47
Table 4 Summary of Noise Measurement Data (dBA) in the Existing Airgas Facility...48
Table 5 Project Trip Generation.....57

SECTION 1 INTRODUCTION AND PURPOSE

This Initial Study (IS) of environmental impacts has been prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (Title 14, California Code of Regulations §15000 *et seq.*) and the regulations and policies of the City of Redwood City. The purpose of this IS is to provide objective information regarding the environmental consequences of the proposed project to the decision makers who will be reviewing and considering the project.

This IS evaluates the environmental impacts that might reasonably be anticipated to result from relocation of the existing Airgas facility from 50 Chemical Way to 1826 Industrial Way, in the City of Redwood City and renovation of an existing warehouse building.

All documents referenced in this IS are available for public review at the Redwood City Hall, 1017 Middlefield Road, during normal business hours.

SECTION 2 PROJECT INFORMATION

2.1 PROJECT TITLE

Airgas Facility Relocation Project

2.2 PROJECT LOCATION

The project site is located at 1826 Industrial Way, in the City of Redwood City. (see Figures 1 and 2)

2.3 LEAD AGENCY CONTACT

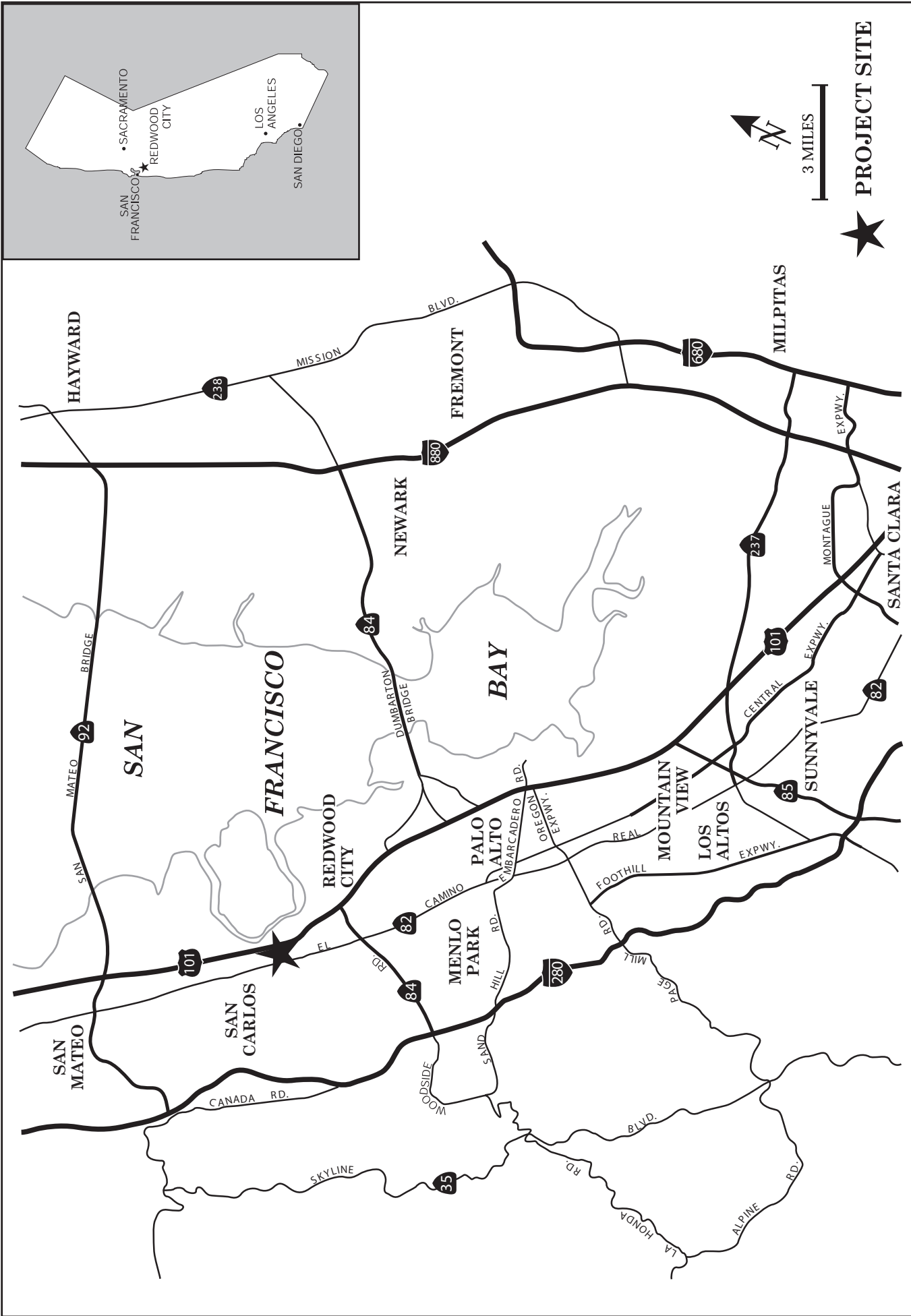
Blake Lyon
Acting Principal Planner
City of Redwood City
Community Development Department
1017 Middlefield Road
Redwood City, CA 94063
650-780-5934
blyon@redwoodcity.org

2.4 ASSESSOR'S PARCEL NUMBER

052-103-090

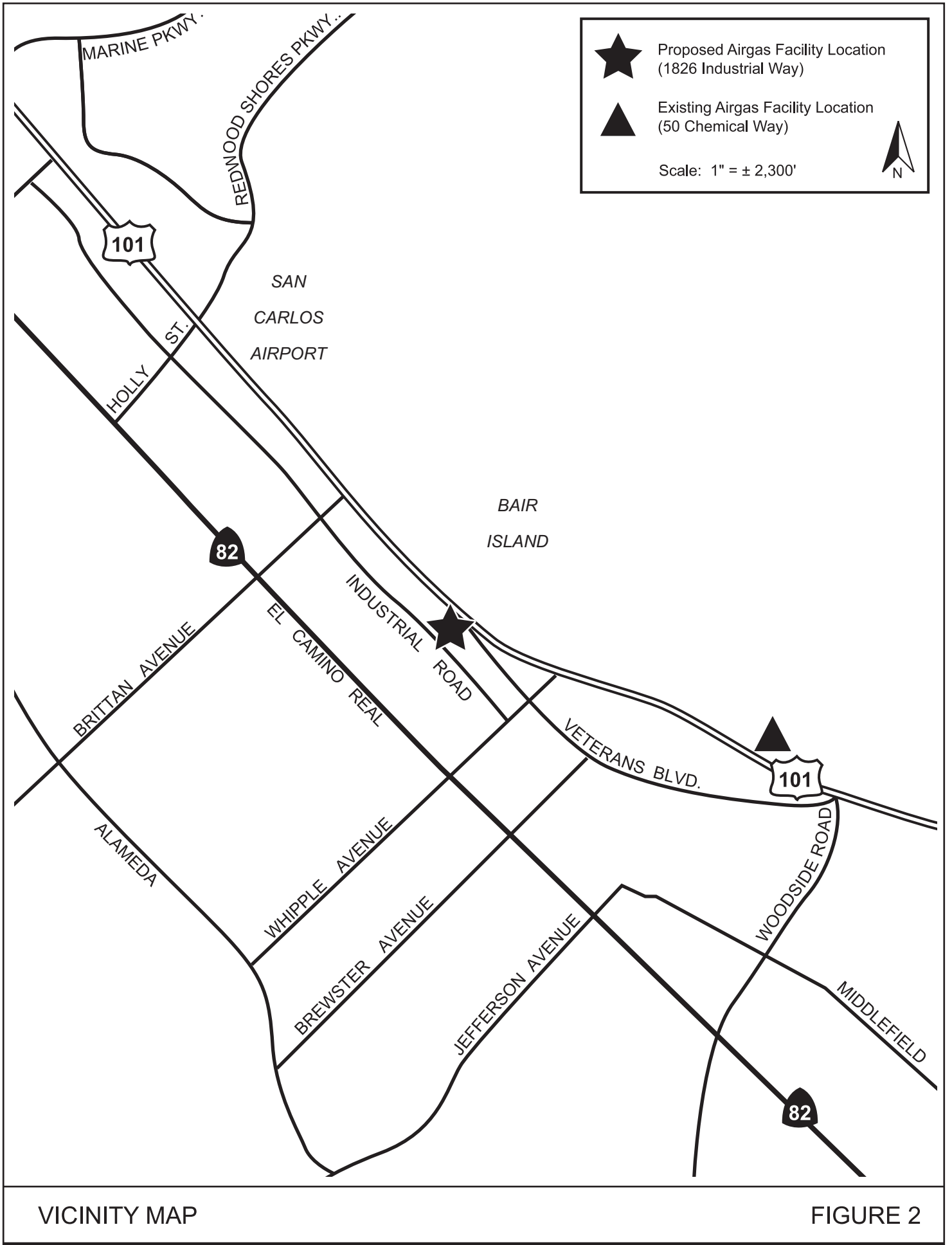
2.5 ZONING DISTRICT AND GENERAL PLAN DESIGNATION

The project site is designated *Light Industrial* under Redwood City's adopted General Plan and *IR – Industrial-Restricted* under the City's zoning ordinance.



REGIONAL MAP

FIGURE 1



VICINITY MAP

FIGURE 2

SECTION 3 PROJECT DESCRIPTION

Airgas currently operates at 50 Chemical Way in Redwood City. This site has been acquired by San Mateo County and, as a result, Airgas needs to relocate to a new location. A new site has been proposed at 1826 Industrial Way in Redwood City. Operation of the Airgas facility at the new proposed site is the focus of this Initial Study.

The proposed project site is an approximately 60,600 square foot (1.4 acre) L-shaped parcel (APN 052-103-090) located on the east side of Industrial Way. The project site is currently designated *Light Industrial* in the General Plan and zoned *IR – Industrial-Restricted*.

The project site is currently developed with a 9,900 square foot, one-story warehouse and a 8,300 square foot, one-story office building. The remaining portion of the project site is hardscape used for parking and outdoor storage. As proposed, the project would demolish the existing office building and construct a surface parking lot in its place. The existing warehouse would remain on-site and would be renovated for the new Airgas facility, including warehouse storage, distribution, and wholesale and retail activities. No new buildings will be constructed but up to four outdoor vertical storage tanks, ranging from 20-34 feet tall will be installed adjacent to the east side of the warehouse near Highway 101. The tanks would hold oxygen, nitrogen, argon, and carbon dioxide.¹ Smaller tanks ranging from one to six feet in height would also be stored on-site. (see Figure 3)

In addition to the aforementioned improvements, a wrought iron fence with mess backing (or an approved alternative design) would be constructed along the property frontage. The fence would be up to 10 feet tall consistent with the City's zoning regulations. The remainder of the site would be equipped with a perimeter chain-link fence with security wire.

The *Light Industrial* land use designation allows light industrial operations that do not involve substantial truck traffic, outdoor fabrication or assembly, do not produce odors, generally operate during typical weekday hours, and do not involve any operations normally considered hazardous within an urban environment. The proposed project is consistent with the General Plan land use designation.

Based on the Redwood City Zoning Ordinance (Article 17), the *IR* zoning designation allows warehouses, wholesale businesses, incidental retail, and storage or distribution operations. These uses are required to be within a building unless a use permit is approved. Because the project proposes outside storage tanks, a use permit is required and is proposed as part of the project.

The project site would be accessed by two driveways on Industrial Way.

The proposed Airgas facility would operate generally the same as the existing facility at 50 Chemical Way. The hours of operation would generally be from 5:30 AM to 6:00 PM Monday through Friday. As proposed, the facility would have 14 employees which would include four drivers, three loaders, four fill people, and three sales people. Drivers would not make multiple trips to the site during business hours; they would leave in the morning and return at the end of the business day.

