Chapter 5
Environmental Justice

5.1 Introduction

The environmental justice analysis complies with Executive Order 12898, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, which requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on minority and low-income populations, and with the Council on Environmental Quality (CEQ) *Guidance for Environmental Justice Under NEPA* (CEQ, 1997). This assessment is also consistent with California state law regarding environmental justice.

5.2 Environmental Setting

The Berth 97-109 Container Terminal site is located in the Port of Los Angeles and adjacent to two City of Los Angeles communities: Wilmington (to the north) and San Pedro (to the west). For this assessment, the area of potential effect was determined in accordance with CEQ's guidance for identifying the "affected community," which requires consideration of the nature of likely Project impacts and identification of a corresponding unit of geographic analysis. Therefore, the area of potential Project effect for purposes of environmental justice corresponds to the areas of effect associated with the specific environmental issues analyzed in this EIS/EIR. Areas of potential effect differ somewhat for each environmental issue.

Environmental justice guidance from CEQ (1997) defines "minority persons" as "individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black (not of Hispanic origin); or Hispanic" (CEQ, 1997). Hispanic or Latino refers to an ethnicity whereas American Indian, Alaskan Native, Asian, Pacific Islander, and Black/African-American (as well as White or European-American) refer to racial categories; thus, for Census purposes, individuals classify themselves into racial categories as well as ethnic categories, where ethnic categories include Hispanic/Latino and non-Hispanic/Latino. The 2000 Census allowed individuals to choose more than one race. For this analysis, consistent with guidance from CEQ (1997) as well as USEPA (1998, 1999b), "minority" refers to people who are Hispanic/Latino of any race, as well as those who are non-Hispanic/Latino of a race other than White or European-American.

The same CEQ environmental justice guidance (CEQ, 1997) suggests low-income populations be identified using the national poverty thresholds from the Census Bureau; guidance from USEPA (1998, 1999b) also suggests using other regional low-income definitions as appropriate. Due to the higher cost of living in southern California compared to the nation as a whole, a higher threshold is appropriate for the identification

of low-income populations. For the purposes of this analysis, low-income people are those with a household income of 1.25 times the national Census poverty threshold. The 1.25 ratio is based on application of a methodology developed by the National Academy of Sciences (Citro and Michael, 1995) and incorporates detailed data about fair market rents over the period 1999-2007 for Los Angeles County from the U.S. Department of Housing and Urban Development (HUD, 2007). Appendix G.1 contains a detailed description of the method used to derive the low-income definition.

To establish context for this environmental justice analysis, race and ethnicity (i.e., minority) and income characteristics of the population residing in the vicinity of the Berth 97-109 Container Terminal site were reviewed. Table 5-1 presents population, minority, and low-income status from the 2000 Census and the Los Angeles City Planning Department for Wilmington, San Pedro, Los Angeles County and the City of Los Angeles, and California. The table also presents similar data for other cities in the general vicinity of the Port. Los Angeles County is used as the comparison population because it is considered representative of the general population that could be affected by the Project.

Table 5-1. Minority and Low-Income Populations

Place	Total Population	Percent Minority Population	Percent Low-Income Population
California	33,871,648	53.4	19.2
Los Angeles County	9,519,338	69.1	23.9
City of Los Angeles	3,694,834	70.4	29.1
San Pedro	76,028	55.3	22.5
Wilmington	75,215	87.1	32.2
Nearby Cities			
Carson	89,730	88.0	13.4
Lomita	20,046	46.4	15.5
Long Beach	461,522	66.9	29.8
Palos Verdes Estates	13,340	23.9	2.2
Rancho Palos Verdes	41,145	36.9	3.5
Rolling Hills	1,871	23.5	1.3
Rolling Hills Estates	7,676	29.4	3.3
Torrance	137,946	47.6	8.8
West Carson	21,138	70.7	13.3

Source: U.S. Census Bureau, 2000; Los Angeles Department of City Planning, 2000 (data for Wilmington and San Pedro, which are defined based on Community Plan Areas).

Table 5-1 shows that within Wilmington (as the neighborhood is defined by the Los Angeles City Planning Department), minorities constitute 87.1 percent of the population, and low-income persons constitute 32.2 percent of the population. Within San Pedro, minorities comprise 55.3 percent of the population, and 22.5 percent of the population is low-income. Thus, both neighborhoods constitute a "minority population concentration" under CEQ guidance because the guidance indicates such a concentration exists if the percent minority exceeds 50 percent. Wilmington has a low-income population concentration, but San Pedro does not, compared to Los Angeles County.

Figure 5-1 shows the percentage of minority residents in Census block groups surrounding the proposed Project Site and the Port, and Figure 5-2 shows the percentage of low-income residents in the same area. Table 5-2 presents data for the 37 Census tracts shown in Figures 5-1 and 5-2. Table G.2-1 in Appendix G.2 provides data for the 134 block groups shown in Figures 5-1 and 5-2.

Table 5-2. Minority and Low-Income Characteristics in the Vicinity of the Proposed Project Site

Census Tract	Total Population	Percent Minority Population	Percent Low-Income Population
2933.01	2,977	66.3	8.7
2933.02	4,302	65.3	15.3
2933.04	4,207	81.5	29.2
2933.05	4,660	64.4	20.5
2941.10	4,060	90.9	19.4
2942	4,425	88.1	24.3
2943	7,059	88.9	32.6
2944.10	3,854	84.0	34.3
2944.20	3,270	88.2	38.0
2945.10	4,266	95.6	36.9
2945.20	3,609	93.8	35.2
2946.10	3,875	93.2	27.7
2946.20	3,931	97.9	35.0
2947	3,270	93.1	52.9
2948.10	4,039	97.7	42.9
2948.20	3,555	96.7	51.5
2948.30	3,274	96.1	48.1
2949	3,262	95.6	50.3
2951.01	5,188	34.1	8.5
2961	1,434	68.0	31.0
2962.10	2,858	92.3	42.9
2962.20	3,605	91.2	62.7
2963	4,348	52.2	13.2
2964	6,294	42.8	8.9
2965	3,796	85.5	26.3
2966	5,200	79.3	36.8
2971.10	4,547	79.4	48.1
2971.20	3,358	77.6	39.6
5436.03	4,116	62.4	9.0
5436.04	5,162	86.4	7.0
5437.03	3,617	84.3	11.1
5756	46	84.8	0.0
6510.01	5,057	46.5	6.3
6700.01	3,244	42.9	11.3
6700.02	3,773	50.0	14.5
6701	6,484	48.0	19.6
6707.01	6,777	32.9	5.1
TOTAL	**150,799**	**73.7**	**26.2**

5.3 Applicable Regulations

5.3.1 Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

In 1994, in response to growing concern that minority and/or low-income populations bear a disproportionate amount of adverse health and environmental effects, President Clinton issued Executive Order 12898 on Environmental Justice, formally focusing federal agency attention on these issues. The Executive Order contains a general directive that states that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

The Executive Order authorized the creation of an Interagency Working Group (IWG) on Environmental Justice, overseen by the U.S. Environmental Protection Agency (EPA), to implement the Executive Order's requirements. The IWG includes representatives of a number of executive agencies and offices and has developed guidance for terms contained in the Executive Order.

The EPA defines "environmental justice" as follows:

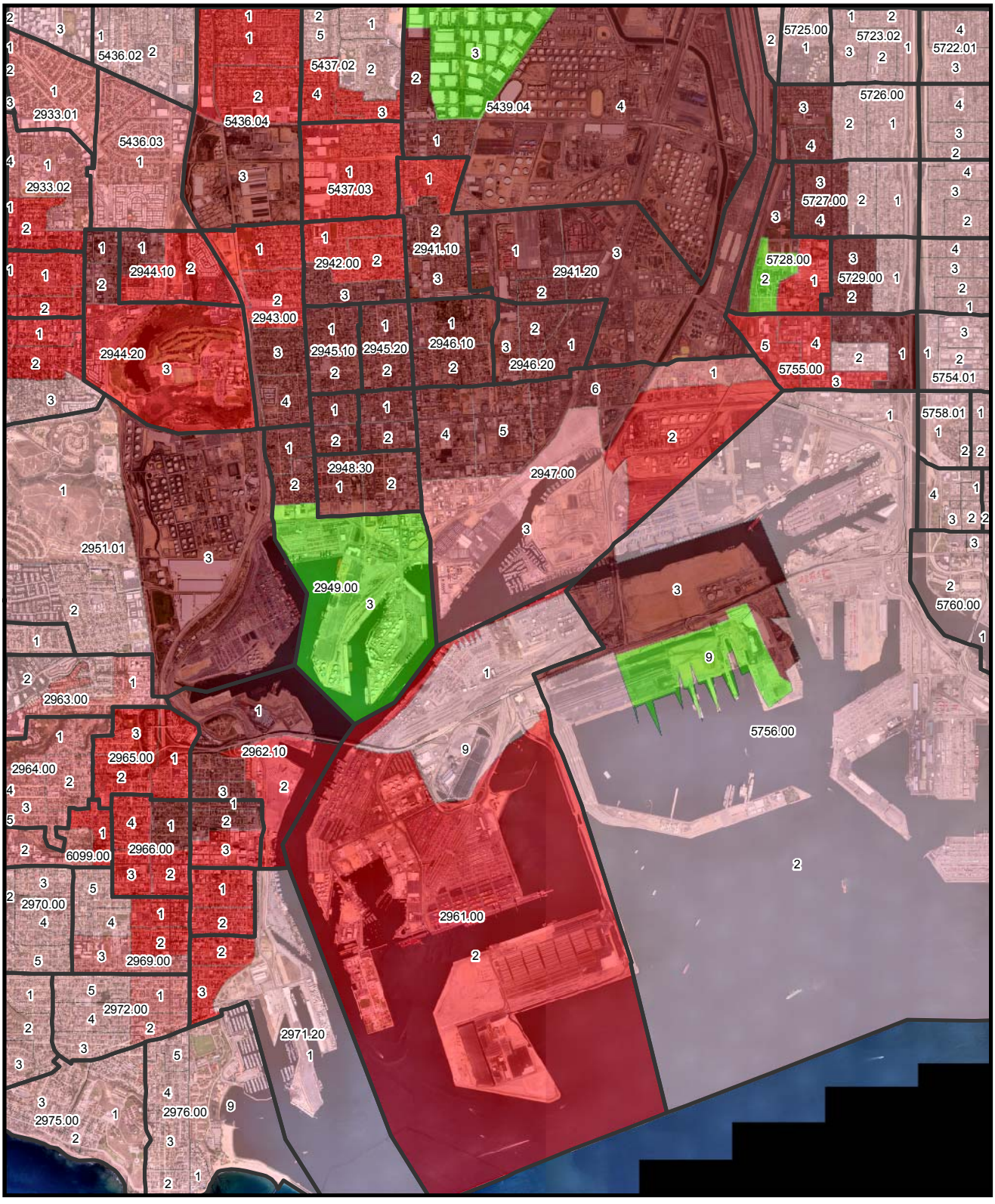
> *The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.* (EPA, 2004, Section 2.2)

The EPA defines "fair treatment" as follows:

> *No group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.* (EPA, 2004, Section 2.2)

The EPA defines "meaningful involvement" as follows:

1. *Potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health;*
2. *The public's contribution can influence the regulatory agency's decision;*
3. *The concerns of all participants involved will be considered in the decision making process; and*
4. *The decision makers seek out and facilitate the involvement of those potentially affected.* (EPA, 2004, Section 2.2)



LEGEND

- Cenesus Tract Number

Percent Minority Population

- 0%-50%
- >50%-70%
- >70%-90%
- >90%
- NA

0 1

Miles

1:60,000

Source: U.S. Census Bureau, 2000

Figure 5-1
Percent Minority Population
Berth 97-109 Container Terminal Project EIS/EIR

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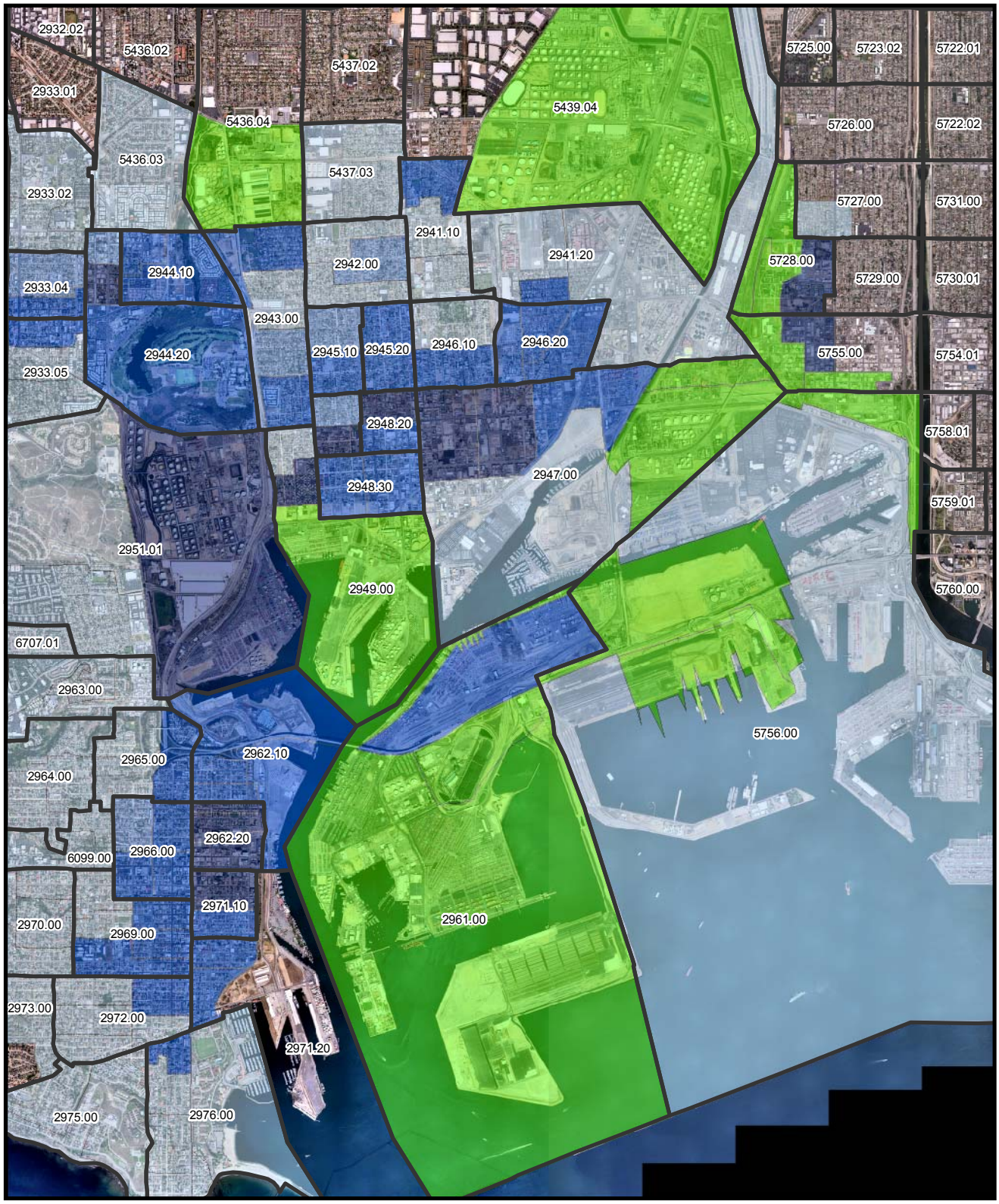

Figure 5-2
Percent Low-Income Population
Berth 97-109 Container Terminal Project EIS/EIR

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Finally, the EPA defines "disproportionately high and adverse effect" (or "impact") as follows:

> *An adverse effect or impact that: (1) is predominately borne by any segment of the population, including, for example, a minority population and/or a low-income population; or (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect or impact that will be suffered by a non-minority population and/or non-low-income population.* (EPA, 2004, Section 3.1)

In the Presidential Memorandum to departments and agencies that accompanies Executive Order 12898, the President cites the importance of the National Environmental Policy Act (NEPA) in identifying and addressing environmental justice concerns. The memorandum states that "each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA." The memorandum emphasizes the importance of the NEPA public participation process, directing that "each Federal agency shall provide opportunities for community input in the NEPA process." Agencies are directed to identify potential impacts and mitigations in consultation with affected communities and ensure the accessibility of meetings, crucial documents, and notices."