¹ At the existing Airgas facility, approximately 85 percent of their business is supplying medical oxygen.

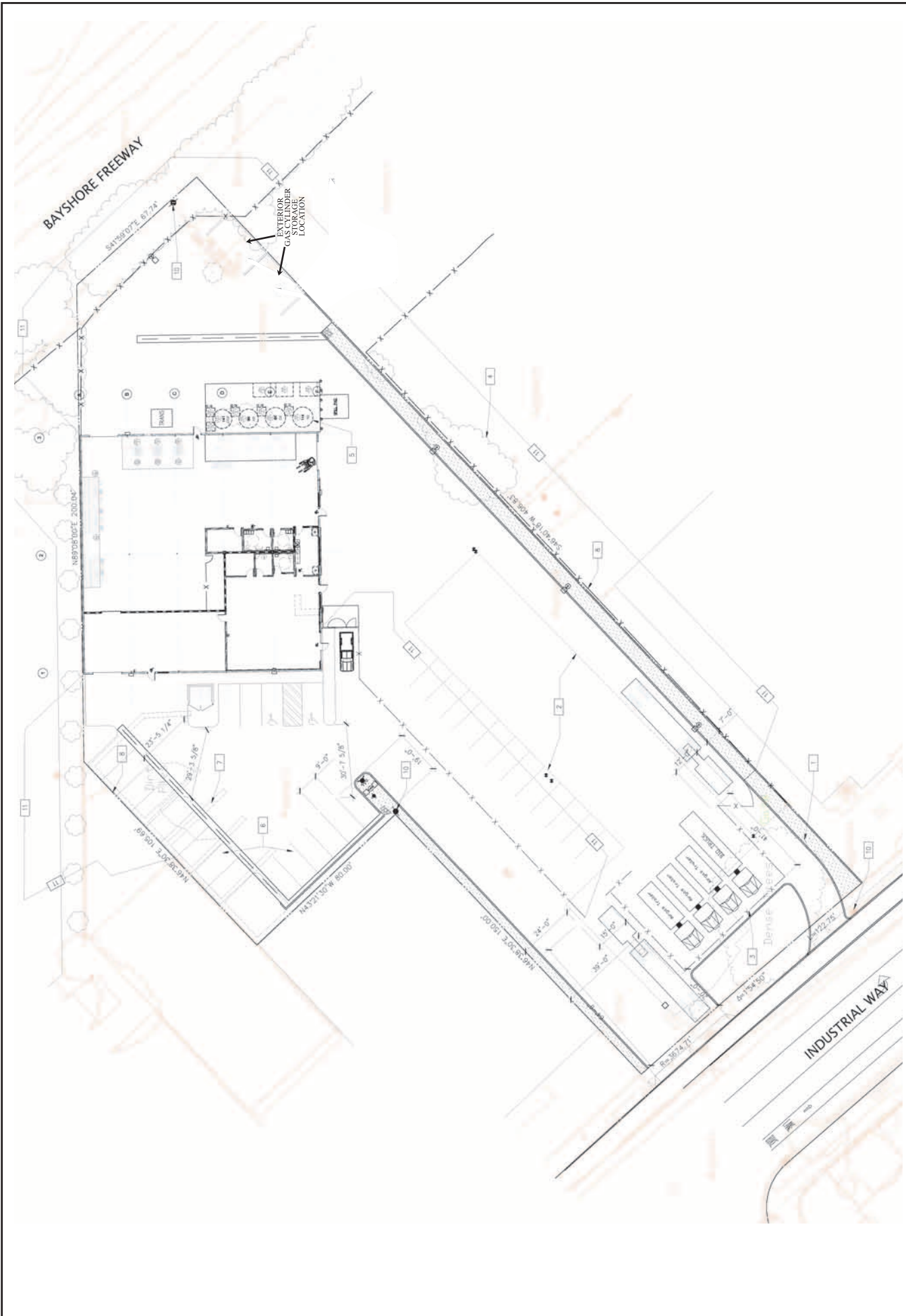


FIGURE 3

SITE PLAN

SECTION 4 ENVIRONMENTAL SETTING & CHECKLIST

This section describes the existing environmental conditions on and near the subject site, as well as environmental impacts associated with the proposed project. The environmental checklist, as recommended in the CEQA Guidelines, was used to identify environmental impacts that could occur if the proposed project is implemented. The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified in Section 5.0. This section identifies environmental impacts from the project, and an explanation for those adverse impacts determined to be less than significant. Mitigation measures are identified and described for all potentially significant impacts, and evaluated briefly for the expected effectiveness/feasibility of these measures, where necessary.

4.1 AESTHETICS

4.1.1 Setting

4.1.1.1 Project Site

The approximately 60,600 square foot L-shaped project site is comprised of a single parcel located on the east side of Industrial Way in the City of Redwood City. The site is developed with a single-story, 9,900 square foot, concrete warehouse building with two large roll-up doors for truck/equipment access (see Photo 1) and a flat-roof, single-story office building totaling 8,300 square feet (see Photo 2). The warehouse building is located in the back northeastern corner of the property. The office building is located adjacent to Industrial Way and somewhat limits the view of the warehouse building from the roadway (see Photo 3). The site is paved except for a few small landscaped areas around the buildings, including an area with three trees in front of the office building (see Photo 4). The paved areas are currently used for parking and storage of materials (see Photo 5).

Most of the project site is separated from surrounding development by a six-foot chain link fence.

4.1.1.2 Surrounding Land Uses

The project site is adjacent to two one-story industrial buildings and a two-story (three level) parking garage to the north, a one-story industrial building to the south, the Veterans Boulevard off-ramp from US 101 to the east, and Industrial Way to the west, beyond which is a residential neighborhood.

In the vicinity of the project site, Industrial Way is a two-lane roadway with a center turn lane, sidewalks and bicycle paths on both sides (see Photo 6). Development in the project area is a combination of low-rise industrial buildings and residential development (see Photos 7 and 8). The east side of Industrial Way is developed with light industrial buildings and the west side of the roadway is developed with a single-family residential neighborhood. The industrial buildings are in generally good overall condition and are surrounded by hardscape. There is no substantive landscaping on these properties and no street trees along the east side of Industrial Way. Power poles line the sidewalk on the east side of the roadway, including one pole centered on the secondary driveway of the project site.

The residential neighborhood is comprised of well maintained one-story and two-story single-family houses. The neighborhood is a post-war tract development with mostly of ranch-style houses. The



Photo 1 - View of the on-site warehouse building, looking east from the northern boundary of the project site.



Photo 2 - View of the on-site office building, looking northeast from the southwestern boundary of the project site.

PHOTOS 1 AND 2



Photo 3 - View of the project site, looking east from the western side of Industrial Way.



Photo 4 - View of a landscaped area adjacent to Industrial Way in front of the on-site office building. View is from the western boundary of the project site, looking northeast.

PHOTOS 3 AND 4



Photo 5 - View of a paved parking area in the western portion of the project site. View is from the northwestern corner of the site, looking east.



Photo 6 - View of Industrial Way, looking southeast from the southwestern corner of the project site.

PHOTOS 5 AND 6



Photo 7 - View of the project site and adjacent industrial buildings. View is from the residential neighborhood located northwest of the project site, looking east.



Photo 8 - View of residential development and associated wooden fences, looking west from the western boundary of the project site.

PHOTOS 7 AND 8

houses located along Industrial Way are oriented so that side yards and garages front Industrial Way and the houses face towards the residential roadways. Much of the private open space adjacent to Industrial Way is separated from the sidewalk and roadway by standard six-foot fencing. The neighborhood has extensive mature landscaping including a dense tree canopy over E Street.

4.1.2 Environmental Checklist and Discussion

AESTHETICS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.1.2.1 Aesthetic Impacts

The project is proposed on a developed site within an urban area that has no natural scenic resources. It is surrounded by industrial and residential land uses, and a highway which is not a designated scenic highway. Implementation of the proposed project would remove the existing office building on-site and renovate the remaining warehouse to accommodate the relocated Airgas facility. This would include installation of four 20 to 34 foot tall storage tanks, a wrought iron fence with mess backing (or an approved alternative design) up to 10 feet tall to help shield views of the parking area, and new lighting including pole mounted security lights in the parking area and exterior building lights.

The visual character of the site will change with the project as the existing office building and trees at the front of the site will be removed and a new fence at the front of the property will be installed along with additional landscaping in the twenty foot front setback. Toward the rear of the site, storage tanks will be installed which will be somewhat visible from Industrial Way and Highway 101. The storage tanks would be located on the east side of the warehouse building near Highway 101 and the Veterans Boulevard off-ramp. All four storage tanks, which are being relocated from the existing facility, are painted with a standard, non-gloss, white enamel paint and would not create a substantial new source of light or glare. Lighting on the project site will comply with the City's zoning ordinance (i.e., low mounted and downward casting to reduce trespass light onto adjacent properties) and will be comparable in brightness to the ambient lighting in the adjacent neighborhood. The proposed fence along Industrial Way will help to shield the project site from the residences across the roadway.

For these reasons, the proposed project will not substantially degrade the existing visual character of the site and renovation of the site for the relocation of the existing Airgas facility will be compatible visually with the surrounding neighborhood. **(Less Than Significant Impact)**

4.1.3 Conclusion

The project would not block scenic vistas or views of scenic resources. The project would be located in an existing industrial area and would not result in a substantial change to the character or quality of the project site or its surroundings. The project would not result in a substantial new source of light or glare. The project would not result in significant aesthetic impacts. **(Less Than Significant Impact)**

4.2 AGRICULTURAL AND FOREST RESOURCES

4.2.1 Setting

The project site is currently developed with a 9,900 square foot, one-story warehouse and a 8,300 square foot, one-story office building. Neither the project site nor any adjacent properties are currently used for agriculture or forestry purposes. The site is not designated by the California Resources Agency as Farmland of any type² and the site is not the subject of a Williamson Act contract. The site is not currently zoned as forest land or for timberland production. There is no property used for agricultural or forestry purposes adjacent to the project site.

4.2.2 Environmental Checklist and Discussion

AGRICULTURAL AND FOREST RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,4
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Codes section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

² California Department of Conservation. San Mateo County Important Farmland. 2006. <http://ftp.consrv.ca.gov/pub/dlrp/fmmp/pdf/2006/smt06.pdf> Accessed October 18, 2011.

4.2.2.1 Agricultural and Forestry Impacts

As stated above, the project site is not the subject of a Williamson Act contract. The project site is not designated agricultural or forest land and is located within a developed urban area with no agricultural or forest land nearby. As a result, implementation of the proposed project would have no impact on agricultural or forest land. **(No Impact)**

4.2.3 Conclusion

The proposed project would have no impact on agricultural land, agricultural activities, or forest resources. **(No Impact)**

4.3 AIR QUALITY

4.3.1 Setting

4.3.1.1 Background

Air quality and the amount of a given pollutant in the atmosphere are determined by the amount of a pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and for photochemical pollutants, sunshine.

The Bay Area typically has moderate ventilation, frequent inversions that restrict vertical dilution, and terrain that restricts horizontal dilution. These factors give the Bay Area a relatively high atmospheric potential for pollution.

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. As shown in Table 1, the only violations of State and Federal standards at the Redwood City monitoring station during the 2007-2009 period (the most recent years that data is available) were high levels of PM₁₀ and PM_{2.5}³.

TABLE 1 Number of Ambient Air Quality Standards Violations and Highest Concentrations (2007-2009) ⁴				
Pollutant	Standard	Days Exceeding Standard		
		2007	2008	2009
REDWOOD CITY STATION				
Ozone	State 1-hour	0	0	0
	Federal 8-hour	0	0	0
Carbon Monoxide	Federal 8-hour	0	0	0
	State 8-hour	0	0	0
Nitrogen Dioxide	State 1-hour	0	0	0
PM ₁₀	Federal 24-hour	0	n/a ⁵	n/a
	State 24-hour	1	n/a	n/a
PM _{2.5}	Federal 24-hour	1	0	0

Source: Bay Area Management District, Bay Area Air Pollution Summary

The pollutants known to exceed the State and Federal standards in the project area are regional pollutants. Ozone and PM_{2.5} are considered regional pollutants because the concentrations are not determined by proximity to individual sources, but rather show a relative uniformity over a region.

³ PM refers to Particulate Matter. Particulate matter is referred to by size (i.e., 10 or 2.5) because the size of particles is directly linked to their potential for causing health problems.

⁴ Bay Area Air Quality Management District. *Annual Bay Area Air Quality Summaries*. <<http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx>> Accessed October 18, 2011.

⁵ PM₁₀ monitoring was discontinued at the Redwood City monitoring station in June 2008. There is no data available for 2008 or 2009.

The Federal Clean Air Act and the California Clean Air Act of 1988 require that the California Air Resources Board, based on air quality monitoring data, designate portions of the state where Federal or State ambient air quality standards are not met as “nonattainment areas”. Because of the differences between the Federal and State standards, the designation of “nonattainment area” is different under the Federal and State legislation. Under the California Clean Air Act, San Mateo County is a nonattainment area for ozone, PM₁₀, and PM_{2.5}. The County is either in attainment or unclassified for all other pollutants. Under the Federal CAA, San Mateo County is classified as a nonattainment area for ozone and PM_{2.5}. The U.S. EPA grades the region as in attainment or unclassified for all other air pollutants, including PM₁₀.

4.3.1.2 Local Air Quality

The primary source of local pollutants in the project area is Highway 101. There are also two BAAQMD permitted facilities within 1,000 feet of the project site on Industrial Way.

4.3.1.3 Sensitive Receptors

BAAQMD defines sensitive receptors as facilities where population groups that are particularly sensitive to the effects of air pollutants (i.e., children, the elderly, and people with illnesses) are likely to be located. Examples include schools, hospitals, and residential areas. The nearest sensitive receptors to the project site are the residences on the west side of Industrial Way, which are located less than 100 feet from the project site. The proposed use on the project site is not considered to include sensitive receptors.

4.3.2 Environmental Checklist and Discussion

AIR QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,5,6
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,5,6
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,5,6
4) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,5,6
5) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.10.3.1 Impacts to Regional and Local Air Quality

The proposed project will demolish an existing office building and occupy an existing industrial facility. Implementation of the proposed project will not result in an increase in building square footage in Redwood City and involves relocation of an existing use to a developed site; as a result, the project will not result in increase emissions from building operations. Therefore, the proposed project would not significantly increase local pollutant levels and would have a less than significant operational air quality impact. **(Less Than Significant Impact)**

4.10.3.3 Construction Impacts

Dust Generation

Construction activities on the site would include demolition of an existing building and hardscape, excavation, and grading of the site, which will generate dust and other particulate matter. Use of heavy equipment would also generate emissions. While repaving of the site is required, no structures would be built. Construction activities are estimated to take four months. The generation of dust and other particulate matter could, however, temporarily impact nearby sensitive receptors.

Impact AIR-1: Construction activities will generate dust and other particulate matter that could impact nearby sensitive receptors. **(Significant Impact)**

Mitigation Measures: BAAQMD has prepared a list of feasible construction dust control measures to reduce construction related air quality impacts to a less-than-significant level. The following mitigation would be implemented during all phases of construction on the project site:

MM AIR 1-1: Water all active construction areas at least twice daily or as often as need to control dust emissions.

MM AIR 1-2: Cover all trucks hauling soil, sand, gravel and other loose materials (including demolition debris) and/or ensure that all trucks hauling such materials maintain at least two feet of freeboard.

MM AIR 1-3: Sweep daily or as often as needed with water sweepers all paved access roads, parking areas and staging areas at construction sites to control dust.

MM AIR 1-4: Sweep public streets daily or as often as needed to keep streets free of visible soil material.

MM AIR 1-5: Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

MM AIR 1-6: Replant vegetation in disturbed areas as quickly as possible.

MM AIR 1-7: If demolition debris is processed on-site (i.e., ground or crushed), additional dust control measures will be utilized to avoid all visible dust plumes leaving the site.

4.10.3.4 Odors

The project would generate localized emissions of diesel exhaust during equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors and would

be consistent with past use of the site with other industrial land uses including diesel trucks. Odors would, however, be localized and are not likely to affect people off-site. **(Less Than Significant Impact)**

4.10.4 Conclusion

Implementation of the identified mitigation measures would reduce the temporary construction-related air quality impact to a less than significant level. **(Less Than Significant Impact with Mitigation)**

The proposed project would have a less than significant long-term impacts on local and regional air quality. **(Less Than Significant Impact)**

4.4 BIOLOGICAL RESOURCES

4.4.1 Setting

4.4.1.1 Existing Vegetation and Wildlife

The project site is located in a highly developed urban habitat. Urban habitats typically include street trees, landscaping, lawns and vacant lots, and provide food and shelter for wildlife able to adapt to the modified environment. The vegetation on the project site consists of three trees, one of which is a large Chinese elm, and landscape shrubs along the property frontage and various trees and shrubs along the sides and back of the warehouse building. There are no sensitive habitats or special status plant or animal species on-site, due to lack of habitat to support them.

The trees and shrubs along the property frontage and along the sides of the warehouse are proposed to be removed.

4.4.2 Environmental Checklist and Discussion

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.4.2.1 Vegetation and Wildlife Impacts

As stated above, there are no sensitive habitats or special status plant or animal species on-site, due to lack of habitat to support them. As a result, the reoccupation and renovation of this site for use as an industrial facility will have no impact on protected plant or animal species. **(No Impact)**

4.4.2.2 Raptor Impacts

The proposed project site is in a highly urbanized area and does not contain any habitat that would support endangered or special status species. The entire site is developed and it is unlikely that the site is utilized by raptors as foraging habitat. It is also unlikely that this site is used as nesting habitat, particularly since it is an industrial site located adjacent to a freeway (Highway 101) and because there is quality habitat in the numerous nearby parks and high quality habitat at Bair Island, which is located just on the other side of Highway 101.

Because of the low probability of the site being utilized by raptors and because there is high quality habitat within close proximity to the project site in which raptors could forage and nest, reoccupation and renovation of this site, including the removal of existing trees, would have a less than significant impact on raptors. **(Less Than Significant Impact)**

4.4.2.3 Tree Impacts

Implementation of the proposed project will result in the loss of most of the trees on-site. These trees are not valuable habitat and the loss of these trees is not considered a significant impact.

The City of Redwood City tree preservation ordinance (Redwood City Municipal Code, Chapter 35) defines a tree as “any woody plant characterized by having a single trunk of a circumference of 38

inches (equivalent to 12 inches in diameter) or more, measured at any point between six and 36 inches above ground level. A tree removal permit is required from the City for the removal of any tree. While the loss of the trees on-site is not considered a significant impact, the project is required to comply with the City's tree preservation ordinance. **(Less Than Significant Impact)**

4.4.3 Conclusion

The project will have no impact on special status plant or animal species. The project will have a less than significant impact on raptors and trees. **(Less Than Significant Impact)**

4.5 CULTURAL RESOURCES

4.5.1 Setting

Prior to mission settlements, the Bay Area was occupied by Native Americans referred to as Ohlones or Costanoans. Shell mounds, evidence pertaining to the Ohlone occupation of Redwood City, have been found at Main Street near Woodside Road and near Union Cemetery. These sites are approximately 1.6 miles southeast and 1.8 miles southeast of the project site. Previous records searches at the Northwest Information Center found three reported but not officially recorded Native American cultural resources sites and 12 recorded prehistoric sites within Redwood City.

No known prehistoric era archaeological sites have been recorded on or adjacent to the project site. Nevertheless, due to the project sites proximity to the bay and known occupation sites, the site has a high probability of containing unknown buried prehistoric resources.

There are currently two buildings on the project site, a warehouse and an office building. Both building were constructed in 1962 and are just under 50 years old.

4.5.2 Environmental Checklist and Discussion

CULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.5.2.1 Impacts to Subsurface Cultural Resources

Implementation of the proposed project would result in the demolition of the existing office building at the front of the project site and the existing hardscape throughout the site, and repaving of the site. The existing warehouse at the back of the property will remain.

Based on soil borings taken on-site, the upper layers of the subsurface are comprised of three to three and a half inches of asphalt, five to six inches of aggregate base, and two feet of fill. While demolition of the office building and hardscape and repaving of the parking lot will require some excavation and grading, it would not exceed the depth of the fill and would not expose native soil. As a result, if any subsurface cultural resources are located on-site, they would not be exposed or damaged by implementation of the proposed project. **(Less Than Significant Impact)**

4.5.2.2 Impacts to Historic Structures

As stated above, both of the buildings on-site are less than 50 years old. In addition, neither building represents the work of a noted architect, represents a distinctive architectural style, is associated with important persons or events in history, or is listed in the City's Historic Resources Inventory. As a result, the demolition of the existing office building and renovation of the existing warehouse will not impact any designated historic structures or structures eligible for the California Register of Historic Resources or the National Register of Historic Places. **(No Impact)**

4.5.3 Conclusion

Implementation of the proposed project will have a less than significant impact on cultural resources. **Less Than Significant Impact)**

4.6 GEOLOGY AND SOILS

The following discussion is based on a geotechnical report prepared by *ENGEO* in October 2011. The report can be found in Appendix A of this report.

4.6.1 Setting

4.6.1.1 Geology and Soils

The project site is located in the Coast Ranges geomorphic province, which is characterized by northwest to southeast trending valleys and ridges. Based on soil borings taken on-site, the upper layers of the subsurface are comprised of three to three and a half inches of asphalt, five to six inches of aggregate base, and two feet of fill. The fill is comprised of loose clay sand. Beneath the fill layer is an approximately five foot layer of medium stiff clay, which is likely remolded bay mud deposits. Medium stiff to stiff clay soils are present below the bay mud and extend for the remaining length of the boring (approximately 20 feet). Groundwater is encountered 6.5-8 feet bgs.

The shallow clay soil has a moderate potential for expansion (i.e., shrinking and swelling).

4.6.1.2 Seismicity and Seismic Hazards

The project site is located within the seismically active San Francisco Bay Region. The Uniform Building Code designates the entire Bay Area as Seismic Activity Zone 4, the most seismically active zone in the United States. The project site is not within a defined Alquist-Priolo Earthquake Fault Zone and the risk of fault rupture at the site is low. The faults in the region are, however, capable of generating earthquakes of magnitude 7.0 or higher and strong to very strong ground shaking would be expected to occur at the project site during a major earthquake on one of the nearby faults.

Liquefaction and Differential Settlement

Liquefaction is the result of seismic activity and is characterized as the transformation of loose water saturated soils from a solid state to a liquid state during ground shaking. Soils most susceptible to liquefaction are loose to moderately dense, saturated, non-cohesive soils with poor drainage. Differential settlement is the unequal settlement of material that causes a gradual, uneven downward movement of a structure's foundation. According to the California Geological Survey, the project site is located within a potential liquefaction zone.⁶ Based on the fact that no saturated loose cohesionless soils were found in the borings; however, the geotechnical report concluded that liquefaction potential for the site is low. The report did find that earthquakes could result in up to 0.5 inches of settlement in the loose clay sand layer.