The Presidential memorandum identifies four provisions that identify ways agencies should consider environmental justice under NEPA, as follows:

1. Each federal agency should analyze the environmental effects, including human health, economic, and social effects of federal actions, including effects on minority populations, low-income populations, and Indian tribes, when such analysis is required by NEPA.
2. Mitigation measures identified as part of an environmental assessment (EA), a finding of no significant impact (FONSI), an environmental impact statement (EIS), or a record of decision (ROD) should, whenever feasible, address significant and adverse environmental effects of proposed federal actions on minority populations, low-income populations, and Indian tribes.
3. Each federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices.
4. Review of NEPA compliance (such as EPA's review under Section 309 of the Clean Air Act) must ensure that the lead agency preparing NEPA analyses and documentation has appropriately analyzed environmental effects on minority populations, low-income populations, or Indian tribes, including human health, social, and economic effects.

5.3.2 Council on Environmental Quality: Environmental Justice – Guidance under the National Environmental Policy Act

While the EPA has lead responsibility for implementation of Executive Order 12898 as chair of the IWG on Environmental Justice, the Council on Environmental Quality (CEQ) has oversight of the federal government's compliance with this Executive Order and NEPA. CEQ, in consultation with the EPA and other agencies, has prepared guidance to assist federal agencies in NEPA compliance in its Environmental Justice—Guidance under the National Environmental Policy Act (1997). This guidance provides an overview of Executive Order 12898; summarizes its relationship to NEPA; recommends methods for the integration of environmental justice into NEPA compliance; and incorporates as an appendix the IWG's definitions of key terms and concepts contained in the Executive Order.

Agencies are permitted to supplement CEQ's guidance with their own, more specific guidance tailored to their programs or activities or departments, insofar as is permitted by law.

Neither the Executive Order nor CEQ proscribe a specific format for environmental justice assessments in the context of NEPA documents. However, CEQ (1997) identifies the following six general principles intended to guide the integration of environmental justice assessment into NEPA compliance, and which are applicable to the proposed Project:

1. Agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action and, if so, whether there may be disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, or Indian tribes.

2. Agencies should consider relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population and historical patterns of exposure to environmental hazards, to the extent such information is reasonably available. For example, data may suggest there are disproportionately high and adverse human health or environmental effects on a minority population, low-income population, or Indian tribe from the agency action. Agencies should consider these multiple, or cumulative effects, even if certain effects are not within the control or subject to the discretion of the agency proposing the action.

3. Agencies should recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the agency's proposed action. These factors should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.

4. Agencies should develop effective public participation strategies. Agencies should, as appropriate, acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups.

5. Agencies should assure meaningful community representation in the process. Agencies should be aware of the diverse constituencies within any particular community when they seek community representation and should endeavor to have complete representation of the community as a whole. Agencies also should be aware that community participation must occur as early as possible if it is to be meaningful.

6. Agencies should seek tribal representation in the process in a manner that is consistent with the government-to-government relationship between the United States and tribal governments, the federal government's trust responsibility to federally recognized tribes, and any treaty rights.

CEQ (1997) states that the identification of a disproportionately high and adverse human health or environmental effect on a low-income or minority population does not preclude a proposed agency action from going forward or compel a finding that a proposed Project is environmentally unacceptable. Instead, the identification of such effects is expected to encourage agency consideration of alternatives, mitigation measures, and preferences expressed by the affected community or population.

5.3.3 California Government Code Sections 65041-65049; Public Resources Code Sections 71110-71116

Environmental justice is defined by California state law as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

The California Public Resources Code Section 71113 states that the mission of the California Environmental Protection Agency (Cal/EPA) includes ensuring that it conducts any activities that substantially affect human health or the environment in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

As part of its mission, Cal/EPA was required to develop a model environmental justice mission statement for its boards, departments, and offices. Cal/EPA was tasked to develop a Working Group on Environmental Justice to assist it in identifying any policy gaps or obstacles impeding the achievement of environmental justice. An advisory committee including representatives of numerous state agencies was established to assist the Working Group pursuant to the development of a Cal/EPA intra-agency strategy for addressing environmental justice. The California Public Resources Code Sections 71110-71116 charges the Cal/EPA with the following responsibilities:

+ Conduct programs, policies, and activities that substantially affect human health or the environment in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

+ Promote enforcement of all health and environmental statutes within Cal/EPA's jurisdiction in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

+ Ensure greater public participation in the agency's development, adoption, and implementation of environmental regulations and policies.

- Improve research and data collection for programs within the agency relating to the health and environment of minority populations and low-income populations of the state.
- Coordinate efforts and share information with the USEPA.
- Identify differential patterns of consumption of natural resources among people of different socio-economic classifications for programs within the agency.
- Consult with and review any information received from the IWG pursuant to developing an agency-wide strategy for Cal/EPA.
- Develop a model environmental justice mission statement for Cal/EPA's boards, departments, and offices.
- Consult with, review, and evaluate any information received from the IWG pursuant to the development of its model environmental justice mission statement.
- Develop an agency-wide strategy to identify and address any gaps in existing programs, policies, or activities that may impede the achievement of environmental justice.

California Government Code Sections 65040-65040.12 identify the Governor's Office of Planning and Research (OPR) as the comprehensive state agency responsible for long-range planning and development. Among its responsibilities, the OPR is tasked with serving as the coordinating agency in state government for environmental justice issues. Specifically, the OPR is required to consult with the Cal/EPA, state Resources Agency, the Working Group on Environmental Justice, and other state agencies as appropriate, and share information with the CEQ, USEPA, and other federal agencies as appropriate to ensure consistency.

Cal/EPA released its final Intra-Agency Environmental Justice Strategy in August 2004. The document sets forth the agency's broad vision for integrating environmental justice into the programs, policies, and activities of its departments. It contains a series of goals, including the integration of environmental justice into the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

5.3.4 City of Los Angeles General Plan

The City of Los Angeles General Plan has adopted environmental justice policies as outlined in the Framework Element and the Transportation Element; these policies are summarized below. The Framework Element is a "strategy for long-term growth which sets a citywide context to guide the update of the community plan and citywide elements."

The Framework Element includes a policy to "assure the fair treatment of people of all races, cultures, incomes and education levels with respect to the development, implementation and enforcement of environmental laws, regulations and policies, including affirmative efforts to inform and involve environmental groups, especially environmental justice groups, in early planning stages through notification and two-way communication."

The Transportation Element includes a policy to "assure the fair and equitable treatment of people of all races, cultures, incomes and education levels with respect to the development and implementation of citywide transportation policies and programs,

including affirmative efforts to inform and involve environmental groups, especially environmental justice groups, in the planning and monitoring process through notification and two-way communication."

The City of Los Angeles also has committed to a Compact for Environmental Justice, which was adopted by the City of Los Angeles Environmental Affairs Department as the City's foundation for a sustainable urban environment. Statements relevant to the Project include the following:

+ All people in Los Angeles are entitled to equal access to public open space and recreation, clean water, and uncontaminated neighborhoods.
+ All planning and regulatory processes must involve residents and community representatives in decision making from start to finish.

5.3.5 South Coast Air Quality Management District: Environmental Justice Program

In 1997, the South Coast Air Quality Management District (SCAQMD) adopted a set of guiding principles on environmental justice, addressing the rights of area citizens to clean air, the expectation of government safeguards for public health, and access to scientific findings concerning public health. Subsequent follow-up plans and initiatives led to the SCAQMD Board's approval in 2003-04 of an Environmental Justice Workplan (Workplan). SCAQMD intends to update its Workplan as needed to reflect ongoing and new initiatives.

SCAQMD's environmental justice program is intended to "ensure that everyone has the right to equal protection from air pollution and fair access to the decision making process that works to improve the quality of air within their communities." Environmental justice is defined by SCAQMD as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

5.4 Assessment

5.4.1 Methodology

The following methodology and assessment addresses the potential for the proposed Project to have disproportionately high and adverse human health and environmental effects on low-income and minority populations. It is provided in compliance with federal *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* and CEQ's *Environmental Justice Guidance Under the National Environmental Policy Act* (Council on Environmental Quality 1997). This EIS/EIR includes an environmental justice analysis for both federal and non-federal actions associated with the proposed Project.

The methodology for conducting the impact analysis for environmental justice included reviewing impact conclusions for each of the resources in Sections 3.1 through 3.14, as well as the cumulative analysis in Sections 4.2.1 through 4.2.14. If the EIS/EIR identified significant impacts or a cumulatively considerable contribution to a cumulatively significant impact, or otherwise identified impacts considered to be high

and adverse, an evaluation was conducted to determine if these impacts would result in disproportionately high and adverse effects on minority populations or low-income populations.

The City of Los Angeles CEQA Thresholds Guide (City of Los Angeles, 2006) does not identify significance thresholds for environmental justice or for disproportionately high and adverse effects on minority and low-income populations. In the absence of local thresholds and because of the joint federal/state nature of the EIS/EIR, federal guidance provided by CEQ is utilized as the basis for determining whether the proposed Project would result in environmental justice effects. CEQ has oversight of the federal government's compliance with Executive Order 12898 and NEPA and has published *Environmental Justice Guidance Under the National Environmental Policy Act* (CEQ 1997). The CEQ guidance identifies three factors to be considered to the extent practicable when determining whether environmental effects are disproportionately high and adverse (CEQ, 1997, pp. 25-26):

+ Whether there is or would be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment;

+ Whether the environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations, low-income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and

+ Whether the environmental effects occur or would occur in a minority population, low-income population or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.

Findings for Project-level impacts and the contribution of the proposed Project to cumulative impacts were reviewed to determine which impacts were significant, or represented cumulatively considerable contributions to cumulatively significant impacts, and would therefore require environmental justice analysis.

+ For impacts that were less than significant and also less than cumulatively considerable, or classified as "No Impact" (and therefore also not cumulatively considerable), further evaluation of the potential for disproportionately high and adverse effects on minority and low-income populations was not needed because impacts that would not be significant would not have the potential to result in such disproportionate effects.

+ Findings of significant impacts or cumulatively considerable contributions to cumulatively significant impacts were reviewed to determine whether those impacts could cause substantial effects on human populations (i.e., the public), as opposed to primarily affecting the natural or physical environment and/or resulting in limited public exposure. Significant impacts that would not be associated with substantial effects on human populations would not result in disproportionately high and adverse effects on minority and low-income populations. However, for disclosure purposes, these significant impacts are summarized in order to facilitate public involvement and review by potentially affected minority and low-income populations in the vicinity of the Project.

- For findings of significant impacts that would affect the public, mitigation measures were considered to determine whether adverse effects would still be significant (as defined by NEPA) after mitigation measures are implemented. If the impact would be less than significant after mitigation – or, in the case of a cumulative contribution, if the contribution would be less than cumulatively considerable after mitigation – then the impact was documented for disclosure purposes, but detailed analysis to determine if the impact or contribution would occur disproportionately on low-income and/or minority populations was not undertaken.
- If the impact would be significant and unavoidable – or the contribution to cumulative impacts would be cumulatively considerable and unavoidable – then the impact was further evaluated to determine whether it would result in disproportionately high and adverse human health or environmental effects on minority and low-income populations. If the specific location of the impact was identified, the population demographics of the affected area were estimated using data from the 2000 Census. In cases where the boundaries of the impacted area were not known, conclusions were drawn based on available information. In cases where data limitations did not allow a full evaluation, this fact was identified.
- In cases where the minority and low-income characteristics of populations in the impacted area could be estimated, the impact area characteristics were compared to data for the general population (i.e., Los Angeles County). If the minority population in the adversely affected area is greater than 50 percent or if either the minority percentage or the low-income percentage of the population in the adversely affected area is meaningfully greater than that of the general population, disproportionate effects on minority or low-income populations could occur. ("Meaningfully greater" is not defined in CEQ or USEPA guidance; for this analysis, "meaningfully greater" is interpreted to mean simply "greater," which provides for a conservative analysis.) In addition, disproportionate effects could also occur in cases where impacts are predominantly borne by minority or low-income populations.
- Proposed Project benefits were also considered to determine whether adverse effects would still be appreciably more severe or of greater magnitude after these other elements are considered. In addition, if significant unavoidable impacts or contributions to cumulatively significant impacts were determined to be disproportionate, the identified mitigation measures were reviewed to determine whether they would be effective in avoiding or reducing the impacts on minority and low-income populations. If necessary, additional mitigations were considered.

The first portion of Section 5.4.2 addresses public comments concerning environmental justice. That discussion is followed by the analysis of environmental justice for the Proposed Project and cumulative effects, followed by the seven action alternatives, including the No Project Alternative (Alternative 1) and No Federal Action Alternative (Alternative 2).

5.4.2 Proposed Project and Cumulative Effects

Public comments received as part of the public involvement process (responses to the NOP/NOI) for the EIS/EIR identified several concerns related to environmental justice. Those concerns are discussed below. Cross-references to other resource sections are provided, as needed, where additional analysis of these concerns is presented in the EIS/EIR.

+ **Adverse aesthetic impacts on views.** Section 3.1 (Aesthetics) evaluates the potential for the proposed Project to result in aesthetic impacts, including those related to view blockages, and Section 4.2.1 addresses cumulative aesthetic impacts and the proposed Project's contribution. At the Project level, significant aesthetic impacts would occur related to the blockage or deterioration of views of the Vincent Thomas Bridge (see Section 3.1.3.3). Cumulative aesthetic impacts would also occur (see Section 4.2.1). The areas from where the view blockages would occur contain a minority or low-income population, and therefore, there would be disproportionate aesthetic effects to minority or low-income populations.