Lateral Spreading

Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open area, such as the steep bank of a stream channel. The project site is relatively flat and is not adjacent to a creek or any other unsupported face. Therefore, the potential for lateral spreading is low.

⁶ Association of Bay Area Governments (ABAG). <<http://gis.abag.ca.gov/website/LiquefactionCGS/>> Accessed November 3, 2011.

4.6.2 Environmental Checklist and Discussion

GEOLOGY AND SOILS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
a) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
b) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
c) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
d) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
2) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,9
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.6.2.1 **Geology and Soils Impacts**

The shallow surface soil on the project site has moderate shrink/swell potential. The soil swells when the water content is increased and shrinks when it decreases. This condition can harm building foundations and on-site improvements and requires special design considerations. The project proposes to install storage tanks and repave the site. The possible geologic and soils impacts to these improvements resulting from conditions on the site can be mitigated by utilizing standard

engineering and construction techniques as outlined in the site-specific geotechnical report. Therefore, the project will not expose people or property to significant impacts associated with the geologic conditions of the site. **(Less Than Significant Impact)**

The project site and surrounding area is flat. After completion of the project, approximately 94 percent of the project site would be impervious surfaces, similar to existing conditions. The project would not, therefore, be exposed to landslide related hazards or erosion hazards. **(Less Than Significant Impact)**

Faults in the area are considered active and have a long history of seismic activity. The project site would experience fairly intense shaking in the event of a large earthquake and is in an area with susceptibility to liquefaction; though the probability for liquefaction on-site is low. All new equipment proposed for installation at the site, such as the storage tanks, would be built and maintained in accordance with the site-specific geotechnical report and applicable regulations including the 2010 California Building Code which contains the regulations that govern the construction of structures in California. Adherence to the 2010 Building Code would increase the likelihood of the project to resist minor earthquakes without damage and major earthquakes without collapse. **(Less Than Significant Impact)**

4.6.2.2 Construction Impacts

The majority of the site is flat and developed and very little soil is currently exposed on the site. Some ground disturbance would be required for demolition of the office building, grading, and installation of the new hardscape at the site. Ground disturbance would expose soils and increase the potential for wind or water related erosion and sedimentation at the site until construction is complete.

Impact GEO-1: Implementation of the proposed project would result in increased erosion and loss of top soil until the project is complete. **(Significant Impact)**

Mitigation Measures: The following measure has been included in the project to reduce potential construction related erosion impacts:

MM GEO 1-1: All excavation and grading work will be scheduled in dry weather months or the construction site will be weatherized (i.e., exposed soils will be covered during periods of high winds or rain) to withstand or avoid erosion. **Less Than Significant Impact)**

4.6.3 Conclusion

Implementation of the proposed mitigation measure would reduce erosion impacts during construction to a less than significant level. Conformance with the 2010 Building Code and the site-specific geotechnical report would avoid significant impacts to people and/or property associated with geologic or seismic conditions. **(Less Than Significant Impact with Mitigation)**

4.7 GREENHOUSE GAS EMISSIONS

4.7.1 Setting

This discussion on global climate change and greenhouse gas (GHG) emissions is based upon the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), the 2006 and 2009 Climate Action Team (CAT) reported to former Governor Schwarzenegger and the Legislature, and research, information, and analysis completed by the International Panel on Climate Change (IPCC), the U.S. EPA, CARB, and the CAT.

Global climate change refers to changes in weather including temperatures, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic (generated by mankind) atmospheric gases such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).⁷ These gases allow sunlight into the atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the Earth's energy balance. This phenomenon is known as the greenhouse effect.

California produced 474 million gross metric tons (MMT) of CO₂ equivalent (CO₂e) averaged over the period from 2002-2004. CO₂e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH₄ has the same contribution to the greenhouse effect as approximately 23 tons of CO₂. Therefore, CH₄ is a much more potent GHG than CO₂. Expressing emissions in CO₂e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.⁸

Naturally occurring greenhouse gases include but are not limited to: CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.⁹ Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but are for the most part solely a product of industrial activities.

Impacts to California from climate change include shifting precipitation patterns, increasing temperatures, increasing severity and duration of wildfires, earlier melting of snow pack and effects on habitats and biodiversity. Sea levels along the California coast have risen up to seven inches over the last century, and average annual temperatures have been increasing. These and other effects will likely intensify in the coming decades and significantly impact the State's public health, natural and manmade infrastructure, and ecosystems.¹⁰

⁷ IPCC, 2007, *Summary for Policymakers*, In "Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change" [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: <http://ipcc.ch/>

⁸ BAAQMD. *CEQA Guidelines*. May 2011.

< <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>> Accessed October 18, 2011, 2010.

⁹ Greenhouse gases as defined by the adopted 2010 CEQA Guidelines.

¹⁰ State of California Energy Commission. *2009 California Climate Adaptation Strategy Discussion Draft. Frequently Asked Questions*. August 3, 2009. <www.climatechange.ca.gov/adaptation/documents/2009-07-31_Discussion_Draft-Adaptation_FAQs.pdf>

Agencies at the international, national, state, and local levels are considering strategies to control emissions of gases that contribute to global warming. There is no comprehensive strategy that is being implemented on a global scale that addresses climate change; however, in California a multi-agency “Climate Action Team,” has identified a range of strategies and the Air Resources Board, under AB 32, has approved the *Climate Change Scoping Plan* (Scoping Plan). AB 32 requires achievement by 2020 of a Statewide GHG emissions limit equivalent to 1990 emission levels, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. The CARB and other State agencies are currently working on regulations and other initiatives to implement the Scoping Plan. By 2050, the State plans to reduce GHG emissions to 80 percent below 1990 levels.

4.7.2 Environmental Checklist and Discussion

GREENHOUSE GAS EMISSIONS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,6
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,6

**Bay Area Air Quality Management District
Air Quality CEQA Thresholds of Significance**

The adopted BAAQMD Air Quality CEQA Thresholds of Significance for operational-related GHG emissions is 1,100 metric tons of CO₂e per year or 4.6 metric tons of CO₂e per service population¹¹ per year. BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions.

4.7.2.1 Greenhouse Gas Emissions Impacts

GHG emissions from the proposed project would include emissions from construction and operation of the Airgas facility in the remaining industrial building.

Operational Emissions

Implementation of the proposed project will result in the relocation of an existing Airgas facility to a new location. Airgas operations on the project site will be comparable to the existing operations, so mobile emissions (e.g., emissions from combustion of fossil fuels for vehicle trips to and from the site) and emissions from the generation of electricity to operate the facility are estimated to be the same. Relocation of the Airgas facility would not result in any net increase in energy usage or GHG emissions.

¹¹ Service population is the sum of projected new residents and full time workers at the project site.

On the proposed project site, the existing warehouse would be occupied by Airgas and the existing office building will be demolished. Because the existing office would be demolished, there would be a slight decrease in total office space in Redwood City which would equate to a small decrease in total energy usage for building operations and traffic to and from the site. Therefore, with implementation of the proposed project, there would be a small net decrease in total energy usage and GHG emissions within Redwood City. **(No Impact)**

Construction Emissions

A small amount of GHG emissions would occur during demolition of the existing office building and grading and paving of the new parking area, and from construction worker trips to and from the site. Due to the small size of the site, the fact that no buildings will be constructed, and the short duration of the construction schedule, construction emissions for the project would not be substantial. Construction emissions would be temporary in nature and would not significantly contribute to regional GHG levels. **(Less Than Significant Impact)**

4.7.3 Conclusion

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHGs. The proposed project would not result in a significant impact from GHG emissions. **(Less Than Significant Impact)**

4.8 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based on a risk modeling analysis prepared by *Belinda Blackie, P.E., R.E.A.* in October 2011. The report can be found in Appendix B of this report.

4.8.1 Setting

The proposed project site is currently developed with a warehouse and a small office building. The existing buildings on-site were constructed in 1962. Mostly recently, the site was occupied by a landscaping contractor. Prior to development of the site in 1962, the site was most likely vacant or utilized as farmland.

4.8.2 Environmental Checklist and Discussion

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,10
2) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,10
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,10
4) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,10
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,13

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
6) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
8) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.8.2.1 Impacts From On-Site Conditions

Operation

The proposed project site is located across the roadway from a residential neighborhood. Due to the handling and storage of chemicals at the proposed Airgas facility, a risk modeling analysis was completed to determine if a release from the proposed facility would impact the adjacent neighborhood. The modeling was based on the most significant chemical of concern identified in the inventory for the existing Airgas facility on Chemical Way. Based on a review of the inventory, it was determined that a 100 pound container of liquid propane was the greatest chemical of concern.

The analysis was based on a “worst-case” release scenario, which assumes that the entire chemical content of the tank is released over a ten minute period with a wind speed of 4.9 feet per second and an air temperature of 77 degrees F. It should be noted that the worst-case release scenario does not consider the possible causes of a release or the probability of a release; the release is simply assumed to occur. In addition, the worst-case scenario assumes that no passive protection measures, such as the tanks being enclosed within a building, are present. The combination of conditions necessary to trigger a worst-case release scenario rarely occurs and is unlikely to persist for an extended period of time.¹² The chance of a worst-case cylinder release is approximately one in one million.

The modeling concluded that in a worst-case release of 100 pounds of liquid propane (i.e., loss of the entire contents of the tank in a 10-minute period) the threat zone for the vapor cloud explosion and the flammable area of the vapor cloud would not extend beyond 45 feet from the source. Therefore, the impact of a worst-case release would not extend beyond the boundaries of the project site.

¹² USEPA Risk Management Plan Guidelines, 2009

Worst-case releases of the other chemicals on-site would have less of an effect (i.e., impact a smaller area) than the liquid propane.

The nearest residences are approximately 60 feet from the project site frontage (the width of Industrial Way) and approximately 370 feet from the proposed tank storage area. Therefore, based on the worst-case release scenario for the most significant chemical of concern, operation of the Airgas facility on the project site would have a less than significant impact on the adjacent residential neighborhood and the surrounding businesses. **(Less Than Significant Impact)**

Airport Operations

The project site is located approximately three-quarters of a mile south of San Carlos Airport. Based on the San Mateo County Comprehensive Airport Land Use Plan, the project site is located within the airport land use plan area and is subject to the height restrictions outlined in the plan. The Plan states that industrial land uses within the San Carlos land use plan area cannot have structures in excess of 50 feet tall. The proposed outdoor storage tanks are 20 to 34 feet tall and will be the tallest structures on-site. As a result, the project will not result in a safety hazard for people working on the project site. **(Less Than Significant Impact)**

Construction

Implementation of the proposed project would result in the demolition of the existing office building at the front of the project site and the existing hardscape throughout the site, and repaving of the site. Based on soil borings taken on-site, the upper layers of the subsurface are comprised of three to three and a half inches of asphalt, five to six inches of aggregate base, and two feet of fill. While demolition of the office building and hardscape and repaving of the parking lot will require some excavation and grading, it would not exceed the depth of the fill.

It is possible that previous industrial operations on or adjacent to the project site resulted in spills that contaminated the shallow soils on-site. As a result, implementation of the proposed project could expose construction workers to contaminated soils.

Impact HAZ-1: Due to past industrial businesses on and adjacent to the project site, shallow soil contamination may be present on-site. **(Significant Impact)**

Project-Specific Mitigation Measures:

The following measures are included in the project to reduce hazardous materials-related impacts:

MM HAZ-1.1: A visual inspection of the soil will be completed by a qualified hazardous materials consultant once the pavement on-site is removed. If any stains are detected, the soil will be tested and, if necessary, removed and hauled off-site to be disposed of at a licensed hazardous materials disposal site prior to issuance of grading permits.

MM HAZ-1.2: All soil investigation and remediation activities will comply with State and Federal requirements. Guidelines, oversight, and approval by the City does not supersede any other environmental agency requirements.