+ **Adverse health effects from increased truck traffic (diesel particulates) and air pollutant emissions.** Section 3.2 (Air Quality) addresses the potential for the proposed Project and alternatives to result in significant health risks during both construction and operation. The evaluation in Section 3.2 includes emissions from trucks, rail operations, terminal operation, and ship calls. Section 4.2.2 addresses cumulative impacts and the proposed Project's contribution. The proposed Project would have a significant air quality impact during construction (**Impact AQ-1** and **Impact AQ-2**) and operation (**Impact AQ-3** and **Impact AQ-4**), a significant health risk impact (**Impact AQ-7**), and a significant impact related to green house gasses (**Impact AQ-9**). The proposed Project would also have a significant cumulative impact to air quality (under the same impact thresholds as above), which would have disproportionate effects on minority or low-income populations.

+ **Impacts of the proposed Project on traffic.** Section 3.6 (Ground transportation and Traffic) evaluates the potential for the proposed Project to affect traffic, and Section 4.2.6 addresses cumulative traffic effects and the proposed Project's contribution. At the Project level, significant impacts would occur, but these impacts would be mitigated to a less than significant level (see Section 3.6.3.3). Cumulative traffic impacts would occur, however, Project level mitigation would reduce the Project's contribution to the cumulative traffic impact below a cumulatively considerable level (see Section 4.2.6). Therefore, there would be no disproportionate effects to minority or low-income populations.

+ **Adverse noise impacts.** Section 3.11 (Noise) evaluates the potential for the proposed Project to affect noise, and Section 4.2.11 addresses cumulative noise effects and the proposed Project's contribution. At the Project level, significant and unavoidable short-term construction noise and operational noise impacts would occur (see Section 3.11.3.3). Cumulative noise impacts would occur (from cumulative traffic growth. Therefore, there would be disproportionate effects to minority or low-income populations.

5.4.2.1 Evaluation of Disproportionately High and Adverse Effects on Minority and Low-Income Populations

Individual impacts associated with the proposed Project are described for each specific resource in Chapter 3, and proposed Project contributions to cumulative impacts are presented in Chapter 4. This section provides a summary of impacts that would represent disproportionately high and adverse effects on minority and low-income populations. Section 5.4.2.2 addresses impacts that would not represent disproportionately high and adverse effects on minority and low-income populations.

Aesthetics (Section 3.1 and 4.2.1)

The region of analysis for aesthetic impacts include are the areas surrounding the Project site which have views of the Vincent Thomas Bridge.

+ **Aesthetics AES-5**: Of the significance thresholds for evaluating the aesthetic impacts of the proposed Project, only Impact AES-5 applies to NEPA (Impact AES-1 through Impact AES-4 are evaluated only under CEQA). The proposed Project would have a significant impact and a cumulatively considerable contribution to a cumulative impact on views of the Vincent Thomas Bridge from the Channel Street residential area and Main Channel/Ports O' Call areas.

  The area in the vicinity of Channel Street where views would be affected is comprised of Block Group 1 of Census Tract 2963 (50-70 percent minority population), Block Group 1 of Census Tract 2964 (50-70 percent minority population), and Block Group 3 of Census Tract 2965 (70-90 percent minority population) as can be seen in Figure 5-1. These Census Block Groups; however, comprise a low-income population below that of the region of comparison (Los Angeles County), as shown in Figure 5-2.

  The views of the Vincent Thomas Bridge from the Main Channel and Ports O' Call occur within Block Group 2 of Census Tracts 2962.10 (70-90 percent minority population), Block Group 2 of Census Tract 2961 (70-90 percent minority population), and Block Group 1 of Census Tract 2971.20 (0-50 percent minority population) as can be seen in Figure 5-2. Although Block Group 1 of Census Tract 2971.20 does not contain a minority population, the overall resident population in this Block Group is very low at 44 persons. In terms of low-income populations, Block Group 1 of Census Tract 2661 does not have low-income population data, thus, this Block Group is not considered. As can be seen from Figure 5-2, the Block Groups that encompass and are located along the Main Channel from where views of the Vincent Thomas Bridge contain proportions of low-income population above that for the region of comparison (Los Angeles County). The proposed Project would result in a disproportionately high and adverse effect on minority and low-income populations related to impact AES-5.

  In addition, the proposed Project would make a cumulatively considerable contribution to a significant cumulative aesthetic impact associated with view blockages of the Vincent Thomas Bridge (see Chapter 4). Because the area surrounding the project site is predominantly minority and low income, the cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality (Section 3.2 and 4.2.2)

The region of analysis for air quality impacts is the area immediately adjacent to the proposed Project site in addition to the surrounding region as represented by the South Coast Air Basin.

+ **Air Quality AQ-1:** Proposed Project emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ during construction of Phases II and III, would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated

with construction of the proposed Project would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

\+ In addition, the proposed Project would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with emissions of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

\+ **Air Quality AQ-2:** Proposed Project construction would result in offsite ambient concentrations of criteria air pollutants (specifically, the 1-hour NO_2 and 24-hour PM_{10} criteria during Phase I construction in 2003 that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures). This finding applies to individual Project impacts as well as the proposed Project's cumulative contribution relative to the NEPA baseline. Although the receptor points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the proposed Project. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include (a) potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups and (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (a) excess deaths from short-term and long-term exposures; (b) excess seasonal declines in pulmonary function, especially in children; (c) asthma exacerbation and possibly induction; (d) adverse birth outcomes including low birth weight; (e) increased infant mortality; (f) increased respiratory symptoms in children such as cough and bronchitis; and (g) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD, 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the proposed Project as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

\+ In addition, the proposed Project would make a cumulatively considerable contribution to a significant cumulative air quality impact NO_X, PM_{10}, and $PM_{2.5}$ pollutant concentrations during construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

\+ **Air Quality AQ-3:** Proposed Project emissions for VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all

criteria pollutants in all proposed Project study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with proposed Project operations would be significant and unavoidable. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations. In addition, the proposed Project would make a cumulatively considerable contribution to a significant cumulative air quality impact from these pollutants during operation, and this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

\+ **Air Quality AQ-4:** Maximum offsite ambient pollutant concentrations associated with proposed Project operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of the proposed Project, the impact would remain significant and unavoidable.

Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

In addition, the proposed Project would make a cumulatively considerable contribution to a significant cumulative air quality impact on NO_2, $PM_{2.5}$, and PM_{10} concentrations during operation, and this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

\+ **Air Quality AQ-6**: Operation of the proposed Project would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most Project emission sources would help to disperse proposed Project emissions. Additionally, the distance between proposed Project emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. The proposed Project would not create an objectionable odor at the nearest sensitive receptor. However, due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of the Project would increase diesel emissions within the Port. Any concurrent emissions-generating activity that occurs in the vicinity of the Project site would add additional air emission burdens to cumulative impacts. After mitigation, Project operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

+ **Air Quality AQ-7:** Three different types of health effects related to toxic emissions from operations of the proposed Project are assessed: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index.

Even after implementation of mitigation measures, increases in toxic emissions from operations of the proposed Project would result in significant cancer risk impacts (i.e., an increased cancer risk of 10 or more cases in a million) compared to the NEPA baseline. The affected area (with mitigation) contains all or parts of the following Census Tracts and Block Groups in which the minority population exceeds 90 percent of total population as shown in Figure 5-3: Block Group 3 and 4 of Census Tract 2943.00; Block Group 5 of Census Tract 2947.00; Block Groups 1 and 2 of Census Tract 2948.30; Block Groups 1 and 2 of Census Tract 2949.00; Block Group 3 of Census Tract 2951.01; Block Groups 1 and 3 of Census Tract 2962.10; and Block Group 1 of Census Tract 2962.20. In addition, a number of geographical reporting units contain low-income populations that exceed 50 percent of the total population. They include Block Group 5 of Census Tract 2947.00; Block Group 2 of Census Tract 2949.00; Block Group 3 of Census Tract 2951.01; and Block Group 1 of Census Tract 2962.20, as can be seen in Figure 5.3. Both of these percentages exceed relevant thresholds (minority greater than 50 percent and low-income greater than Los Angeles County). Therefore, the increased cancer risk would cause disproportionately high and adverse effects on minority and low-income populations.

The proposed Project would have significant effects on acute noncancer risks relative to the NEPA baseline. Because the populations closest to the proposed Project site are predominantly minority (Figure 5-1) and low-income (Figure 5-2), this elevated acute noncancer risk would represent a disproportionately high and adverse impact on minority and low-income populations.

Because the proposed Project would have significant effects on cancer risks or acute noncancer risks relative to the NEPA baseline, it would make a cumulatively considerable contribution to cancer risks relative to the NEPA baseline. The proposed Project would also make a cumulatively considerable contribution to noncancer risks relative to the NEPA baseline. Some of these cumulative risks are regional across the areas in the vicinity of the Port. The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). The South Coast Air Basin includes many areas that do not constitute minority and low-income populations. However, in the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB 2006b). Noncancer risk due to concentrations of DPM would also occur within and in proximity to the two Ports. Because the populations closest to the Port of Los Angeles are predominantly minority (Figure 5-1) and low income (Figure 5-2), this elevated cumulative cancer and noncancer risks would represent a disproportionately high and adverse impact on minority and low-income populations.

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Legend

- Positive values (net increase)
- Significance threshold of 10 per million
- Proposed Project Terminal Area
- Census Tract Number
- Census Block Number

N

0 3,000 Feet

0 1,000 Meters

1:36,000

Figure 5-3
Mitigated Project minus NEPA Baseline

Residential Individual Lifetime Cancer Risk (per Million)
80th Percentile Breathing Rate

CH2MHILL

Figure5-3_cen.pdf

It should be noted that port-wide air quality mitigations that will be implemented through the Port's Clean Air Action Plan (CAAP) and measures implemented as part of this Project will reduce the health risk impacts from the proposed Project and other Projects at the Port. Future rulemaking activities by the CARB and USEPA also will reduce future cumulative health impacts. Other than a few CAAP measures, these future measures have not been accounted for in the emission calculations or health risk assessment for the proposed Project. Therefore, the extent to which these future measures will reduce cumulative health risk impacts within the Project area at the Port is unknown at this time.

Ground Transportation (Section 3.6 and Section 4.2.6)

The region of influence for traffic impacts includes the street system in proximity to the Project site, as described in Section 3.6.

TRANS-1: The proposed Project would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact to the following five intersections, as described in Section 4.2.6):

+ Alameda Street/Anaheim Street
+ Harbor Boulevard/SR-47 Westbound On-Ramp intersection
+ Harbor Boulevard/Swinford Street/SR-47 Ramps intersection
+ Figueroa Street/C-Street/I-110 Ramp
+ Broad Avenue/Harry Bridges Boulevard intersection

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-5: Operation of the proposed Project would result in significant impacts to the at-grade rail crossings at Henry Ford Avenue and Avalon Boulevard, and would make a cumulatively considerable contribution to cumulative rail crossing delays under NEPA. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise (Section 3.9 and Section 4.2.9)

The region of influence for noise impacts includes the residential areas in proximity to the Project site, including residents of San Pedro located in the Knoll Hill area, the Pacific Avenue/Channel Street neighborhood, and the Wilmington area. The exact locations of the noise measurement locations utilized in the noise analysis are shown in Figure 3.11-1. This is the area over which noise from construction or operation of the proposed Project could have impacts or contribute to cumulative impacts to sensitive noise receptors.

+ **Noise NOI-1:** The proposed Project would produce significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed Project site. Section 3.11 identifies a significant residual short-term construction noise impact to two receiver locations on Knoll Hill (ST-1 and ST-3) and one receiver location in the Pacific Avenue/Channel Street neighborhood (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these Census reporting areas contain minority populations and construction of the proposed Project, therefore, would disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of the proposed Project would disproportionately affect low-income populations.

  The Project would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts from the Project, as well as construction noise from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be constructed in the Port vicinity. Thus, the proposed Project would contribute to an unavoidable cumulative noise impact that would disproportionately affect minority and low-income populations.

+ **Noise NOI-3:** Operation of the proposed Project would produce significant unavoidable noise impacts at two receiver locations, LT-1 (Knoll Hill) and LT-3 (Front Street area). Both of these areas are located in Census Tract 2962.10 (Knoll Hill is located in Block Group 1 and the Front Street area is located in Block Group 2). Census Tract 2962.10 is predominantly minority and has a low-income population is excess of that found in Los Angeles County. Thus, operation of the proposed Project would result in significant unavoidable noise impacts that would disproportionately affect minority and low-income populations.

  The proposed Project would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.2.2 Summary of Impacts that Would Not Cause Disproportionately High and Adverse Effects on Minority and Low-Income Populations

This section provides a summary of individual and cumulative impacts that would not cause disproportionately high and adverse effects on minority and low-income populations, either (1) because the unmitigated proposed Project would not result in significant project impacts or make a cumulatively considerable contribution to cumulatively significant impacts; (2) mitigation measures applied to the proposed Project would reduce impacts to less than significant and cumulative contributions to less than cumulatively considerable; (3) because the significant impact or cumulatively considerable contribution would not affect human populations or would not have a disproportionately high and adverse effect on minority and low-income populations based on comparison of the affected population to the general population; and/or (4) because the impact is such that an environmental justice evaluation is not applicable. Most of the

Project's significant impacts would be reduced through mitigation and would not result in disproportionate high and adverse effects on minority and low-income populations.

Aesthetics and Visual Resources (Section 3.1 and Section 4.2.1)

The geographic boundary for analysis of aesthetic and visual resources is the set of "critical public views" from which the proposed Project would be substantially visible and which are readily available to the public, and for which there is reason to believe that the public would be concerned over adverse visual changes.

+ **Impact AES-1:** The proposed Project would not have a demonstrable negative aesthetic effect on the visual character of the area, but would cause a very minor decrease in views of open water in the West Basin as seen from Knoll Hill and the hillside residential areas. Although minor, this would nonetheless represent a cumulatively considerable contribution to a significant cumulative aesthetic impact under CEQA. Impact AES-1 is a CEQA criterion and, consequently, no finding is made under NEPA relative to the potential for adverse impact on minority and low-income populations.

+ **Impact AES-2:** The proposed Project would not, for the most part, have a significant impact or make a cumulatively considerable contribution to a cumulative impact on scenic resources within view from a state scenic highway. Although Front street is a scenic highway due to the views of a working Port, the proposed Project would be a working container terminal within the Port, which is consistent with the scenic highway designation (see Section 3.1.4.3.3.1.4). However, in views from the Channel Street area and surrounding hillside neighborhoods, the presence of the proposed Project would detract from views toward and of the Vincent Thomas Bridge and impacts are considered significant. In addition, the view blockages from the Project would also make a cumulatively considerable contribution to a significant impact. These significantly adverse impacts would remain significant even with implementation of mitigation measures. There would not be a disproportionately high and adverse effect on minority and low-income populations related to this impact under NEPA because **Impact AES-2** is a CEQA criterion and, consequently, no finding is made under NEPA relative to the potential for adverse impact on minority and low-income populations. Impacts to views as assessed under NEPA are discussed in Section 5.4.2.1.

+ **Impact AES-3:** The proposed Project would not have a significant impact or a cumulatively considerable contribution to a cumulative impact related to shadow effects on nearby shadow-sensitive land uses because there are no shadow-sensitive land uses over which the proposed Project might cast shadows (see analysis in Section 3.1). Therefore, there would not be a disproportionately high and adverse effect on minority and low-income populations related to this impact. Impact AES-3 is a CEQA criterion and, consequently, no finding is made under NEPA relative to the potential for adverse impacts on minority and low-income populations.

+ **Impact AES-4:** The proposed Project would not have a significant Project impact but would nonetheless make a cumulatively considerable contribution to cumulative impacts related to generating new sources of light or glare that would adversely affect day or nighttime views in the area. Design measures for backland lighting would include directing lights downward and would specify the use of shielding to keep light and glare impacts below a level of significance, as documented in Section 3.1. Therefore, there would not be a disproportionately high and adverse effect on

minority and low-income populations related to this impact. Impact AES-4 is a CEQA criterion and, consequently, no finding is made under NEPA relative to the potential for adverse impact on minority and low-income populations.

Air Quality and Meteorology (Section 3.2 and Section 4.2.2)

As stated above in Section 5.4.2.1, the region of analysis for air quality impacts is the immediate area of the proposed Project site and the surrounding region, represented by the South Coast Air Basin.

+ **Impact AQ-5:** Truck trips generated by the proposed Project would affect intersections predicted to operate at a poor LOS in future years. During periods of near-calm winds, heavily congested intersections can produce elevated levels of carbon monoxide (CO) in their immediate vicinity. Thus, the intersection of Harbor Boulevard/SR-47 Eastbound off-ramp/Swinford Avenue (p.m. peak) was selected for the CO analysis because it is considered to be the worst-case intersection. Based on a CO hotspots analysis (see **Impact AQ-5** in Section 3.2.4.3), the proposed Project would not generate on-road traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards. The proposed Project would not contribute to a cumulatively significant exceedance of the SCAQMD emission threshold, relative to the NEPA baseline. Therefore**, Impact AQ-5** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact AQ-8:** Under NEPA, the proposed Project would not conflict with or obstruct implementation of an applicable AQMP and would not make a cumulatively considerable contribution to a cumulative impact related to such a conflict or obstruction. Because the impacts are less than significant and less than cumulatively considerable, **Impact AQ-8** would not constitute a disproportionately high and adverse effect on minority or low-income populations.

+ **Impact AQ-9:** Proposed Project operations would result in increased emissions of greenhouse gases (GHGs); however, no significance finding is made under NEPA. The potential ecological damage and damage to human populations from global climate change would affect people globally, including all people in California and in the United States. Section 3.2 describes potential global impacts of GHG. These effects would have consequences for all people, and therefore would not affect low-income and minority populations disproportionately.

Biological Resources (Section 3.3 and Section 4.2.3)

The geographic region of analysis for biological resources differs by organism groups, because the mobility of species in these groups, their population distributions, and the normal movement range for individuals living in an area varies so that effects on biotic communities in one area can affect communities in other nearby areas. The region of analysis is described fully in Section 4.2.3, and is not reiterated here because no biological resource impacts would contribute to disproportionately high and adverse effects on minority and low-income populations.

+ **Impact BIO-1:** Operation of the proposed Project would result in the addition of 234 vessel calls to the Port. The container ships transiting the coastal waters of southern California could potentially cause harm to endangered, threatened, or species of concern, such as marine mammals and sea turtles, from vessel collisions. However, the likelihood of such a collision is very low; therefore, the potential for impacts to marine mammals is considered less than significant. Although the

likelihood of a collision between a vessel and marine mammals is very low, measure MM BIO-2, which reduces Project vessel speeds to 12 knots between 40 nm from Point Fermin and the Precautionary Area starting in 2009, would further reduce the potential for vessel strikes. The proposed Project would not otherwise cause a loss of individuals or habitat of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat. The proposed Project would make a cumulatively considerable contribution to any cumulatively significant impact relative to **Impact BIO-1** related to cumulative vessel strikes. However, since the cumulative impact would not affect a human population, the significant cumulative impact to marine mammals under NEPA, **Impact BIO-1,** would not constitute a disproportionately high and adverse effect on minority or low-income populations.

+ **Impact BIO-2:** In the absence of mitigation, filling 2.54 acres in the West Basin would result in a permanent loss of marine habitat, resulting in a significant project impact and contributing to a cumulatively significant impact. However, the impact would primarily affect marine habitat, not human populations or the public. In addition, the Project's significant impacts and its cumulatively considerable contribution would be completely offset under NEPA by **MM BIO-1**, which involves LAHD providing offsite or onsite compensation for loss of general marine resources. Therefore, **Impact BIO-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact BIO-3:** The proposed Project would not interfere with wildlife movement/ migration corridors, nor would it make a cumulatively considerable contribution to any cumulative impact. Therefore, **Impact BIO-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact BIO-4:** While construction and operations activities would not substantially disrupt local biological communities (**Impact BIO-4a** and **Impact BIO-4b,** respectively). The placement of 2.54 acres of fill would significantly affect soft-bottom habitat, which would also make a cumulatively considerable contribution to a significant cumulative biological resources impact. However, the impact would be fully mitigated by measure **MM BIO-1**. Operation of the new facilities in the West Basin has a low potential to introduce non-native species into the Harbor that could substantially disrupt local biological communities. However, the impacts cannot be completely eliminated. In addition, there is a remote possibility of an accidental spill, which could result in a significant project-level and cumulative impact to biological resources. **Impact BIO-4b** would remain significant and would make a cumulatively considerable contribution under NEPA) after mitigation. However, this impact would primarily affect marine biological communities, not human populations or the public. Therefore, **Impact BIO-4** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact BIO-5:** The placement of 2.54 acres of fill in the West Basin would result in a permanent loss of marine habitat, which represents a significant impact of the proposed Project and a cumulatively considerable contribution to cumulative impacts. However, this impact would be completely mitigated by the implementation of **Mitigation Measure BIO-1**. In addition, this impact would primarily affect marine biological communities, not human populations or the public. Therefore, **Impact BIO-5** would not result in disproportionately high and adverse effects on minority and low-income populations.

Cultural Resources (Section 3.4 and Section 4.2.4)

As stated in Section 5.4.2.1, the geographic region of analysis for impacts on archaeological, historic architectural, and paleontological resources related to the proposed Project consists of the areas at the Port and in the immediate vicinity (on land or submerged) that could be affected by dredging, demolition, or ground disturbance.

+ **Impact CR-1:** Construction of the proposed Project would result in less than significant impacts on known archaeological and ethnographic resources under NEPA and the impact on unknown resources is remote given the high degree of previous disturbance to native soils and presence of imported fill in the Project area. Furthermore, construction of the proposed Project would not contribute to a cumulative impact on archaeological resources. Therefore**, Impact CR-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact CR-2:** The proposed Project would have no impacts on historic architectural resources, nor would it contribute to a cumulative impact on historic architectural resources. Therefore**, Impact CR-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact CR-3:** The proposed Project would have no impacts on paleontological resources, nor would it contribute to a cumulative impact on paleontological resources. Therefore**, Impact CR-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

Geological Resources (Section 3.5 and Section 4.2.5)

The region of influence for cumulative impacts varies for geological resources, depending on the geologic issue. The region of analysis is described fully in Section 4.2.5, and is not reiterated here because no geological resource impacts would contribute to disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-1:** Seismic activity could expose people and structures to substantial risk during the construction period (**GEO-1a**) and operation period (**GEO-1b**), which are significant and unavoidable Project and cumulative impacts. Because potential impacts would be confined to the site and would not affect the public (i.e., could affect employees onsite, but not offsite residents), **GEO-1** would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GEO-2:** Facilities constructed under the proposed Project would be susceptible to tsunamis and seiches. There is a substantial risk of coastal flooding of wharves and associated backland areas due to tsunamis and seiches. Increased exposure of people and property during construction to seismically induced tsunamis or seiches cannot be precluded. Impacts due to tsunamis and seiches are significant and unavoidable under NEPA. However, because impacts would not affect the public (i.e., could affect employees on site, but not offsite residents), **Impact GEO-2** and the associated cumulatively considerable contribution to a cumulatively significant impact would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GEO-3:** The proposed Project would result in less than significant impacts and a less than cumulatively considerable contribution to cumulative impacts related

to subsidence and settlement under NEPA. Since the proposed Project impact is less than significant and the contribution to cumulative impacts is less than cumulatively considerable, **Impact GEO-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-4:** The proposed Project would result in less than significant impacts and a less than cumulatively considerable contribution to cumulative impacts related to expansive soils under NEPA. Since the proposed Project impact is less than significant and the contribution to cumulative impacts is less than cumulatively considerable, **Impact GEO-4** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-5:** Since the topography in the vicinity of the proposed Project site is flat and not subject to landslides or mudflows, the proposed Project would not increase the risk of landslides or mudflows individually or cumulatively under NEPA. Thus, **Impact GEO-5** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-6:** The proposed Project would result in less than significant impacts and a less than cumulatively considerable contribution to cumulative impacts related to unstable soil conditions under NEPA. Since the proposed Project impact is less than significant and the contribution to cumulative impacts is less than cumulatively considerable, **Impact GEO-6** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-7:** Since the proposed Project area is relatively flat and paved with no prominent geologic or topographic features, proposed Project construction would not result in any distinct and prominent geologic or topographic features being destroyed, permanently covered, or materially and adversely modified. The finding of no impact is made for NEPA. Thus, Impact GEO-7 would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact GEO-8:** Construction of the proposed Project would not result in the permanent loss of availability of any mineral resource of regional, statewide, or local significance. Under NEPA, the individual Project impact is less than significant and the cumulative contribution is less than considerable. Thus, **Impact GEO-8** would not result in disproportionately high and adverse effects on minority and low-income populations.

Ground Transportation and Traffic (Section 3.6 and Section 4.2.6)

As stated in Section 5.4.2.1, the region of analysis for ground transportation effects includes those streets and intersections that would be used by both automobile and truck traffic to gain access to and from the Berth 97-109 Container Terminal, as well as those streets that would be used by construction traffic (i.e., equipment and commuting workers). The streets most likely to be impacted by cumulative Project-related auto and truck traffic include the following: Harbor Boulevard, Front Street, John S. Gibson Boulevard, Harry Bridges Boulevard, Figueroa Street, Alameda Street, Anaheim Street, and Sepulveda Boulevard. Beyond these locations, the proposed Project would generate fewer than 43 Project trips (thus falling below the City of Los Angeles threshold for analysis), or in the case of Alameda Street, the downstream intersections are all grade separated (aligned at different heights such that they do not disrupt the flow of traffic on one another when they cross) and thus experience no traffic delays (i.e., the crossing at Pacific Coast Highway and Sepulveda Boulevard).

+ **Impact TRANS-1:** There would be temporary impacts on the study area roadway system during construction of the proposed Project because the construction activities would generate vehicular traffic associated with construction workers' vehicles and trucks delivering equipment and fill material to the site. This site-generated traffic from construction of the various Project components would result in increased traffic volumes on the study area roadways for the duration of the construction periods. Construction of the proposed Project would generate up to 100 inbound worker trips and 20 truck trips during peak hours. This temporary increase in Project-related traffic would not create significant increases in truck and automobile traffic (see Section 3.6). Thus, **Impact TRANS-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact TRANS-2:** Long-term vehicular traffic associated with the proposed Project operations would significantly impact volume/capacity ratios at six study area intersections, resulting in an unacceptable impact on the Level of Service (LOS) relative to the NEPA baseline. The significantly impacted intersections would be:

  - 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
    Alameda Street and Anaheim Street – (a.m. peak hour)
    John S. Gibson Boulevard and I-110 NB Ramps – (p.m. peak hour)
    Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
    Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
  - 2030 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
    Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
    John S. Gibson Boulevard and I-110 NB Ramps – (a.m. and p.m. peak hours)
    Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
    Navy Way and Seaside Avenue – (p.m. peak hour)
  - 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
    Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
    John S. Gibson Boulevard and I-110 NB Ramps – (a.m. and p.m. peak hours)
    Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
    Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
    Navy Way and Seaside Avenue – (p.m. peak hour)

However, ground transportation impacts at all six intersections would be reduced to less than significant through implementation of **MM TRANS-1** through **MM TRANS-6** (which include measures such as addition of through-lanes, turn lanes, and signalization). Because impacts would be less than significant after mitigation, **Impact TRANS-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact TRANS-3:** Although the proposed Project would result in additional onsite employees, the increase in work-related trips using public transit would be negligible; the increase would not be significant under NEPA, nor would it make a cumulatively

considerable contribution to cumulative impacts. Since the proposed Project impacts would be less than significant and the contribution to cumulative impacts would be less than cumulatively considerable, **Impact TRANS-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact TRANS-4:** Proposed Project operations would result in a less than significant increase in freeway congestion, and would make a less than cumulatively considerable contribution to cumulative impacts, under NEPA. Since the proposed Project impacts would be less than significant and the contribution to cumulative impacts would be less than cumulatively considerable, **Impact TRANS-4** would not result in disproportionately high and adverse effects on minority and low-income populations.

Groundwater and Soils (Section 3.7 and Section 4.2.7)

The region of influence for cumulative impacts on groundwater and soils varies, depending on the issue. The region of influence with respect to contaminated soils would be confined to the proposed Project area, as these impacts are site-specific and relate primarily to potential exposure of contaminants to onsite personnel during construction, or to onsite personnel when construction and operations overlap. There is no region of influence with respect to change in potable water levels and potential violation of regulatory water quality standards at an existing production well, as drinking water is provided to the area where the proposed Project would be located by the City of Los Angeles Department of Water and Power (LADWP); local groundwater would not be utilized as a water source. There is no region of influence with respect to potential reduction in groundwater recharge because the Project site and area is not used for groundwater recharge and because groundwater in the Project area is not used as a potable supply source.

+ **Impact GW-1:** Construction activities may encounter toxic substances or other contaminants associated with historical uses are the site, resulting in short-term exposure (duration of construction) to construction/operations personnel. However, implementation of **MM GW-1** (remediation of soil contamination) and **MM GW-2** (Contamination Contingency Plan) would reduce impacts to less than significant and would reduce the contribution to cumulatively significant impacts to less than cumulatively considerable under NEPA. In addition, impacts would not affect the public (i.e., could affect employees on site, but not offsite residents). Thus, **Impact GW-1** would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GW-2:** Excavation and grading in contaminated soils could remove existing contamination from the Project site, which is considered to be a beneficial impact. In addition, the proposed project would introduce an impermeable layer over the site (paved backlands) that would prevent contaminated storm water runoff or percolation though potentially contaminated soil resulting in further groundwater contamination. The proposed Project would not result in significant impacts and would not contribute to a significant cumulative impact. Thus, **Impact GW-2** would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GW-3:** The proposed Project would have no impact, and no cumulative contribution to impacts, on potable water levels and potential potable water supplies under NEPA. Thus, **Impact GW-3** would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GW-4:** The proposed Project would not result in a demonstrable and sustained reduction in groundwater recharge capacity. Under NEPA, the impacts of the proposed Project would be less than significant and its contribution to cumulative impacts would be less than cumulatively considerable. Thus, **Impact GW-4** would not result in disproportionately high and adverse effects on minority or low-income populations.

+ **Impact GW-5:** No existing water production wells are located at or in the vicinity of the proposed Project site. The proposed Project would not result in violation of regulatory water quality standards at an existing production well under NEPA. Thus, **Impact GW-5** would not result in disproportionately high and adverse effects on minority or low-income populations.