Asbestos and Lead Based Paint

Friable asbestos is any asbestos containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Non-friable ACMs are materials that contain a binder or hardening agent that does not allow the asbestos particles to become airborne easily. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl asbestos floor tiles, and transite siding made with cement. Non-friable ACMs can pose the same hazard as friable asbestos during remodeling, repairs, or other construction activities that would damage the material. Use of friable asbestos products was banned in 1978.

In 1980, the Consumer Products Safety Commission banned paint and other surface coating materials containing lead. Due to the age of the existing office building, the building could contain ACMs and lead-based paint.

The project will be required to conform to the following regulatory programs and to implement the following measures to reduce impacts due to the presence of ACMs and/or lead based paint:

- In conformance with State and local laws, a visual inspection/pre-demolition survey, and possible sampling, shall be completed prior to the demolition of on-site structures to determine the presence of asbestos-containing materials and/or lead-based paint.
- Prior to demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code Regulations 1532.1, including employee training, employee air monitoring, and dust control. Any debris or soil containing lead-based paint or coatings would be disposed of at landfills that meet acceptance criteria for the waste being disposed.
- All potentially friable ACMs shall be removed in accordance with NESHAP guidelines prior to any building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.

Conformance with aforementioned regulatory requirements would result in a less than significant impact from ACMs and lead. **(Less Than Significant Impact)**

4.8.3 Conclusion

Implementation of the identified mitigation measures would reduce the temporary construction-related hazardous materials impact to a less than significant level. **(Less Than Significant Impact with Mitigation)**

The proposed project would not pose a substantial hazard to the public and would have a less than significant operational impact on the surrounding land uses. **(Less Than Significant Impact)**

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Setting

4.9.1.1 Flooding

Based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (Map 0603250011B), the project site is located in Flood Zone C. Zone C is an area of minimal flood hazard above the 500-year flood level.

4.9.1.2 Storm Drainage System

The Redwood City Public Works Services Department maintains the storm drainage system that serves the project site. Stormwater in Redwood City is conveyed into creeks, lined channels, storm drainage pipes and retention basins, all of which drain directly into San Francisco Bay.

4.9.1.4 Water Quality

Nonpoint Source Pollution Program

In 1988, the State Water Resources Control Board (SWRCB) adopted the Nonpoint Source Management Plan in an effort to control nonpoint source pollution in California. In December 1999, the Plan was updated to comply with the requirements of Section 319 of the Clean Water Act and Section 6217 of the Coastal Zone Act Reauthorization Amendment of 1990. The Nonpoint Source Management Program requires individual permits to control discharge associated with construction activities. The Nonpoint Source Program is administered by the Regional Water Quality Control Board (RWQCB) under the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities. Projects must comply with the requirements of the Nonpoint Source Program if they disturb one or more acres of soil.

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) was developed to assist co-permittees in implementing the provisions of the NPDES permit. This program was also designed to fulfill the requirements of Section 304(1) of the Federal Clean Water Act, which mandated that the Environmental Protection Agency develop NPDES application requirements for storm water runoff. The Program's Municipal Regional NPDES stormwater permit includes provisions requiring regulation of stormwater discharges associated with new development and development of an area-wide watershed management strategy. Any project that creates, replaces, or adds 10,000 square feet of impervious surface must comply with the provisions of the NPDES permit.

Redwood City Municipal Code

Chapter 27A of the Redwood City Municipal Code (*Stormwater Management and Discharge Control Program*) outlines the City's policies that govern the quantity and quality of stormwater discharge within the City. This program discusses exempted activities, illicit discharge prohibitions, broad watercourse protection objectives, and best management practices for new and redevelopment projects.

Redwood City Zoning Ordinance

Section 32.12 of the City’s Zoning Ordinance provides requirements related to stormwater treatment. The purpose of these requirements is to provide zoning standards that minimize the quantity of runoff and associated pollutants in stormwater runoff from developed sites to creeks, the stormdrain system, and ultimately, to the San Francisco Bay. According to the City’s Zoning Ordinance, enhanced stormwater quality can be achieved through reduction of impervious surfaces, the protection of watercourses and riparian vegetation, providing for infiltration of stormwater on-site through vegetation and soils, and with engineered treatment systems. This section also requires that all new development, additions, and reconstruction are subject to the provisions of Chapter 27A of the City’s Municipal Code.

4.9.2 Environmental Checklist and Discussion

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
6) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
7) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,7
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,7
9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
10) Be subject to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.9.3 Hydrology Impacts

4.9.3.1 **Flooding Impacts**

Based on the FEMA flood insurance rate maps, the site is outside the 100-year and 500-year flood plain. In addition, the project site is not susceptible to flooding as a result of levee or dam failure. Because of the location of the site and its distance from any 100-year flood zone, implementation of the proposed project will not expose people or structures to significant flood hazards. **(Less Than Significant Impact)**

The project site is not subject to inundation by seiche or mudflows. While Redwood City is adjacent to the Bay, the potential risk of sea waves or tsunamis impacting the City is considered low as the City lies approximately 10 miles east of the Pacific Ocean shoreline, outside the County of San Mateo Tsunami Evacuation Planning Area. Therefore, the project site would not be subject to inundation by tsunamis, seiches, or mudflows. **(No Impact)**

4.9.3.2 **Water Quality Impacts**

Construction Impacts

Implementation of the project would result in the disturbance of approximately 60,600 square feet of land. As a result, the project would be required to comply with the NPDES General Permit for construction activities. Construction activities would temporarily increase pollutant loads due to grading and construction (i.e., demolition of the existing building, removal of pavement, and repaving of the site). Demolition and construction activities would temporarily increase the amount of debris on-site and grading activities would increase the potential for erosion and sedimentation that could be carried by runoff into the San Francisco Bay. As a result, construction activities would result in a temporary increase in pollutants in stormwater runoff. **(Significant Impact)**

Impact HYD-1: Construction activities could temporarily increase pollutant loads in stormwater runoff. **(Significant Impact)**

Mitigation Measures: The following mitigation measures, based on RWQCB Best Management Practices, are included in the project to ensure compliance with NPDES permit requirements to reduce construction-related water quality impacts:

MM HYD 1-1: During construction, burlap bags filled with drain rock will be installed around storm drains to route sediment and other debris away from the drains.

MM HYD 1-2: During construction, earthmoving or other dust-producing activities will be suspended during periods of high winds.

MM HYD 1-3: During construction, all exposed or disturbed soil surfaces will be watered at least twice daily to control dust as necessary.

MM HYD 1-4: During construction, stockpiles of soil or other materials that can be blown by the wind will be watered or covered.

MM HYD 1-5: During construction, all trucks hauling soil, sand, and other loose materials will be covered and/or all trucks will be required to maintain at least two feet of freeboard.

MM HYD 1-6: During construction, all paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites will be swept daily (with water sweepers).

MM HYD 1-7: During construction, vegetation in disturbed areas will be replanted as quickly as possible.

MM HYD 1-8: Prior to construction grading for the proposed land uses, the applicant will file a "Notice of Intent" (NOI) to comply with the General Permit administered by the Regional Board and will prepare a Stormwater Pollution Prevention Plan (SWPPP) which addresses measures that would be included in the amendment to minimize and control construction and post-construction runoff. The following measures would be included in the SWPPP:

- Preclude non-stormwater discharges to the stormwater system.
- Effective, site-specific Best Management Practices for erosion and sediment control during the construction and post-construction periods.
- Coverage of soil, equipment, and supplies that could contribute non-visible pollution prior to rainfall events or perform monitoring of runoff.
- Perform monitoring of discharges to the stormwater system.

MM HYD 1-9: The developer will submit a copy of the draft SWPPP to the City of Redwood City for review and approval prior to construction of the project site. The certified SWPPP will be posted at the site and will be updated to reflect current site conditions.

Post-Construction Impacts

Implementation of the project will result in a decrease in pollutant loads due to an approximately four percent increase in permeable surfaces on the site. Nevertheless, the project site will still contribute the same types of stormwater runoff pollutants as the existing development. Street and parking area runoff often carries grease, oil, and trace amounts of heavy metals into natural drainages. Runoff from landscaping can carry pesticides, herbicides, and fertilizers. Although the amounts of these pollutants ultimately discharged into the waterways are unknown, over time they could be substantial.

The existing and proposed square footages of pervious and impervious surfaces are shown on Table 2, below. The existing project site is approximately 60,600 square feet¹³, of which approximately 98 percent is currently comprised of impervious surfaces. The proposed project will replace 57,000 square feet of impervious surface on-site. The remaining 3,600 square feet will be landscaping. The project will result in a net reduction in impervious surfaces on the site, so implementation of the proposed project will decrease the amount of runoff and pollution flowing into the storm drain system.

TABLE 2 Pervious and Impervious Surfaces On-Site (in square feet)						
Site Surface	Existing Conditions	%	Project Conditions	%	Net Difference	%
Impervious						
Buildings/Parking/Driveways	59,400	98	57,000	94	-2,400	-4
Pervious						
Landscaping	1,200	2	3,600	8	+2,400	+4
Total	60,600	100	60,600	100		

Because the project will replace more than 10,000 square feet of impervious surface area on the project site, the project must comply with the City of Redwood City’s Stormwater Management and Discharge Control Program and the SWRCB Municipal Regional NPDES permit. In order to meet these requirements, the project proposes vegetated swales along the north and south perimeters of the project site. Stormwater runoff will drain into these swales prior to entering the storm drainage system.

The proposed treatment facilities have been numerically sized and will have sufficient capacity to treat all the stormwater runoff entering the storm drainage system. In addition, the project will be required to record an Operation & Maintenance Agreement to ensure continued maintenance and performance of post-construction measures. The proposed treatment system combined with the net reduction in stormwater runoff will result in a less than significant impact on water quality. **(Less Than Significant Impact)**

4.9.3.3 Groundwater Impacts

The proposed project will have less impermeable surface area than the existing condition, but will still not contribute to the recharging of the groundwater aquifers. The depth to groundwater on-site is approximately 6.5 to 8 feet bgs, which is below the subsurface fill layer. Implementation of the project site will not require ground disturbance below the fill layer and, as a result, will not interfere

¹³ One acre equals 43,560 square feet.

with groundwater flow or expose any aquifers. The water supply for the project site will not be met from the groundwater supply and, as a result, the project will not deplete the existing groundwater supply or impact the groundwater aquifer. **(Less Than Significant Impact)**

4.9.4 Conclusion

With implementation of the proposed mitigation measures, the proposed project would have a less than significant hydrology impact. **(Less Than Significant Impact with Mitigation)**

4.10 LAND USE

4.10.1 Setting

The following discussion identifies the existing conditions on and adjacent to the proposed project site.

4.10.1.1 Existing Land Uses

The approximately 60,600 square foot L-shaped project site is comprised of a single parcel generally located on the east side of Industrial Way, between Flower Street and E Street in the City of Redwood City. The project site is located in an existing urban/industrial/residential area and is developed with one single-story warehouse building totaling 9,900 square feet and one single-story office building totaling 8,300 square feet. The remainder of the site is paved except for a few small landscape areas around the buildings. The paved areas are currently used for parking and storage of materials. The warehouse building is located at the back of the property and the office building fronts Industrial Way.

Most of the project site is currently separated from the surrounding development by a six-foot chain link fence.

Figure 4 shows an aerial of the project site and surrounding land uses.

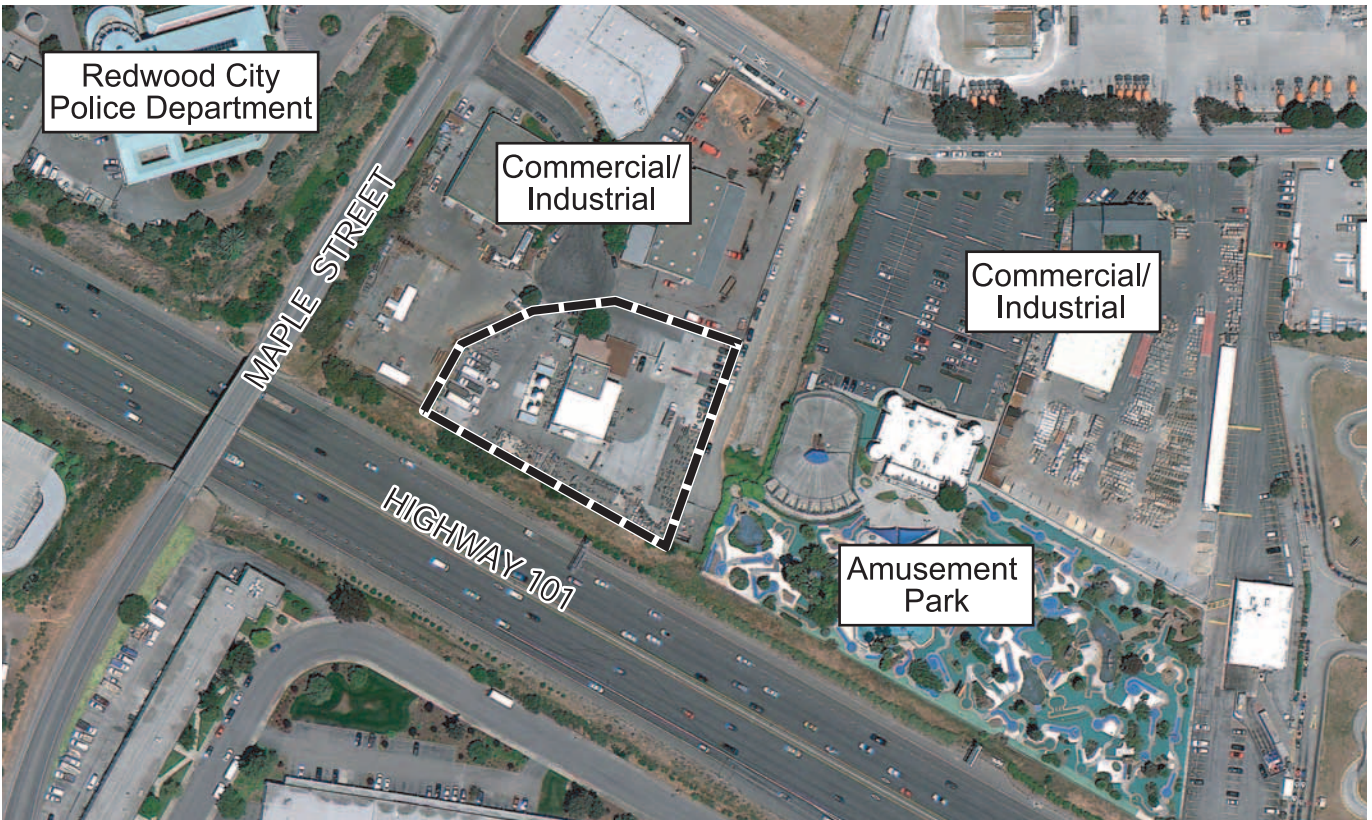
4.10.1.2 Surrounding Land Uses

The project site is adjacent to two one-story industrial buildings and a two-story (three level) parking garage to the north, a one-story industrial building to the south, the Veterans Boulevard off-ramp from US 101 to the east, and Industrial Way to the west, beyond which is a residential neighborhood.

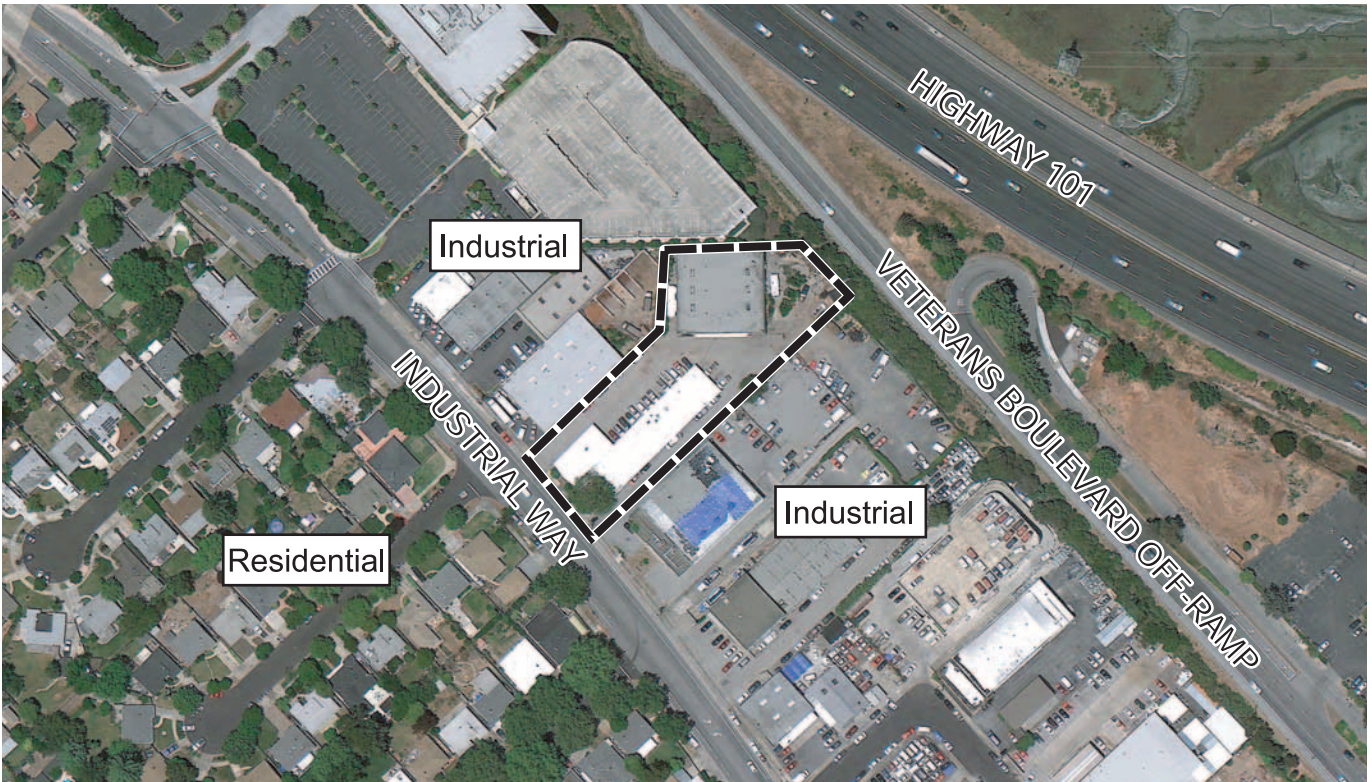
In the vicinity of the project site, Industrial Way is a two-lane roadway with a center turn lane, sidewalks and bicycle paths on both sides. Development in the project area is a combination of low-rise industrial buildings and residential development. The east side of Industrial Way is developed with light industrial buildings and the west side of the roadway is developed with a single-family residential neighborhood. Power poles line the sidewalk on the east side of the roadway, including one pole centered on the secondary driveway of the project site.

4.10.1.3 Existing Land Use Designation and Zoning

The City of Redwood City General Plan is an adopted statement of goals and policies for the future character and quality of development of the community. The Zoning Ordinance establishes various districts within the City and specifies the lawful uses within the districts to encourage the most appropriate use of land within the City. The project site is designated *Light Industrial* under Redwood City's adopted General Plan and *IR – Industrial-Restricted* under the City's zoning ordinance.



Existing Airgas Facility Location (50 Chemical Way)



Proposed Airgas Facility Location (1826 Industrial Way)

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 4

4.10.2 Environmental Checklist and Discussion

LAND USE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.10.2.1 Land Use Impacts

Implementation of the proposed project is the relocation of an existing industrial business to a site zoned for industrial land uses and designated industrial in the General Plan. Operation of the Airgas facility on-site and demolition of the office building will not conflict with any applicable land use plan, policy, or regulation because the project would be the continued use of the project site for industrial business operations.¹⁴ The proposed project is consistent with the General Plan including Policies BE-23.3 and BE-32.2 which support the establishment and retention of commercial, office, and industrial businesses to benefit the local economy without conflicting with surrounding land uses.

Use of the site for industrial businesses has been previously approved and, therefore, was determined to be compatible with the surrounding land uses. Because the proposed Airgas facility will not alter the existing land use designation, operation of the facility on-site will be compatible with the surrounding land uses.

The project will not significantly alter the project site and will not divide an established community or conflict with any applicable habitat conservation plan or natural community conservation plan.

4.10.3 Conclusion

Implementation of the proposed project will have a less than significant land use impact. **(Less Than Significant Impact)**

¹⁴ Outdoor uses on-site would be subject to the review and approval of a use permit.

4.11 MINERAL RESOURCES

4.11.1 Setting

The project site is located in central Redwood City. The project site and surrounding area are completely developed with urban land uses. There are no known mineral resources located on or adjacent to the project site.

4.11.2 Environmental Checklist and Discussion

MINERAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.11.2.1 Impacts to Mineral Resources

The project site is within a developed urban area and it does not contain any known or designated mineral resources. The project would not result in the loss of availability of a known mineral resources or a mineral resource recovery site.

4.11.3 Conclusion

The project would not result in a significant impact from the loss of availability of a known mineral resource. **(No Impact)**

4.12 NOISE

The following discussion is based on a noise analysis prepared by *Charles M Salter Associates* in October 2011. The report can be found in Appendix C of this report.

4.12.1 Setting

4.12.1.1 Background Information

Acceptable levels of noise vary from land use to land use. In any one location, the noise level will vary over time, from the lowest background or ambient noise level to temporary increases caused by traffic or other sources. State and Federal standards have been established as guidelines for determining the compatibility of a particular land use with its noise environment.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level* or *dba*.¹⁵ This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq} . The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_{01} , L_{10} , L_{50} , and L_{90} , are commonly used. They are the A-weighted noise levels equaled or exceeded during 1, 10, 50, and 90 percent of a stated time period.

Sound level meters can accurately measure environmental noise levels to within about plus or minus one dba. Since the sensitivity to noise increases during the evening hours, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Day/Night Average Sound Level*, L_{dn} , is the average A-weighted noise level during a 24-hour day, obtained after the addition of 10 dB to noise levels measured in the nighttime between 10:00 PM and 7:00 AM.

4.12.1.2 Noise Policies and Regulations

Based on the City's General Plan, Table 3 shows the noise levels considered consistent with specific land uses.

¹⁵ The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. All sound levels in this discussion are A-weighted, unless otherwise stated.

TABLE 3 Land Use Compatibility Guidelines for Community Noise in Redwood City							
Noise and Land Use Compatibility (Ldn)							
Land Use	55	60	65	70	75	80	85
Residential – Low Density							
Residential – Medium/Medium High Density							
Residential – High Density							
Mixed-Use Districts							
Commercial - Neighborhood							
Commercial – Regional							
Commercial - Office							
Marina							
Hospital							
Industrial/Port							
Public Facilities/Schools							
Open Space/Recreation							
	Normally Acceptable						
	Conditionally Acceptable						
	Normally Unacceptable						
	Clearly Unacceptable						

4.12.1.3 Existing Noise Environment

Proposed Project Site

The project site is located on east side of Industrial Way, just west of Highway 101. The site is adjacent to industrial businesses and is across the road from a residential neighborhood. The existing noise environment is created primarily by vehicular traffic on the highway, operation of industrial businesses along Industrial Way, and traffic noise from Industrial Way. Industrial land uses are not considered sensitive receptors and are not typically impacted by excessive ambient noise levels. The main issue regarding the proposed project is the impact of the proposed Airgas facility on the nearby residential neighborhood.