Hazards and Hazardous Materials (Section 3.8 and Section 4.2.8)

The region of influence for impacts associated with spills of hazardous materials encompasses two areas: the West Basin area of the Port of Los Angeles, and areas within the regional cargo distribution network.

+ **Impact RISK-1:** The proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance. Based on criterion **RISK-1**, impacts would be less than significant and would not make a cumulatively considerable contribution relative to a cumulative impact. Therefore**, Impact RISK-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact RISK-2:** During operations, the proposed Project would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards. Based on criterion **RISK-2**, impacts would be less than significant, and would not make a cumulatively considerable contribution to a cumulative impact. Thus, **Impact RISK-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact RISK-3:** The proposed Project would not substantially interfere with an existing emergency response or evacuation plan, thereby increasing risk of injury or death. Nor would it make a cumulatively considerable contribution to a related cumulative impact. Thus, **Impact RISK-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact RISK-4:** The proposed Project would comply with all applicable regulations and policies governing hazardous materials and activities at the Port. Since the proposed Project has no individual impact or incremental contribution to a cumulative impact, **Impact RISK-4** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact RISK-5:** The proposed Project would have a less than significant impact relative to an increased risk or consequences of an accidental spill associated with tsunami-induced flooding or other seismic event. Nor would it make a cumulatively considerable contribution relative to the cumulative impacts of such events. Therefore, **Impact RISK-5** does not represent a disproportionately high and adverse effect on minority and low-income populations.

+ **Impact RISK-6:** The proposed Project would have a less than significant impact relative to increased risk or consequences of a terrorist attack, and a less than cumulatively considerable contribution relative to the cumulative impacts of such a potential attack. Therefore, **Impact RISK-6** does not represent a disproportionately high and adverse effect on minority and low-income populations.

Land Use (Section 3.9 and Section 4.2.9)

Since the proposed Project has the capacity to affect land use within the Port and surrounding communities, the region of analysis for land use impacts includes the Port of Los Angeles and extends to adjacent areas, including the communities of San Pedro and Wilmington.

+ **Impact LU-1:** The proposed Project would be consistent with land use and density designations in land use plans that govern development, after plan amendments, and would have no impact or contribution to a cumulative impact. Thus, **Impact LU-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact LU-2:** The proposed Project would be consistent with the General Plan and environmental goals and policies delineated in land use plans adopted for the purpose of avoiding or mitigating an environmental impact. The proposed Project would have no impact or contribution to a cumulative impact. Thus, **Impact LU-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact LU-3:** The proposed Project would not affect the types and/or extent of land uses in the project area and would not make a cumulatively considerable contribution to a significant cumulative impact. Thus, **Impact LU-3** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact LU-4:** The proposed Project would not contribute to the division or isolation of existing residential neighborhoods or communities because the terminal would be confined to lands designated for such uses within the Port. The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact. Therefore, **Impact LU-4** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact LU-5:** The proposed Project would not have a significant effect on property values, nor a cumulatively considerable contribution to changes in property values, within surrounding communities. Since **Impact LU-5** is less than significant and less than cumulatively considerable, this impact would not result in disproportionately high and adverse effects on minority and low-income populations.

Marine Transportation (Section 3.10 and Section 4.2.10)

Since the proposed Project has the capacity to affect vessel transportation only within designated traffic channels or the berths the vessels access, the region of analysis for marine transportation impacts includes the vessel traffic channels that ships use to access berths within the Port and West Basin, and the berths themselves.

+ **Impact VT-1:** The construction of the proposed Project would require use of marine-based construction equipment to support berth development, wharf improvements, and new wharf construction, and the proposed Project operation would increase

vessel traffic (container ships). However, because the Port and terminal operator would follow standard safety precautions and applicable regulations, the construction equipment and increased vessel traffic would have a less than significant impact on marine vessel safety, and a less than cumulatively considerable contribution to cumulative impacts. Since the proposed Project impacts would be less than significant and make a less than cumulatively considerable contribution to cumulative impacts, **Impact VT-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

Noise (Section 3.11 and Section 4.2.11)

As stated in Section 5.4.2.1, the region of influence for noise impacts includes the residential areas close to the Project site, including residents of San Pedro located in the Knoll Hill area, the Pacific Avenue/Chancel Street neighborhood, and the surrounding area. This is the area over which noise from construction or operation of the proposed Project could have impacts or contribute to cumulative impacts on sensitive noise receptors.

+ **Impact NOI-2:** Because no construction activities would occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday, there would be no construction-related noise impacts (nor contribution to a cumulative impact) during prohibited hours. Thus, **Impact NOI-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

Recreation (Section 3.12 and Section 4.2.10)

The geographic region of analysis for recreation depends on the service area of the individual recreational facilities and the extent over which increased demand for services from the proposed Project could affect those services. The region of analysis for cumulative recreational impacts includes public recreational opportunities located within the Port, and the same geographic region would apply for purposes of environmental justice analysis.

+ **Impact REC-1:** The proposed Project is not expected to result in substantial demand for recreation and park services above NEPA baseline levels because the proposed Project would not result in substantial increases in population or employees in the Project area. Because **Impact REC-1** is less than significant and the contribution is less than cumulatively considerable (relative to the NEPA baseline), the proposed Project would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact REC-2:** Although the proposed Project would relocate the Catalina Express Terminal, it would not result in disruptions in service because the relocation would occur prior to construction of the proposed Project. The relocation of the Catalina Express Terminal would not affect berths with current visitor-oriented activities. Because in-water Project construction activities would not interfere with vessel traffic lanes in the Main Channel, the proposed Project would not preclude private watercraft recreational opportunities in the proposed Project vicinity. The proposed Project would not result in significant impacts resulting from substantial losses or diminished quality of recreational, educational, or visitor-oriented resources. Because **Impact REC-2** is less than significant and the contribution is less than cumulatively

considerable (relative to the NEPA baseline), the proposed Project would not result in disproportionately high and adverse effects on minority and low-income populations.

Utilities and Public Services (Section 3.13 and Section 4.2.13)

The geographic region of analysis for utilities and public service impacts varies by the service area of the individual public service or utility provider and the jurisdiction over which increased demand for services attributable to the proposed Project could reduce the availability of such services. For the Port Police, this area is localized to the Ports of Los Angeles and Long Beach. The service area of the LAPD and LAFD encompasses the City of Los Angeles; however, the police and fire stations identified as serving the proposed Project serve only the Port and harbor area. The LAPD Harbor Division Area includes a 27.5-square-mile area including Harbor City, Harbor Gateway, San Pedro, Wilmington, and Terminal Island. Direct impacts of the proposed Project would be localized to the Port area, and indirect impacts could extend beyond the confines of the Port. For stormwater, the region of influence is the proposed Project backlands and immediately adjacent lands within the Harbor's subwatershed because this represents the drainage area that would be influenced by the proposed Project. The service area of the Bureau of Sanitation (wastewater), Los Angeles County Sanitation Districts and BFI (solid waste), and LADWP (water and electricity) encompasses the City of Los Angeles. The Southern California Gas Company (SCG) (natural gas) serves most of central and Southern California. However, the analysis region for cumulative utilities impacts focuses on the Port and Harbor District because the infrastructure immediately serving the Project is located within this service area and service subareas of utility providers are sufficiently separated such that increased service demands from the proposed Project would not threaten such provisions in other areas. The region of analysis for cumulative recreational impacts includes public recreational opportunities located within the Port.

+ **Impact PS-1:** The proposed Project would not increase the demand for additional law enforcement officers and/or facilities and the USCG, LAPD, or Port Police would be able to maintain an adequate level of service without additional facilities. The impacts relative to this threshold are less than significant and less than cumulatively considerable under NEPA. Therefore, **Impact PS-1** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact PS-2:** Development of the proposed Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility to maintain service; it also would not make a cumulatively considerable contribution to a significant cumulative impact on fire protection services that would result in a similar need. This is true relative to NEPA requirements. Thus, **Impact PS-2** would not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact PS-3:** The proposed Project would result in minimal increases in water demand, wastewater generation, and storm runoff. These increases would not exceed the capacity of existing facilities. Although the proposed Project would require the construction and expansion of onsite water, wastewater, and storm drain service lines to support new terminal development, all infrastructure improvements and connections would occur within existing utility corridors and would comply with relevant codes and permits. The proposed Project would have a less than significant impact and not make a cumulatively considerable contribution to significant cumulative impacts on utility lines (relative to NEPA). Thus, **Impact PS-3** would

not result in disproportionately high and adverse effects on minority and low-income populations.

+ **Impact PS-4:** The proposed Project would have less than significant impacts on the capacity of utility systems to supply water and treat wastewater. The proposed Project also would not make a cumulatively considerable contribution to significant cumulative impacts on water or wastewater systems. However, the proposed Project would not result in significant project and cumulative impacts to solid waste capacity from construction or operation after mitigation. Mitigation measures **MM PS-1** through **MM PS-3** would reduce project-level and cumulative impacts to a less than significant level. Thus, **Impact PS-4** would not result in disproportionately high and adverse effects on minority and low-income populations after mitigation.

+ **Impact PS-5:** The proposed Project would have a less than significant impact and a less than cumulatively considerable contribution to increases in energy demands that would necessitate the construction of new energy supply facilities and distribution infrastructure. Because the impact is less than significant and less than cumulatively considerable under NEPA, **Impact PS-5** would not result in disproportionately high and adverse effects on minority and low-income populations.

Water Quality (Section 3.14 and Section 4.2.14)

The region of influence for impacts on water and sediment quality is the Los Angeles-Long Beach Harbor (Inner and Outer Harbor areas) because this water body represents receiving waters for the proposed Project and related cumulative projects. The region of influence for surface water hydrology and flooding is the proposed Project backlands and immediately adjacent lands within the Harbors subwatershed because this represents the drainage area that would be influenced by the proposed Project and cumulative projects.

+ **Impact WQ-1:** During the construction phase of the proposed Project, dredging, dike and fill placement, and pile installation would result in temporary and localized increases in suspended sediment and turbidity levels. However, the adaptive management of in-water work and regulatory compliance would keep in-water project-level and cumulative impacts below the level of significance. Although project-level impacts from potential accidental spills of pollutants during in-water construction would not result in significant water quality impacts (**Impact WQ-1a, Impact WQ-1c** and **Impact WQ-1d**), impacts from cumulative accidental spills could have the potential to result in violations of water quality standards or permit conditions. The potential impacts from for accidental spills during in-water construction to contribute to cumulative impacts, despite regulatory compliance, would remain significant.

  Additionally, during operations, the proposed Project would have a significant, unavoidable project and cumulative impact (**Impact WQ-1e**) on water quality from in-water vessel spills, discharges, and pollutant leaching from vessel coatings. Because these impacts relate to a water quality standard and would be geographically limited to the water areas in the vicinity of the proposed Project, the impacts would not affect human populations and, therefore, would not have disproportionately high and adverse effects on minority and low-income populations.

+ **Impact WQ-2:** The proposed Project would have a less than significant impact on the potential for flooding, and would also make a less than cumulatively considerable contribution to this potential impact. Since the impact is less than significant,

Impact WQ-2 would not be a disproportionately high and adverse effect on minority and low-income populations.

+ **Impact WQ-3:** The proposed Project would have a less than significant impact on permanent alteration of surface water movement, and would also make a less than cumulatively considerable contribution to such alteration. Since the impact is less than significant, **Impact WQ-3** would not be a disproportionately high and adverse effect on minority and low-income populations.

+ **Impact WQ-4:** The proposed Project would have a less than significant impact related to increasing rates of soil erosion within onshore portions of the Project site and sedimentation within the site or in adjacent properties and receiving waters. The proposed Project would also make a less than cumulatively considerable contribution to such an increase. Since the impact is less than significant, **Impact WQ-4** would not be a disproportionately high and adverse effect on minority and low-income populations.

5.4.2.3 Beneficial Impacts

Under Executive Order 12898, offsetting benefits should also be considered by decision-makers when a Project would result in disproportionately high and adverse effects. The proposed Project would create economic benefits in the form of jobs and income (see Chapter 7, Socioeconomics and Environmental Quality). If contaminated soils are encountered during construction, site remediation would result in beneficial environmental impacts (see Section 3.7, Groundwater and Soils).

5.4.3 Alternative 1 – No Project Alternative

The No Project Alternative (Alternative 1) considers what would reasonably be expected to occur on the site in the absence of issuance of both an additional federal permit by the USACE (beyond the Phase I permit) and a discretionary land use decision by the Port of Los Angeles. This alternative would not allow implementation of the Project or other new physical improvements at the site of Berths 97-109 beyond the Phase I improvements. Alternative 1 would include Phase I development (72 acres of backlands and in-water elements), but the 1.3 acres of fill added to waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit), the wharf at Berth 100, and the bridge over the Southwest Slip would be abandoned in place. Under the No Project Alternative, up to 457,100 TEUs per year from the Yang Ming Terminal could be stored on the 72 acres of backlands at the Project site. Containers would be transported between the terminals via an internal road. The Yang Ming facility is currently berth limited. Under this alternative, the total throughput for Yang Ming is assumed to remain the same with or without the use of additional land at Berths 97-109. However, the additional land will allow Yang Ming to operate more wheeled operations versus a stacked operation.

Under this alternative, impacts of Phase I are applied (i.e., dredging, dike or fill placement, pile installation, and wharf construction), but no additional in-water works would occur because no federal permit would be issued. The impacts of the No Project Alternative are not analyzed under NEPA, because NEPA requires the analysis of a No Federal Action Alternative (Alternative 2).

5.4.4 Alternative 2 – No Federal Action Alternative

The No Federal Action Alternative (Alternative 2) considers what would reasonably be expected to occur on the site in the absence of issuance of an additional federal permit by the USACE (beyond Phase I), but includes a discretionary land use decision by the Port of Los Angeles. Alternative 2 would include Phase I development, but would not include additional in-water features such as wharves and cranes. This alternative would allow the expansion of backlands at the Project site to 117 acres from the 11-acre baseline and the 72 acres constructed under Phase I. Under this alternative, the 1.3 acres of fill added to waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit), the wharf at Berth 100, and the bridge over the Southwest Slip would be abandoned in place. The cranes installed under Phase I would also be removed. Under the No Federal Action Alternative, up to 632,500 TEUs per year from the Yang Ming Terminal could be stored on the 117 acres of backlands at the terminal site. Containers would be transported between the terminals via an internal road. Yang Ming's facility is presently berth limited. Under this alternative, Yang Ming's total throughput is assumed to remain the same with or without the use of additional land at Berth 97-109. However, the additional land will allow Yang Ming to operate more wheeled operations versus a stacked operation.

Under this alternative, the impacts of Phase I are applied (i.e. dredging, dike or fill placement, pile installation, and wharf construction), but no additional in-water works would occur because no federal permit would be issued. In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential upland impacts under NEPA would not occur because there would be no substantive change in environmental conditions between Alternative 2 and the NEPA baseline.

This alternative would result in some disproportionately high and adverse impacts on minority and low-income populations similar to those of the proposed Project. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts identified in Section 5.4.2.1, that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses, in turn, each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Air Quality AQ-1: Alternative 2 emissions for VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and NO_X, SO_X, and $PM_{2.5}$ during construction of Phase II would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with construction of Alternative 2 would be significant. Since residential areas closest to the Alternative 2 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to

Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 2 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternate 2 would result in offsite ambient concentrations of criteria air pollutants (specifically, NO_2, PM_{10}, and $PM_{2.5}$ criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures. This finding applies to individual Project impacts, as well as the cumulative contribution made by Alternative 2, relative to the NEPA baselines. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also a risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phase II of construction of Alternative 2, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 2 for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would be greater than the NEPA baseline for all criteria pollutants. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with Alternative 2 operations would be significant. Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10} and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 2 operations would be significant for NO_2 (1-hour average and annual) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 2, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

Air Quality AQ-6: Operation of Alternative 2 would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most Project emission sources would help to disperse Alternative 2 emissions. Additionally, the distance between Alternative 2 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 2 would not create an objectionable odor at the nearest sensitive receptor. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of Alternative 2 would increase diesel emissions within the Port. Any concurrent emission-generating activity that occurs in the vicinity of the Project site would add to cumulative impacts of air emission burdens. After mitigation, Alternative 2 operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Thus, **Impact AQ-6** would have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Operation of Alternative 2 would not result in significant project-level impacts from health effects (individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index) related to toxic emissions. In addition, Alternative 2 operations would essentially be the same as the NEPA baseline; therefore, operation of Alternative 2 would not result in significant project-level impacts under AQ-7. Thus, Alternative 2 would not have a disproportionately high and adverse project-level effect on minority or low income populations. However, Alternative 2 would make a cumulatively considerable contribution to significant cumulative cancer and noncancer impacts related to toxic air contaminants. Because the area surrounding the project site is predominantly minority and low income, these cumulative impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Ground Transportation TRANS-1: Alternative 2 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-1: Similar to the proposed Project, significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed terminal site would occur under Alternative 2 (Phase I impacts are applied). Section 3.11 identifies a

significant residual short-term construction noise impact to one receiver location on Knoll Hill (ST-3) and one receiver location in the Front Street area (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these Census reporting areas contain minority populations and construction activities under Alternative 2 would therefore disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of the Alternative 2 would disproportionately affect low-income populations.

Alternative 2 would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts, as well as construction noise from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be constructed in the Port vicinity.

Noise NOI-3: Operation of Alternative 2 would not produce significant unavoidable noise impacts. However, Alternative 2 would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.5 Alternative 3 – Reduced Fill: No New Wharf Construction at Berth 102

This alternative would be developed similar to the proposed Project except that 925 linear feet of wharf proposed at Berth 102 would not be constructed. The total length of wharf at the terminal would be 1,575 feet, i.e., the existing 1,200 feet of Berth 100 (already constructed during Phase I and officially put into operation on June 21, 2004) and the proposed 375-foot south extension. An additional 116,000 yd^3 of rock dike and 24,000 yd^3 of fill behind the dike would be required for the Berth 100 south extension.

As a result of no wharf construction at Berth 102, only one additional A-frame crane would be installed for a total of five cranes at the Berth 97-109 Container Terminal (four currently exist). The total acreage of backlands under this alternative would be 142 acres, the same as the proposed Project. TEU throughput would be less than the proposed Project, with an expected throughput of 936,000 TEUs by 2030. This would translate into 130 annual ship calls at Berth 97-109 with associated 520 tugboat operations. In addition, this alternative would result in up to 2,452 daily truck trips, and up to 493 annual round-trip rail movements. Development of all other landside terminal components would be identical to the proposed Project.

This alternative would result in disproportionately high and adverse impact on minority and low-income populations similar to those of the proposed Project. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts

identified in Section 5.4.2.1; that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses in turn each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Aesthetics AES-5: Similar to the proposed Project, Alternative 3 would have a significant impact and a cumulatively considerable contribution to a cumulative impact on views of the Vincent Thomas Bridge from the Channel Street residential area and Main Channel/Ports O' Call areas due to the placement of five A-frame cranes at the wharves.

The area in the vicinity of Channel Street where views would be affected encompasses Block Group 1 of Census Tract 2963 (50 to 70 percent minority population), Block Group 1 of Census Tract 2964 (50 to 70 percent minority population), and Block Group 3 of Census Tract 2965 (70 to 90 percent minority population) as can be seen in Figure 5-1. These Census Block Groups, however, represent a low-income population below that of the region of comparison (Los Angeles County), as shown in Figure 5-2.

The views of the Vincent Thomas Bridge from the Main Channel and Ports O' Call occur within Block Group 2 of Census Tracts 2962.10 (70 to 90 percent minority population), Block Group 2 of Census Tract 2961 (70 to 90 percent minority population), and Block Group 1 of Census Tract 2971.20 (0 to 50 percent minority population), as can be seen in Figure 5-2. Although Block Group 1 of Census Tract 2971.20 does not contain a minority population, the overall resident population in this Block Group is very low at 44 persons. In terms of low-income populations, Block Group 1 of Census Tract 2661 does not have low-income population data; thus, this Block Group is not considered. As can be seen from Figure 5-2, the Block Groups that encompass and are located along the Main Channel from where views of the Vincent Thomas Bridge contain proportions of low-income population above that for the region of comparison (Los Angeles County). Alternative 3 would result in a disproportionately high and adverse effect on minority and low-income populations related to impact AES-5.

Air Quality AQ-1: Alternative 3 emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and NO_X, SO_X, and $PM_{2.5}$ during construction of Phase II and Phase III, would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with construction of Alternative 3 would be significant. Since residential areas closest to the Alternative 3 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 3 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternate 3 would result in offsite ambient concentrations of criteria air pollutants (specifically, NO_2, PM_{10}, and $PM_{2.5}$ criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance,

even after implementation of mitigation measures. This finding applies to individual Project impacts, as well as the cumulative contribution made by Alternative 3, relative to the NEPA baselines. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also a risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (1) excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased symptoms of respiratory problems in children, such as cough and bronchitis; and (7) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the terminal site as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phases II and III of construction of Alternative 3, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 3 for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all criteria pollutants in all study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with Alternative 3 operations would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10} and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 3 operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 3, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would

constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

Air Quality AQ-6: Operation of Alternative 3 would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most Project emission sources would help to disperse Alternative 3 emissions. Additionally, the distance between Alternative 3 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 3 would not create an objectionable odor at the nearest sensitive receptor. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of Alternative 3 would increase diesel emissions within the Port. Any concurrent emission-generating activity that occurs in the vicinity of the Project site would add to cumulative impacts of air emission burdens. After mitigation, Alternative 3 operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Thus, **Impact AQ-6** would have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Three different types of health effects related to toxic emissions from operations of Alternative 3 are assessed: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index.

After implementation of mitigation measures, increases in toxic emissions from operations of Alternative 3 would result in less than significant cancer risk impacts (i.e., an increased cancer risk of less than 10 cases in a million) compared to the NEPA baseline. Cumulative cancer risk would be significant. Because the area surrounding the project site is predominantly minority and low income, the cumulative cancer risk impacts would constitute a disproportionately high and adverse effect on minority and low-income populations. Therefore, the increased cancer risk would cause disproportionately high and adverse effects on minority and low-income populations.

Alternative 3 would have significant effects on acute noncancer risks relative to the NEPA baseline. Because the populations closest to the terminal site are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated acute noncancer risk would represent a disproportionately high and adverse impact on minority and low-income populations.

Because Alternative 3 would have significant effects on cancer risks or acute noncancer risks relative to the NEPA baseline, it would make a cumulatively considerable contribution to cancer risks relative to the NEPA baseline. Alternative 3 also would make a cumulatively considerable contribution to chronic noncancer risks relative to the NEPA baseline. Some of these cumulative risks are regional across the areas in the vicinity of the Port. The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). The South Coast Air Basin includes many areas that do not constitute minority and low-income populations. However, in the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach

occur within and in proximity to the two Ports (CARB 2006b). Chronic noncancer risk due to concentrations of DPM would also occur within and in proximity to the two Ports. Because the populations closest to the Port of Los Angeles are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated cumulative risk would represent a disproportionately high and adverse impact on minority and low-income populations.

It should be noted that port-wide air quality mitigations that will be implemented through the Clean Air Action Plan (CAAP) and measures implemented as part of this Project will reduce the health risk impacts from Alternative 3 and other projects at the Port. Future rule-making activities by the CARB and USEPA also will reduce future cumulative health impacts. Other than a few CAAP measures, these future measures have not been accounted for in the emission calculations or health risk assessment for Alternative 3. Therefore, the extent to which these future measures will reduce cumulative health risk impacts within the Project area of the Port is unknown at this time.

TRANS-1: Alternative 3 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-5: Operation of Alternative 3 would result in significant impact at the at-grade rail crossings at Henry Ford Avenue and Avalon Boulevard, and would make a cumulatively considerable contribution to cumulative rail crossing delays under NEPA. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-1: Similar to the proposed Project, significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed terminal site would occur under Alternative 3. Section 3.11 identifies a significant residual short-term construction noise impact to two receiver locations on Knoll Hill (ST-1 and ST-3) and one receiver location in the Front Street area (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these Census reporting areas contain minority populations and construction activities under Alternative 3 would therefore disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of the Alternative 3 would disproportionately affect low-income populations.

The Project would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts from the Project, as well as construction noise from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be constructed in the Port vicinity.

Noise NOI-3: Operation of Alternative 3 would not produce significant unavoidable noise impacts. However, Alternative 3 would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.6 Alternative 4 – Reduced Fill Alternative, No Berth 100 South

This alternative would be similar to the proposed Project except that the proposed 375 feet of linear wharf proposed south of Berth 100 would not be constructed or developed, and only 13 of the 25 acres of area behind Berth 100 would be developed as backlands in Phase III. The total length of wharf at the terminal would be 2,125 feet. As part of the Phase I construction, 1,200 feet of wharf at Berth 100 has already been constructed and was officially put into operation on June 21, 2004. The dredging of 41,000 yd^3 of fill has already occurred as part of Phase I construction.

This alternative would include construction of an additional 925 feet of wharf at Berth 102, to extend north of the existing wharf at Berth 100. No additional rock dike or fill would be required. Five additional A-frame cranes would be installed at Berth 102 in Phase II for a total of nine cranes at the Berth 97-109 Container Terminal (four currently exist). TEU throughput would be less than the proposed Project with an expected throughput of 1,392,000 TEUs by 2030. This would translate into 208 annual ship calls and 832 associated tugboat trips. In addition, this alternative would result in up to 4.472 daily truck trips, and up to 734 annual round-trip rail movements. With 130 acres of backlands, as compared to the proposed Project, slightly less backland would be developed under the Alternative 4.

This alternative would result in disproportionately high and adverse impact on minority and low-income populations similar to those of he proposed Project. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts identified in Section 5.4.2.1; that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses in turn each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Aesthetics AES-5: Similar to the proposed Project, Alternative 4 would have a significant impact and a cumulatively considerable contribution to a cumulative impact on views of the Vincent Thomas Bridge from the Channel Street residential area and Main Channel/Ports O' Call areas due to the placement of five A-frame cranes at the wharves.

The area in the vicinity of Channel Street where views would be affected encompasses Block Group 1 of Census Tract 2963 (50 to 70 percent minority population), Block

Group 1 of Census Tract 2964 (50 to 70 percent minority population), and Block Group 3 of Census Tract 2965 (70 to 90 percent minority population) as can be seen in Figure 5-1. These Census Block Groups, however, constitute a low-income population below that of the region of comparison (Los Angeles County), as shown in Figure 5-2.

The views of the Vincent Thomas Bridge from the Main Channel and Ports O' Call occur within Block Group 2 of Census Tracts 2962.10 (70 to 90 percent minority population), Block Group 2 of Census Tract 2961 (70 to 90 percent minority population), and Block Group 1 of Census Tract 2971.20 (0 to 50 percent minority population) as can be seen in Figure 5-2. Although Block Group 1 of Census Tract 2971.20 does not contain a minority population, the overall resident population in this Block Group is very low at 44 persons. In terms of low-income populations, Block Group 1 of Census Tract 2661 does not have low-income population data, thus, this Block Group is not considered. As can be seen from Figure 5-2, the Block Groups that encompass and are located along the Main Channel from where views of the Vincent Thomas Bridge contain proportions of low-income population above that for the region of comparison (Los Angeles County). Alternative 4 would result in a disproportionately high and adverse effect on minority and low-income populations related to impact AES-5.

Air Quality AQ-1: Alternative 4 emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and NO_X, SO_X, and $PM_{2.5}$ during construction of Phase II and Phase III, would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with construction of Alternative 4 would be significant. Since residential areas closest to the Alternative 4 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 4 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with emissions of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternate 4 would result in offsite ambient concentrations of criteria air pollutants (specifically, the 1-hour NO_2 and 24-hour PM_{10} criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures. This finding applies to individual Project impacts, as well as the cumulative contribution made by Alternative 4, relative to the NEPA baseline. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also a risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and

pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (1) excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased symptoms of respiratory problems in children, such as cough and bronchitis; and (7) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD, 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the terminal site as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phases II and III of construction of Alternative 4, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 4 for VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all criteria pollutants in all study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with Alternative 4 operations would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 4 operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 3, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

Air Quality AQ-6: Operation of Alternative 4 would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most Project emission sources would help to disperse Alternative 4 emissions. Additionally, the distance between Alternative 4 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 4 would not create an objectionable odor at the nearest sensitive receptor. Due to the large number of sources within the Port that emit diesel emissions and the proximity of

residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of Alternative 4 would increase diesel emissions within the Port. Any concurrent emissions-generating activity that occurs in the vicinity of the Project site would add additional air emission burdens to cumulative impacts. After mitigation, Alternative 4 operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Thus, **Impact AQ-6** would have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Three different types of health effects related to toxic emissions from operations of Alternative 4 are assessed: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index.

Even after implementation of mitigation measures, increases in toxic emissions from operations of Alternative 4 would result in significant cancer risk impacts (i.e., an increased cancer risk of 10 or more cases in a million) compared to the NEPA baseline. Cumulative cancer risk would be significant. Because the area surrounding the project site is predominantly minority and low income, the cumulative cancer risk impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Alternative 4 would have significant effects on acute noncancer risks relative to the NEPA baseline. Because the populations closest to the terminal site are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated acute noncancer risk would represent a disproportionately high and adverse impact on minority and low-income populations.

Because Alternative 4 would have significant effects on cancer risks or acute noncancer risks relative to the NEPA baseline, it would make a cumulatively considerable contribution to cancer risks relative to the NEPA baseline. Alternative 4 would also make a cumulatively considerable contribution to chronic noncancer risks relative to the NEPA baseline. Some of these cumulative risks are regional across the areas in the vicinity of the Port. The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). The South Coast Air Basin includes many areas that do not constitute minority and low-income populations. However, in the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB, 2006b). Chronic noncancer risk due to concentrations of DPM would also occur within and in proximity to the two Ports. Because the populations closest to the Port of Los Angeles are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated cumulative risk would represent a disproportionately high and adverse impact on minority and low-income populations.