In order to quantify the ambient noise levels in the project area, noise measurements were completed at the nearest sensitive receptors to the project site. Specifically, noise measurements were taken near the residences at Industrial Way and Flower Street. Between 5:00 AM and 5:00 PM, average noise levels ranged from 64 to 71 dBA with the lowest noise levels measured between 5:00 AM and 6:00 AM. The maximum noise levels were measured at 81 to 99 dBA.

Existing Airgas Facility

In order to accurately estimate the noise levels in the project area with implementation of the proposed project, noise measurements were taken at the existing Airgas facility. The noise monitoring equipment was located in the central yard (location 1) where trucks drive through for tank pick-up and drop-off to measure the overall ambient noise levels on-site. Noise levels at this location

were affected by traffic noise on Highway 101, so noise measurements were also taken on the highway (location 2) in order to adjust for that noise source. Additional short-term measurements (locations 3 and 4) were made of specific activities and equipment on-site including pumps, compressors, tank discharge, and idling forklifts. A summary of the noise measurements are shown in Table 4 below.

Measurement Location		Average Noise Levels	Lmax Noise Levels ¹⁶
1	Central Yard	71 to 84 dBA	103 dBA
2	Centerline of Highway 101	73 dBA	86 dBA
3	15 Ft from discharging nitrogen tank	77 dBA	85 dBA
4	15 feet from idling forklift	---	72 dBA

4.12.2 Environmental Checklist and Discussion

NOISE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project result in:						
1) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,11
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,11
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,11
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,11
5) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,11

¹⁶ Lmax represents the maximum noise level during an individual noise event.

NOISE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project result in: 6) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,11

4.12.2.1 Noise Impacts from the Project

Operational Impacts

The existing Airgas facility produces average noise levels of 71 to 84 dBA. The loudest steady noise is produced by the discharging of gas tanks in the equipment area which is approximately 85 dBA at 15 feet from the noise source on the project site. This area will be located 300+ feet from the nearest residences. At 300 feet, this activity would generate a noise level of approximately 59 dBA.

Heavy truck circulation through the project site would be slightly different than truck circulation at the existing facility. At the project site, large trucks would require more maneuvering to reach the tanks. This could increase the duration or volume of noise generated by the trucks. As stated above, the tanks are located at the back of the property, more than 300 feet from the nearest residences. While the truck noise on-site may be slightly higher than at the existing facility, it will not significantly increase ambient noise levels.

Based on the existing ambient noise levels in the project area and the noise levels generated by the existing Airgas facility, it is estimated that operation of the proposed facility would increase ambient noise levels by one decibel. A one decibel increase is barely perceptible and would not adversely impact the nearby residences. **(Less Than Significant Impact)**

Heavy trucks would be utilized daily as part of the Airgas operations consistent with previous uses of the site with other industrial businesses. Based on industry standards, traffic volumes must double for there to be a perceptible increase in ambient noise levels. Specifically, more than 100 additional truck trips in one hour would be necessary for truck trips to/from the site to noticeably increase ambient noise levels. The project will have no more than 11 traffic trips (which includes both private automobiles and heavy trucks) in any given hour.¹⁷ Therefore, the proposed project would have a less than significant long-term noise impact. **(Less Than Significant impact)**

Construction Impacts

Construction activity would require the use of heavy equipment during demolition and grading that would temporarily increase noise levels within the project area. Typical noise levels generated by construction equipment range from 75 dBA to 80 dBA at a distance of 100 feet from the construction

¹⁷ The traffic report estimates that the project site would generate a total of 11 AM Peak Hour trips, which is the highest peak hour of traffic for the proposed project.

site. Construction activities would be most noticeable at residential land uses located along the north boundary of the project site.

Impact NOI-1: Noise generating activities associated with demolition and grading and construction activities on the project site would temporarily elevate noise levels in the area surrounding the project site. **(Significant Impact)**

Project-Specific Mitigation Measures:

The following construction Best Management Practices will be enforced at the site to reduce noise impacts on neighboring properties:

MM NOI - 1.1: The following measures are included in the project to reduce construction impacts to a less than significant level:

- Construction activities shall be limited to the hours between 7:00 AM and 6:00 PM, Monday through Friday, and between the hours of 9:00 AM to 6:00 PM on Saturday. No construction activities shall occur on Sundays or holidays.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise generating equipment as far as possible from adjacent residential properties.
- Acoustically shield stationary equipment located near existing residential properties.
- Utilize “quiet” air compressors and other stationary noise sources where technology exists.
- The contractor shall prepare a construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordinating with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a “disturbance coordinator” who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem.

4.12.3 Conclusion

Implementation of the proposed mitigation measures will reduce short-term construction noise impacts to a less than significant level. **(Less Than Significant Impact With Mitigation)**

Operation of the proposed Airgas facility during the proposed business hours will have a less than significant impact on nearby sensitive receptors. **(Less Than Significant Impact)**

4.13 POPULATION AND HOUSING

4.13.1 Setting

According to California Department of Finance 2010 census data, Redwood City's population for 2010 was 76,815 persons. In 2010, there were 27,957 households with 2.69 persons per household.¹⁸ The Association of Bay Area Governments (ABAG) projects the population for Redwood City to be 96,200 in 2030.¹⁹ As of 2008, the City had approximately 52,000 jobs (with an additional 5,700 jobs located within the City's sphere of influence) and an active labor force of approximately 43,600 people.

The jobs/housing balance is the relationship between the number of housing units required as a result of local jobs and the number of residential units available in the City. This relationship is quantified by the jobs/employed resident ratio. When the ratio reaches 1.0, a balance is struck between the supply of local housing and local jobs. The jobs/employed resident ratio is determined by dividing the number of local jobs by the number of employed residents that can be housed in local housing.

Redwood City currently has a higher number of jobs than employed residents (approximately 1.32 jobs per employed resident) and is projected to continue to have a higher number of jobs than employed residents with full build-out under the current General Plan.

4.13.2 Environmental Checklist and Discussion

POPULATION AND HOUSING						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,8
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,8
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12,3,8

¹⁸ State of California Department of Finance. *Census 2010*. 2010.
<http://www.dof.ca.gov/research/demographic/reports/view.php#objCollapsiblePanelCensusSurveysAnchor>
 Accessed November 7, 2011.

¹⁹ Association of Bay Area Governments. *Building Momentum: Projections and Priorities 2009*, August 2009.

4.13.2.1 Population and Housing Impacts

The project site is currently developed with an industrial land use and would continue to be used as industrial land under the proposed project. Implementation of the proposed project would not displace any housing and would not require replacement housing to be constructed. The project would result in the demolition of one office building, which would incrementally decrease jobs in the City but would ultimately have no effect on the overall jobs/housing imbalance in the City.

The proposed project would not induce population growth, displace existing housing, or displace residents requiring the construction of new housing. Implementation of the proposed project would not impact population and housing in Redwood City. **(No Impact)**

4.13.3 Conclusion

Implementation of the proposed project would have no impact on population and housing. **(No Impact)**

4.14 PUBLIC SERVICES

4.14.1 Setting

4.14.1.1 Fire and Police Protection Services

Fire protection services for the project site are provided by the Redwood City Fire Department (RCFD). Automatic mutual aid is provided by the California Department of Forestry and Fire Protection and adjacent cities such as Menlo Park, Woodside, Belmont, and San Carlos. The RCFD has a goal of responding to emergency calls within five to seven minutes. The closest station to the project site is Station No. 9 at 755 Marshall Street approximately one mile southeast of the site.

Police protection services for Redwood City are provided by the Redwood City Police Department (RCPD), which is headquartered at 1301 Maple Street, approximately one mile east of the project site. In an average year the RCPD responds to 77,000 calls for service. In the 2009/2010 fiscal year, the most frequent calls for service in the City dealt with larceny, burglary, vehicle theft, and assault.²⁰ The officer-to-population ratio in Redwood City is currently 1.23 officers per 1,000 residents.²¹ The Police Department has a goal of responding to emergency calls and arriving on-scene within five minutes.²²

4.14.2 Environmental Checklist and Discussion

PUBLIC SERVICES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
<p>Would the project:</p> <p>1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</p> <p>Fire Protection?</p> <p>Police Protection?</p> <p>Schools?</p> <p>Parks?</p> <p>Other Public Facilities?</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>1,2,3</p> <p>1,2,3</p> <p>1,2,3</p> <p>1,2,3</p> <p>1,2,3</p>

²⁰ Redwood City Police Department website.

²¹ Redwood City General Plan EIR

²² Redwood City General Plan.

4.14.2.1 Impacts to Public Services

The proposed project would relocate an existing Airgas facility in Redwood City to a new site in an existing industrial building also located in Redwood City. The project site is already served by fire and police protection services and would not result in an increase in demand for fire or police services beyond what already exists in the City. **(Less Than Significant Impact)**

The proposed project would not increase the permanent population of the City. As a result, the project would have no direct impact on the use of schools, libraries, parks, or other public facilities. **(No Impact)**

4.14.3 Conclusion

The project would have a less than significant impact on public services with Redwood City. **(Less Than Significant Impact)**

4.15 RECREATION

4.15.1 Setting

Redwood City has approximately 225 acres of park facilities including mini-parks, neighborhood parks, community parks, special use parks, and sports fields on public school property. In addition to parks, the City manages four community centers which offer opportunities for fitness and classroom activities. The City also has one senior center, two outdoor pools that are operated during the summer months, and several recreational bicycle paths including access to the regional Bay Trail. Although bicycle facilities are provided along many roadways, the bicycle network in Redwood City does not serve the project area. The City Department of Parks, Recreation and Community Services is responsible for the design, construction, operation, and maintenance of City recreational facilities.

4.15.2 Environmental Checklist and Discussion

RECREATION						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.15.2.1 Recreation Impacts

The proposed project would relocate an existing Airgas facility in Redwood City to a new site in an existing industrial building also located in Redwood City. The project would not increase the permanent population of the City. As a result, the project would not increase the use of existing recreational facilities or require the construction of new recreational facilities. **(No Impact)**

4.15.3 Conclusion

Implementation of the proposed project would not result in accelerated deterioration of local recreational facilities or the need for new recreational facilities. **(No Impact)**

4.16 TRANSPORTATION

The following discussion is based on a traffic analysis prepared by *Hexagon Transportation Consultants* in October 2011. The report can be found in Appendix D of this report.

4.16.1 Setting

The proposed project site is located on Industrial Way. In the vicinity of the project site, Industrial Way is a two-lane roadway (one lane in each direction) with a center turn lane between the two travel lanes. The turning lane provides access to the adjacent driveways and roadways for both directions of traffic. Industrial Way also has designated bike lanes in both directions.

Access to the project site is provided via two ingress/egress driveways on Industrial Way. The main driveway is 35 feet wide and the secondary driveway is 25 feet wide.

4.16.2 Environmental Checklist and Discussion

TRANSPORTATION/TRAFFIC						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio of roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,12
2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,12
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3,13
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
5) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.16.2.1 Transportation Impacts

Project Trip Generation

Trip generation counts were taken at the existing Airgas facility and at the project site, which is currently occupied by a landscape contractor. The result of the traffic counts are shown in Table 5 below.