It should be noted that port-wide air quality mitigations that will be implemented through the Clean Air Action Plan (CAAP) and measures implemented as part of this Project will reduce the health risk impacts from Alternative 4 and other projects at the Port. Future rulemaking activities by the CARB and USEPA also will reduce future cumulative health impacts. Other than a few CAAP measures, these future measures have not been accounted for in the emission calculations or health risk assessment for Alternative 4.

Therefore, the extent to which these future measures will reduce cumulative health risk impacts within the Project area at the Port is unknown at this time.

TRANS-1: Alternative 4 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-5: Operation of Alternative 4 would result in significant impacts on the at-grade rail crossings at Henry Ford Avenue and Avalon Boulevard, and would make a cumulatively considerable contribution to cumulative rail crossing delays under NEPA. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-1: Similar to the proposed Project, significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed terminal site would occur under Alternative 4. Section 3.11 identifies a significant residual short-term construction noise impact to one receiver location on Knoll Hill (ST-3) and one receiver location in the Front Street area (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these Census reporting areas contain minority populations and construction activities under Alternative 4 would therefore disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of the Alternative 4 would disproportionately affect low-income populations.

Alternative 4 would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts from the Project, as well as construction noise from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be constructed in the Port vicinity.

Noise NOI-3: Operation of Alternative 4 would produce a significant unavoidable noise impact at one receptor location, LT-1. Alternative 3 would also make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site includes receptor location LT-1 and is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.7 Alternative 5 – Reduced Construction and Operation: Phase I Construction Only

Under Alternative 5, the Phase I terminal (completed in 2003 as allowed by the ASJ) would operate at levels similar to today (2007). The total acreage of backlands under this

alternative would be 72 acres. Existing equipment and facilities on the terminal site would remain, including four A-frame cranes along the wharf, the bridge connecting Berth 121-131 to Berth 97-109, the paved backlands used for container storage, terminal and gate buildings, mobile equipment used to handle containers, and 1,200 linear feet of wharves and the 1.3 acres of fill associated with the wharf construction. Under this alternative, however, Phase II and Phase III construction elements would not be constructed, including the Berth 102 wharf and the Berth 100 south extension construction, six additional cranes, the second bridge connecting Berths 97-109 and Berths 121-131, and 70 additional terminal acres.

Under Alternative 5, China Shipping would operate the terminal under a 40-year lease. The lease would include AMP and terminal equipment provisions consistent with the ASJ. TEU throughput would be less than the proposed Project with an expected throughput of 630,000 by 2030. This would translate into 104 annual ship calls at Berths 97-109 and 416 associated tugboat trips. In addition, this alternative would result in up to 1,796 daily truck trips, and up to 332 annual round-trip rail movements.

This alternative would result in disproportionately high and adverse impact on minority and low-income populations similar to those of he proposed Project. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts identified in Section 5.4.2.1; that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses in turn each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Aesthetics AES-5: Similar to the proposed Project, Alternative 5 would have a significant impact and a cumulatively considerable contribution to a cumulative impact on views of the Vincent Thomas Bridge from the Channel Street residential area and Main Channel/Ports O' Call areas due to the placement of five A-frame cranes at the wharves.

The area in the vicinity of Channel Street where views would be affected is comprised of Block Group 1 of Census Tract 2963 (50 to 70 percent minority population), Block Group 1 of Census Tract 2964 (50 to 70 percent minority population), and Block Group 3 of Census Tract 2965 (70 to 90 percent minority population) as can be seen in Figure 5-1. These Census Block Groups, however, constitute a low-income population below that of the region of comparison (Los Angeles County), as shown in Figure 5-2.

The views of the Vincent Thomas Bridge from the Main Channel and Ports O' Call occur within Block Group 2 of Census Tracts 2962.10 (70 to 90 percent minority population), Block Group 2 of Census Tract 2961 (70 to 90 percent minority population), and Block Group 1 of Census Tract 2971.20 (0 to 50 percent minority population) as can be seen in Figure 5-2. Although Block Group 1 of Census Tract 2971.20 does not contain a minority population, the overall resident population in this Block Group is very low at 44 persons. In terms of low-income populations, Block Group 1 of Census Tract 2661 does not have low-income population data; thus, this Block Group is not considered. As

can be seen from Figure 5-2, the Block Groups that are located along the Main Channel from where views of the Vincent Thomas Bridge contain proportions of low-income population above that for the region of comparison (Los Angeles County). Alternative 5 would result in a disproportionately high and adverse effect on minority and low-income populations related to impact AES-5.

Air Quality AQ-1: Alternative 5 emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with construction of Alternative 5 would be significant. Since residential areas closest to the Alternative 5 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 5 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternate 5 would result in offsite ambient concentrations of criteria air pollutants (specifically, the 1-hour NO_2 and 24-hour PM_{10} criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures. This finding applies to individual Project impacts as well as the cumulative contribution made by Alternative 5, relative to the NEPA baseline. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also a risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (1) excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased symptoms of respiratory problems in children, such as cough and bronchitis; and (7) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD, 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the terminal site as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phases II and III of construction of Alternative 5, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 5 for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all criteria pollutants in all study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with Alternative 5 operations would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 5 operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average), and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 3, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

Air Quality AQ-6: Operation of Alternative 5 would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most Project emission sources would help to disperse Alternative 5 emissions. Additionally, the distance between Alternative 5 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 5 would not create an objectionable odor at the nearest sensitive receptor. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of Alternative 5 would increase diesel emissions within the Port. Any concurrent emission-generating activity that occurs in the vicinity of the Project site would add to cumulative impacts of air emission burdens. After mitigation, Alternative 5 operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Thus, **Impact AQ-6** would have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Three different types of health effects related to toxic emissions from operations of Alternative 5 are assessed: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index.

After implementation of mitigation measures, increases in toxic emissions from operations of Alternative 5 would result in less than significant cancer risk impacts (i.e., an increased cancer risk of less than 10 cases in a million) compared to the NEPA baseline. Cumulative cancer risk would be significant. Because the area surrounding the project site is predominantly minority and low income, the cumulative cancer risk impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Alternative 5 would have significant effects on acute noncancer risks relative to the NEPA baseline. Because the populations closest to the terminal site are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated acute noncancer risk would represent a disproportionately high and adverse impact on minority and low-income populations.

Because Alternative 5 would have significant effects on cancer risks or acute noncancer risks relative to the NEPA baseline, it would make a cumulatively considerable contribution to significant cumulative cancer risks under NEPA. Alternative 5 would also make a cumulatively considerable contribution to chronic noncancer risks relative to the NEPA baseline. Some of these cumulative risks are regional across the areas in the vicinity of the Port. The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). The South Coast Air Basin includes many areas that do not constitute minority and low-income populations. However, in the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB, 2006b). Chronic noncancer risk due to concentrations of DPM would also occur within and in proximity to the two Ports. Because the populations closest to the Port of Los Angeles are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated cumulative risk would represent a disproportionately high and adverse impact on minority and low-income populations.

It should be noted that port-wide air quality mitigations that will be implemented through the Clean Air Action Plan (CAAP) and measures implemented as part of this Project will reduce the health risk impacts from the proposed Project and other projects at the Port. Future rule-making activities by the CARB and USEPA also will reduce future cumulative health impacts. Other than a few CAAP measures, these future measures have not been accounted for in the emission calculations or health risk assessment for Alternative 5. Therefore, the extent to which these future measures will reduce cumulative health risk impacts within the Project area at the Port is unknown at this time.

TRANS-1: Alternative 5 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would

constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-5: Operation of Alternative 5 would result in significant impact at the at-grade rail crossings at Henry Ford Avenue and Avalon Boulevard, and would make a cumulatively considerable contribution to cumulative rail crossing delays under NEPA. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-1: Similar to the proposed Project, significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed terminal site would occur under Alternative 5. Section 3.11 identifies a significant residual short-term construction noise impact to one receiver location on Knoll Hill (ST-3) and one receiver location in the Front Street neighborhood (ST-2 and ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all Census reporting areas that contain minority populations and construction activities under Alternative 5, therefore, would disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of the Alternative 5 would disproportionately affect low-income populations.

The Project would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts from the Project, as well as construction noise from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be constructed in the Port vicinity.

Noise NOI-3: Operation of Alternative 5 would not produce significant unavoidable noise impacts. However, Alternative 5 would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.8 Alternative 6 – Omni Cargo Terminal Alternative

The Omni Cargo Terminal Alternative would convert the existing site into an operating omni cargo-handling terminal similar to the Pasha Stevedoring & Terminals L. P. (Pasha) currently operating at Berths 174-181. This alternative does not meet the Project alternative to accommodate foreseeable containerized cargo volumes through the Port and to increase container handling efficiency and create sufficient backland area for container terminal operations, including storage, transport, and on/offloading of container ships in a safe and efficient manner

This alternative would develop 2,500 feet of wharves (including the Berth 100 wharf completed as part of Phase I), five new A-frame cranes (one would be added to the existing four A-frame cranes installed as part of Phase I), and backlands occupying 142 acres (the same as under the proposed Project). Development of this alternative would take place proportionately over three phases similar to those of the proposed Project.

Annual throughput volumes at the proposed omni terminal would vary by commodity: 506,467 container TEUs, 17,987 auto TEUs, and break-bulk commodities totaling 5,159,570 tons. Under this alternative, 364 annual ship calls and 1,456 tugboat trips would be required. In addition, this alternative would result in up to 3,982 truck trips, and up to 245 annual round-trip rail movements.

This alternative would result in disproportionately high and adverse impact on minority and low-income populations similar to those of he proposed Project. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts identified in Section 5.4.2.1; that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses in turn each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Aesthetics AES-5: Similar to the proposed Project, Alternative 6 would have a significant impact and a cumulatively considerable contribution to a cumulative impact on views of the Vincent Thomas Bridge from the Channel Street residential area and Main Channel/Ports O' Call areas due to the placement of five A-frame cranes at the wharves.

The area in the vicinity of Channel Street where views would be affected encompasses Block Group 1 of Census Tract 2963 (50 to 70 percent minority population), Block Group 1 of Census Tract 2964 (50 to 70 percent minority population), and Block Group 3 of Census Tract 2965 (70 to 90 percent minority population) as can be seen in Figure 5-1. These Census Block Groups, however, constitute a low-income population below that of the region of comparison (Los Angeles County), as shown in Figure 5-2.

The views of the Vincent Thomas Bridge from the Main Channel and Ports O'Call occur within Block Group 2 of Census Tracts 2962.10 (70 to 90 percent minority population), Block Group 2 of Census Tract 2961 (70 to 90 percent minority population), and Block Group 1 of Census Tract 2971.20 (0 to 50 percent minority population) as can be seen in Figure 5-2. Although Block Group 1 of Census Tract 2971.20 does not contain a minority population, the overall resident population in this Block Group is very low at 44 persons. In terms of low-income populations, Block Group 1 of Census Tract 2661 does not have low-income population data; thus, this Block Group is not considered. As can be seen from Figure 5-2, the Block Groups that encompass and are located along the Main Channel from where views of the Vincent Thomas Bridge contain proportions of low-income population above that for the region of comparison (Los Angeles County). Alternative 6 would result in a disproportionately high and adverse effect on minority and low-income populations related to impact AES-5.

Air Quality AQ-1: Alternative 6 emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and NO_X, SO_X, and $PM_{2.5}$ during construction of Phase II and Phase III, would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA

perspective, the mitigated air quality impacts associated with construction of Alternative 6 would be significant. Since residential areas closest to the Alternative 6 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 6 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with emissions of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternate 6 would result in offsite ambient concentrations of criteria air pollutants (specifically, the 1-hour NO_2 and 24-hour PM_{10} criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures. This finding applies to individual Project impacts, as well as the cumulative contribution made by Alternative 6, relative to the NEPA baseline. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also the risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (1) excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased symptoms of respiratory problems in children, such as cough and bronchitis; and (7) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD, 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the terminal site as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phases II and III of construction of Alternative 6, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 6 for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all criteria pollutants in all study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts

associated with Alternative 6 operations would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 6 operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 3, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under **AQ-2**.

Air Quality AQ-6: Operation of Alternative 6 would increase air pollutants due to the combustion of diesel fuel. Some individuals might find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of most project emission sources would help to disperse Alternative 6 emissions. Additionally, the distance between Alternative 6 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 6 would not create an objectionable odor at the nearest sensitive receptor. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant. Operation of Alternative 6 would increase diesel emissions within the Port. Any concurrent emission-generating activity that occurs in the vicinity of the Project site would add to cumulative impacts of air emission burdens. After mitigation, Alternative 6 operations would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region. Thus, **Impact AQ-6** would have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Three different types of health effects related to toxic emissions from operations of Alternative 6 are assessed: individual lifetime cancer risk, chronic noncancer hazard index, and acute noncancer hazard index.

Even after implementation of mitigation measures, increases in toxic emissions from operations of Alternative 6 would result in significant cancer risk impacts (i.e., an increased cancer risk of 10 or more cases in a million) compared to the NEPA baseline. Cumulative cancer risk would be significant. Because the area surrounding the project site is predominantly minority and low income, the cumulative cancer risk impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Alternative 6 would have significant effects on acute noncancer risks relative to the NEPA baseline. Because the populations closest to the terminal site are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated acute

noncancer risk would represent a disproportionately high and adverse impact on minority and low-income populations.

Because Alternative 6 would have significant effects on cancer risks or acute noncancer risks relative to the NEPA baseline, it would make a cumulatively considerable contribution to significant cumulative cancer risks under NEPA. Alternative 3 would also make a cumulatively considerable contribution to chronic noncancer risks relative to the NEPA baseline. Some of these cumulative risks are regional across the areas in the vicinity of the Port. The *Multiple Air Toxics Exposure Study* (MATES-II) conducted by the SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be 1,400 in a million (SCAQMD, 2000). The South Coast Air Basin includes many areas that do not constitute minority and low-income populations. However, in the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB 2006b). Chronic noncancer risk due to concentrations of DPM would also occur within and in proximity to the two Ports. Because the populations closest to the Port of Los Angeles are predominantly minority (Figure 5-1) and disproportionately low-income (Figure 5-2), this elevated cumulative risk would represent a disproportionately high and adverse impact on minority and low-income populations.

It should be noted that port-wide air quality mitigations that will be implemented through the Clean Air Action Plan (CAAP) and measures implemented as part of this Project will reduce the health risk impacts from the proposed Project and other projects at the Port. Future rulemaking activities by the CARB and USEPA also will reduce future cumulative health impacts. Other than a few CAAP measures, these future measures have not been accounted for in the emission calculations or health risk assessment for Alternative 6. Therefore, the extent to which these future measures will reduce cumulative health risk impacts within the Project area at the Port is unknown at this time.

TRANS-1: Alternative 6 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-5: Operation of Alternative 6 would not result in a significant impact at the at-grade rail crossings at Henry Ford Avenue and Avalon Boulevard because it would not utilize the on-dock rail yard at Berths 121-131. Alternative 6 would also not make a cumulatively considerable contribution to cumulative rail crossing delays under NEPA. Because Alternative 6 would not result in transportation delays at rail crossings, it would not result in a disproportionately high and adverse effect on minority and low-income populations.