Location	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
50 Chemical Way (existing Airgas facility)	5	6	11	2	4	6
1826 Industrial Way (proposed project site) ²³	23	10	33	10	19	29
<i>Net Project Trips</i>	-18	-4	-22	-8	-15	-23

As shown in Table 5, the Airgas facility has fewer daily trips than the existing industrial operation on the project site. Airgas operations on the proposed relocation site would be comparable to their existing operations at the Chemical Way site; therefore, the project would result in fewer daily traffic trips to/from the project site. With fewer trips entering and leaving the project site (and truck trips restricted to right turns only out of the site), there would be no level of service impacts on any local roadways or intersections that provide access to the project site. **(No Impact)**

4.16.2.2 Other Transportation Considerations

The project as proposed does not include any design feature that would result in substantial hazards to future site users or adjacent properties. The City's Fire Department has reviewed the site design plans and has determined that the project design would not result in inadequate emergency access. The project would not affect any existing or planned pedestrian, bicycle, or transit facilities.

The project would not construct any new buildings. The exterior storage tanks would be 20 to 34 feet tall, but would not interfere with air traffic patterns (see discussion in Section 4.8.2.1). **(No Impact)**

4.16.3 Conclusion

The proposed project will have a less than significant transportation impact. **(Less Than Significant Impact)**

²³ Based on the current landscape contractors operations.

4.17 UTILITIES AND SERVICE SYSTEMS

4.17.1 Setting

4.17.1.1 Water Services

The City's local water system service area is approximately 14 square miles and is operated by the Redwood City Public Works Services Department – Water Services Division. Redwood City draws its water from the regional water system pipelines at 13 metered connections. The City water distribution system is comprised of 262 miles of distribution mains, 10 pump stations, 2,385 fire hydrants, and 26 pressure reducing valve stations. The City receives potable water from the Hetch-Hetchy regional water system and recycled water from the South Bayside System Authority sub-regional wastewater treatment plant.

Based on actual water meter readings collected by the City's Revenue Services Department, the project site currently uses approximately 252.1 gallons per day (gpd) of potable water.

4.17.1.2 Wastewater

The City operates and maintains a sewer pipeline system comprised of 192 miles of sewer mains and 31 sewer lift stations.²⁴ The system conveys wastewater to the South Bayside System Authority (SBSA) Wastewater Treatment Plant. After treatment, the wastewater is discharged through an outfall into the San Francisco Bay, as permitted by the San Francisco Regional Water Quality Control Board (RWQCB).

The treatment plant operating capacity is 29 million gallons per day of average dry weather flow. Between June and October 2008, the average dry weather flow was 15.8 million gallons per day, or 54 percent of the treatment plant operating capacity. Even though the treatment plant currently operates well below capacity for dry weather flow, there are wet weather condition capacity issues due to rain and groundwater infiltration into the collection system. While Redwood City has wet weather condition problems, it is considered to be among the industry's average.

Based on the water usage rates, it is estimated that the existing land uses on-site generate approximately 214.3 gallons of wastewater per day. This estimate assumes that 15 percent of all potable water usage is for landscaping and does not enter the wastewater drainage system.

4.17.1.3 Storm Drainage

The Redwood City Public Works Services Department maintains the storm drainage system which serves the project site. Stormwater in Redwood City is conveyed into creeks, lined channels, storm drainage pipes and retention basins, all of which drain directly into San Francisco Bay.

4.17.1.4 Solid Waste

Solid waste and recyclable materials from Redwood City are initially transported to the South Bayside Transfer Station (SBTS),²⁵ located in the City of San Carlos. In 2006, Redwood City diverted 61 percent of its waste from landfills through recycling and reuse.

²⁴ A sewer lift station is used to pump sewage or wastewater uphill from a low-lying neighborhood to a collection system of pipes.

²⁵ A transfer station is where recyclables and refuse are collected and sorted in preparation for processing or landfill.

Collection service to non-residential properties, such as the existing industrial land uses, is provided by a number of non-exclusive service providers and non-residential waste may be disposed at any of four privately owned landfills in San José. The existing land use currently generate approximately 1,077 pounds of solid waste per day.²⁶

4.17.2 Environmental Checklist and Discussion

UTILITIES AND SERVICE SYSTEMS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
3) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,3
5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
7) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

4.17.2.1 **Water Supply**

The project site currently uses approximately 252 gpd of potable water. Based on the water usage at the existing Airgas facility, the proposed project would use approximately 827 gpd of potable water. Implementation of the proposed project will result in an approximately 575 gpd net increase in water usage on-site. While the project would increase water usage on-site, the increase would not be

²⁶ California Integrated Waste Management Board. Estimated Solid Waste Generation Rates for Warehouse and Office Establishments. This estimate is based upon 0.0108 tons of solid waste per square feet per year.

significant. There is sufficient water supply to support the proposed project. In addition, the existing water supply system has sufficient capacity to serve the current water demand on the project site. **(Less Than Significant Impact)**

4.17.2.2 Sanitary Sewer Capacity

Wastewater generation is directly related to water usage. The net increase in water usage on-site will equate to a net increase in wastewater generation. Specifically, implementation of the proposed project would result in an approximately 489 gpd net increase in wastewater generation on-site. This increase represents less than one-tenth of one percent of the total wastewater generated in the City. The existing sanitary sewer system, including the drainage lines and treatment plant, have sufficient capacity to serve the proposed project. **(Less Than Significant Impact)**

4.17.2.3 Storm Drainage System

The project site is currently 98 percent impervious. The existing storm drainage system has sufficient capacity to support the current land use. The project would increase pervious surfaces at the site by four percent, which would increase on-site filtration and decrease the amount of water entering the storm drainage system. Because the proposed project will result in a net decrease in stormwater runoff, the existing storm drainage system will have sufficient capacity to accommodate the proposed project. **(No Impact)**

4.17.2.4 Solid Waste

Implementation of the proposed project will result in the relocation of an existing Airgas facility to a new location. Airgas operations on the project site will be comparable to the existing operations, so solid waste generation is estimated to be the same. Relocation of the Airgas facility would not result in any increase in solid waste generation in Redwood City.

On the proposed project site, the existing warehouse would be occupied by Airgas and the existing office building will be demolished. Because the existing office would be demolished, there would be a slight decrease in total office space in Redwood City which would equate to a slight decrease in solid waste generation. Therefore, with implementation of the proposed project, there would be a small net decrease in total solid waste generation within Redwood City. **(No Impact)**

Implementation of the proposed project will require removal of the existing asphalt and repaving of the site. The project proposes to use the existing asphalt as base material for the new pavement, thereby recycling the old asphalt. This reuse of materials will reduce temporary solid waste production and disposal that would result from construction of the project. **(No Impact)**

4.17.3 Conclusion

The project would have a less than significant impact on local utilities and service systems that serve the project site. **(Less Than Significant Impact)**

4.18

MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1-13
2) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1-13
3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1-13

4.18.1 Findings

The project would result in temporary air quality, geology, hazardous materials, and noise impacts during construction. With implementation of the identified mitigation measures construction impacts would be reduced to a less than significant level. Because these identified impacts will occur over a relatively small timeframe, will be mitigated to less than significant, and will not occur during construction of other projects in the immediate project area, the proposed project would not have a cumulatively considerable impact on air quality, geology, hazardous materials, or noise in the project area.

As discussed in the respective sections, the proposed project would have no impact or a less than significant impact on aesthetics, agricultural and forestry resources, biological resources, cultural resources, hydrology and water quality, land use, greenhouse gas emissions, mineral resources, population and housing, public services, recreation, transportation, and utility and service facilities.

There are no recently approved or reasonably foreseeable projects that, when combined with the proposed project, would result in a cumulatively considerable impact.

4.18.2 Conclusion

Implementation of the proposed project would not result in any significant unavoidable impacts, impacts that are cumulatively considerable, or directly or indirectly cause substantial adverse affects on human beings. **(Less Than Significant Impact)**

SECTION 5 CHECKLIST SOURCES

1. CEQA Guidelines - Environmental Thresholds (Professional judgment and expertise)
2. City of Redwood City General Plan, 2010
3. Redwood City. *General Plan Draft EIR*. 2010.
4. California Department of Conservation. *San Mateo County Important Farmland*. 2006.
5. BAAQMD Air Quality Monitoring Data
6. BAAQMD CEQA Guidelines, May, 2011.
7. Federal Emergency Management Agency (FEMA) *Flood Insurance Map Community Panel 0603250011B*. 1982.
8. California Department of Finance Census Data
9. Geotechnical Report
10. Risk Modeling Analysis
11. Noise Analysis
12. Transportation Analysis
13. San Mateo Country Comprehensive Airport Land Use Plan

SECTION 6 REFERENCES

Association of Bay Area Governments. *Building Momentum: Projections and Priorities 2009*, August 2009.

Association of Bay Area Governments. Geographic Information Systems.
<<http://gis.abag.ca.gov/website/LiquefactionCGS/>>

Bay Area Air Quality Management District. *CEQA Guidelines*. May 2011. Available at:
<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_June%202010.ashx>

Bay Area Air Quality Management District. *Annual Bay Area Air Quality Summaries*.
<<http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx>>

Bay Area Air Quality Management District. *Air Quality Standards and Attainment Status*. Accessed August 24, 2009. Available at: <http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm>

Bay Area Air Quality Management District. *Tools and Methodology*. May 2011.
<<http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>>

Belinda Blackie. Airgas Modeling Analysis. October 2011.

California Department of Conservation. *San Mateo County Important Farmland*. 2006.
<<ftp://ftp.consrv.ca.gov/pub/dlrp/fimmp/pdf/2006/smt06.pdf>> Accessed June 29, 2011.

California Department of Finance. Census 2010.
<<http://www.dof.ca.gov/research/demographic/reports/view.php#objCollapsiblePanelCensusSurveysAnchor>>

California Integrated Waste Management Board. 2011
<http://www.calrecycle.ca.gov/wastechar/wastegenrates/>

Charles M. Salter Associates. Airgas Plant Relocation Environmental Noise Study. October 2011.

ENGEO Incorporated. Geotechnical Report for 1826 Industrial Way. October 2011.

Federal Emergency Management Agency (FEMA). *Flood Insurance Map Community Panel* 0603250011B. 1982. <<http://msc.fema.gov>>

Hexagon Transportation Consultants. Traffic Analysis for the Airgas Relocation to 1826 Industrial Way. October 2011.

IPCC, 2007. "Summary for Policymakers, In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: <<http://www.ipcc.ch/>>

Redwood City. *General Plan Draft EIR*. 2010.
<http://www.redwoodcity.org/phed/planning/eir/pdf/gp/4.15_Utilities.pdf>

Redwood City. *General Plan*. 2010.

Redwood City. Official Website. <http://www.redwoodcity.org/>

San Mateo County. Comprehensive Airport Land Use Plan. December 1996.
http://www.ccag.ca.gov/plans_reports.html

State of California Energy Commission. *2009 California Climate Adaptation Strategy Discussion Draft. Frequently Asked Questions*. August 3, 2009.
<www.climatechange.ca.gov/adaptation/documents/2009-07-31_Discussion_Draft-Adaptation_FAQs.pdf>

United States Environmental Protection Agency. Risk Management Plan Guidelines. 2009

SECTION 7 LEAD AGENCY AND CONSULTANTS

Lead Agency

City of Redwood City

Bill Ekern, Community Development Director

Jill Ekas, Planning Manager

Blake Lyon, Acting Principal Planner

Consultants

David J. Powers & Associates

San José, CA

Akoni Danielsen, Principal

Shannon George, Senior Project Manager

Tanya Cottle, Assistant Project Manager

Stephanie Francis, Graphic Artist

Sub-Consultants

Belinda Blackie, P.E., R.E.A.

San José, CA

Hazardous Materials

Charles M. Salter Associates

San Francisco, CA

Acoustics

Hexagon Transportation Consultants

San José, CA

Transportation