Noise (NOI-1): Similar to the proposed Project, significant unavoidable noise impacts from construction of the wharf and backland areas at the proposed terminal site would

occur under Alternative 6. Section 3.11 identifies a significant residual short-term construction noise impact to two receiver locations on Knoll Hill (ST-1 and ST-3) and one receiver location in the Front Street neighborhood (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these census reporting areas that contain minority populations and construction activities under Alternative 6, therefore, would disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of Alternative 6 would disproportionately affect low-income populations.

The Project would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts. Construction noise from the Project, and from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be built near the Port. Because the area surrounding the Alternative 6 site that could be affected by cumulative construction noise impacts is predominantly minority and low income, the cumulative noise impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-3: Operation of Alternative 6 would not produce significant unavoidable noise impacts. However, Alternative 6 would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.9 Alternative 7 – Nonshipping Use

The Nonshipping Use Alternative would convert the existing site into a "Regional Center," which would generally be considered as a mixed-use center with major retail tenants serving as "anchor" uses; office park uses; and light industrial uses supporting maritime activities such as machine shops, marine vessel chandlers, and marine supply stores. In addition, a public dock would be constructed to support onsite retail and restaurant uses. This dock would be constructed to provide service and access to smaller watercraft (such as small boats, wave runners, and kayaks). The public dock would likely be a floating dock with access ramps connected to the existing wharf or adjacent area to allow recreational users access to the Regional Center and would require a permit from the USACE prior to construction. Hours of operation for the Nonshipping Use Alternative would generally be 8:00 a.m. to 10:00 p.m., Monday through Friday, and 10:00 a.m. to 2:00 a.m. on the weekends.

Similar to the proposed Project, this alternative could be developed proportionally over three phases. Existing backlands uses and facilities on the 117-acre site would have to be demolished because they would not be consistent with the alternative use. The 1.3 acres of fill added to Waters of the U.S. during construction of Phase I of the proposed Project (as allowed under the ASJ and under USACE permit), which was fully mitigated by applying mitigation bank credit offsets and in-water construction BMPs, would remain in place under Alternative 7. Section 2.5.1.6 in Chapter 2 provides further information about this Alternative.

This alternative would result in disproportionately high and adverse impact on minority and low-income populations. The resource analyses in Chapter 3, and the summary of alternatives and impacts in Chapter 6, provide detailed and summary information (respectively) comparing the effects of this alternative with other alternatives and the proposed Project. The focus of this chapter is the potential for disproportionately high and adverse effects on minority and low-income populations.

To facilitate comparison of the potential for disproportionately high and adverse effects on minority and low-income populations between the proposed Project and this alternative (among other alternatives), the remainder of this section addresses impacts identified in Section 5.4.2.1; that is, impacts that, under the proposed Project, would be disproportionately high and adverse on minority and low-income populations. This section addresses in turn each of the impacts enumerated in Section 5.4.2.1 and documents whether there would be disproportionately high and adverse effects on minority and low-income populations for this alternative.

Aesthetics AES-5: Alternative 7 would not result in a substantial change in the overall visual character or quality of the landscape that would have a significant effect on viewer response. As a consequence, it would not create significant impacts under NEPA based on the evaluative criteria used by federal agencies. Because of this, Alternative 7 would not result in a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-1: Alternative 7 emissions for VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from Phase I construction, and VOC, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ during construction of Phase II, would be greater than the NEPA baseline. These emissions from construction would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with construction of Alternative 7 would be significant. Since residential areas closest to the Alternative 7 site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

In addition, Alternative 7 would make a cumulatively considerable contribution to a significant cumulative air quality impact associated with emissions of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ from construction. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-2: Construction of Alternative 7 would result in offsite ambient concentrations of criteria air pollutants (specifically, the 1-hour NO_2 and 24-hour PM_{10} criteria during Phase I construction in 2003) that would exceed SCAQMD thresholds of significance, even after implementation of mitigation measures. This finding applies to individual Project impacts as well as the cumulative contribution made by Alternative 7, relative to the NEPA baseline. Although the single points with maximum concentrations would not be in residential areas, residential areas would experience higher concentrations the closer they are to the terminal site. Since residential areas closest to the site are predominantly minority (Figure 5-1) and have a concentration of low-income population compared to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2 and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations.

Adverse human health effects of NO_2 include not only the potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups but also the risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes. NO_2 also contributes to atmospheric discoloration, although this impact would be regional and would not primarily affect populations closest to the emission sources. Adverse human health effects associated with PM_{10} and $PM_{2.5}$ include (1) excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased symptoms of respiratory problems in children, such as cough and bronchitis; and (7) increased hospitalization for cardiovascular and respiratory disease (including asthma) (SCAQMD, 2006a). These adverse health effects may occur disproportionately among minority and low-income populations in the vicinity of the terminal site as a result of the elevated ambient concentrations in exceedance of SCAQMD thresholds.

NO_2, PM_{10}, and $PM_{2.5}$ would be produced during Phase II of construction of Alternative 7, and would make a cumulatively considerable contribution to a significant cumulative impact. Because the area surrounding the project site is predominantly minority and low income, the pollutant concentration impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-3: Emissions under Alternative 7 for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ in 2005, 2015, 2030, and 2045 would be greater than the NEPA baseline for all criteria pollutants in all study years. These increases would exceed the SCAQMD daily emission thresholds. With implementation of mitigation measures, impacts would remain significant. Therefore, from a NEPA perspective, the mitigated air quality impacts associated with Alternative 7 operations would be significant. Since residential areas closest to the proposed Project site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ would constitute a disproportionately high and adverse effect on minority and low-income populations.

Air Quality AQ-4: Maximum offsite ambient pollutant concentrations associated with Alternative 3 operations would be significant for NO_2 (1-hour average and annual) and PM_{10} and $PM_{2.5}$ (24-hour average) and significant impacts under NEPA would occur. While implementation of mitigation measures would reduce the impact of Alternative 7, the impact would remain significant and unavoidable.

Since residential areas closest to the terminal site are predominantly minority (Figure 5-1) and have a concentration of low-income population relative to Los Angeles County (Figure 5-2), the elevated ambient concentrations of NO_2, $PM_{2.5}$, and PM_{10} would constitute a disproportionately high and adverse effect on minority and low-income populations. Adverse human health effects of NO_2 and PM_{10} and $PM_{2.5}$ would be the same as described immediately above under AQ-2.

Air Quality AQ-6: Operation of Alternative 7 would not increase air pollutants due to the combustion of diesel fuel measurably and the mobile nature of most project emission sources would help to disperse Alternative 7 emissions. Additionally, the distance between Alternative 7 emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Alternative 7 would not create an objectionable odor at the nearest sensitive

receptor and would not add additional air emission burdens to cumulative impacts. Thus, **Impact AQ-6** would not have a disproportionately high and adverse effect on minority or low-income populations.

Air Quality AQ-7: Because the main source of emissions for Alternative 7 would be automobile trips (primarily gasoline powered), this alternative would generate only a small fraction of the DPM emissions that the proposed Project would generate. As a result, the maximum cancer risks and chronic noncancer hazard index values associated with this alternative would be less than the significance thresholds at all receptors. Alternative 7 would not make a cumulatively considerable contribution to a significant cumulative impact. Alternative 7 would not result in cancer risks and chronic or acute noncancer risks that could cause disproportionately high and adverse effects on minority and low-income populations.

TRANS-1: Alternative 7 would not result in a significant unavoidable project-level impact to the transportation system during construction. However, traffic generated during project construction does have the potential to make a cumulatively considerable contribution to a significant short-term cumulative impact on intersections in the project area.

Compliance with traffic control measures would not keep the cumulative impacts below the level of significance; therefore, these temporary cumulative intersection impacts would be considered unavoidable. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

TRANS-2: Operation of Alternative 7 would result in significant unavoidable impacts after mitigation at the following intersections:

+ Figueroa Street and Harry Bridges Boulevard – (p.m. peak hour)
+ Harbor Boulevard and Swinford Street – (p.m. peak hour)
+ John S. Gibson Boulevard and I-110 NB Ramps – (p.m. peak hour)
+ Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

In addition, Alternative 7 would make a cumulatively considerable contribution to cumulative intersection impacts under NEPA. Because the area surrounding the project site is predominantly minority and low income, these cumulative intersection impacts would constitute a disproportionately high and adverse effect on minority and low-income populations.

Noise NOI-1: The project development under Alternative 7 would increase acreage above the NEPA baseline conditions; therefore, short-term noise construction impacts would occur under NEPA. Section 3.11 identifies a significant residual short-term construction noise impact to one receiver location on Knoll Hill (ST-3) and one receiver location in the Front Street neighborhood (ST-4). Knoll Hill is located in Block Group 1 of Census Tract 2962.10. The ST-4 receiver is located in Block Group 1 of Census Tract 2963.00. As shown in Figure 5-1, all these Census reporting areas contain minority populations and construction activities under Alternative 7 would, therefore, disproportionately affect minority populations. As shown in Figure 5-2, these areas also contain low-income population concentrations greater than that for Los Angeles County. Thus, construction of Alternative 7 would disproportionately affect low-income populations.

The Project would make a cumulatively considerable contribution to a significant cumulative impact due to short-term construction noise impacts. Construction noise from the Project, and from other West Basin terminal projects that may have overlapping construction activity (Berth 121-131 Container Terminal and Berth 136-147 Terminal), including the transportation improvements that would be built near the Port.

Noise NOI-3: Operation of Alternative 7 would not produce significant unavoidable noise impacts. However, Alternative 7 would make a cumulatively considerable contribution to a significant cumulative noise impact from terminal operations. Because the area surrounding the project site is predominantly minority and low income, this cumulative impact would constitute a disproportionately high and adverse effect on minority and low-income populations.

5.4.10 Summary of Disproportionate Effects on Minority and Low-Income Populations

Table 5-3 summarizes the effects of the proposed Project and alternatives with respect to disproportionately high and adverse effects on minority and low-income populations. Significant unavoidable aesthetic, air quality, and noise impacts would constitute disproportionate effects. All other resource impacts would either be less than significant or if significant, would be limited to the proposed Project site, would not affect the public, would be mitigated to less than significant, or would otherwise not have disproportionately high and adverse effects on minority and low-income populations.

Table 5-3. Summary of Disproportionate Effects on Minority and Low-Income Populations from the Proposed Project and Alternatives

Alternative	Aesthetic	Air Quality	Transportation	Noise	Additional Considerations
Proposed Project	Degradation of views toward the Vincent Thomas Bridge from the Channel Street and Main Channel/Ports O' Call areas due to the presence of 10 A-frame cranes. Disproportionately high and adverse impacts to minority or low-income populations.	Criteria pollutant emissions in excess of thresholds from construction and operations. High ambient concentrations of 1-hour NO_2 and 24-hour PM_{10} and $PM_{2.5}$ associated with maximum daily emissions in construction and operation phases. Disproportionately high and adverse effects on minority and low-income populations due to increased risk of cancer and acute noncancer hazards. Cumulative odor impacts that disproportionately affect minority and low-income populations.	Significant cumulative impacts to five intersections during construction that would disproportionately affect minority and low-income populations. Significant unavoidable rail delays at Henry Ford Avenue and Avalon Boulevard, which would disproportionately affect minority and low-income populations.	Significant unavoidable construction noise impacts to the Knoll Hill and Front Street areas due to construction of the backlands and wharves. Significant cumulative noise impacts from construction and operation. Disproportionately high and adverse impacts to minority or low-income populations.	Creation of economic benefits in the form of jobs and income, and possible remediation of contaminated soils.
Alternative 1 (No Project)	NEPA is not applicable to this alternative.	NEPA is not applicable to this alternative.	NEPA is not applicable to this alternative.	NEPA is not applicable to this alternative.	Minimal benefits.
Alternative 2 (No Federal Action)	Less than Significant	Criteria pollutant emissions in excess of thresholds from construction and operations. High ambient concentrations of 1-hour NO_2 and 24-hour PM_{10} and $PM_{2.5}$ associated with maximum daily emissions in construction and high NO_2 from operation phases. Disproportionately high and adverse effects on minority and low-income populations due to cumulative cancer and acute noncancer risk impacts. Cumulative odor impacts that disproportionately affect minority and low-income populations.	Significant cumulative impacts to five intersections during construction that would disproportionately affect minority and low-income populations.	Same as the proposed Project.	Minimal benefits.

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Table 5-3. Summary of Disproportionate Effects on Minority and Low-Income Populations from the Proposed Project and Alternatives (continued)

Alternative	Aesthetic	Air Quality	Transportation	Noise	Additional Considerations
Alternative 3 (No Berth 102)	Degradation of views toward the Vincent Thomas Bridge from the Channel Street and Main Channel areas due to the presence of 5 A-frame cranes.	Same as the proposed Project.	Same as the proposed Project.	Same as the proposed Project.	Benefits similar but less than the proposed Project.
Alternative 4 (No Berth 100 South Extension)	Degradation of views toward the Vincent Thomas Bridge from the Channel Street and Main Channel areas due to the presence of 9 A-frame cranes.	Same as the proposed Project.	Same as the proposed Project.	Same as the proposed Project.	Benefits similar but less than the proposed Project.
Alternative 5 (Phase I Only)	Degradation of views toward the Vincent Thomas Bridge from the Channel Street and Main Channel areas due to the presence of 4 A-frame cranes.	Same as the proposed Project.	Same as the proposed Project.	Same as the proposed Project.	Benefits similar but less than the proposed Project.
Alternative 6 (Omni Cargo Terminal)	Degradation of views toward the Vincent Thomas Bridge from the Channel Street and Main Channel areas due to the presence of 5 A-frame cranes.	Same as the proposed Project.	Same as the proposed Project for construction traffic.	Same as the proposed Project.	Benefits same as the proposed Project
Alternative 7 (Nonshipping)	No disproportionately high and adverse impacts to minority or low-income populations.	Impacts from construction would be similar to the proposed Project. Cumulative odor impacts that disproportionately affect minority and low-income populations.	Same as the proposed Project for construction traffic.	Construction noise impacts to Knoll Hill and Pacific Avenue/Channel Street areas. Disproportionately high and adverse impacts to minority or low-income populations.	Benefits similar to the proposed Project

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5.5 Public Outreach

The purpose of this Draft EIS/EIR is to inform agencies and the public of significant environmental effects associated with the proposed Project, to describe and evaluate reasonable alternatives to the proposed Project, and to propose mitigation measures that would avoid or reduce the significant effects of the proposed Project.

The LAHD has made considerable efforts to provide public outreach, beyond what is minimally required by environmental or agency guidelines. Any Notice of Preparation/ Initial Study (NOP/IS), Draft EIS, or Draft EIR is presented at public meetings at locations and times convenient for the affected community. The meetings are held at the Port Administration Building or in the community, depending on the location of the project.

Notification of availability of documents is extensive and utilizes a variety of media. Environmental notices are placed in six newspapers: the *Los Angeles Times*, *Daily Breeze*, *La Opinion*, *Sentinel*, *Long Beach Press Telegram*, and *Metropolitan News*. Meeting notices are sent to all active community organizations and to anyone who has requested to be on the LAHD environmental documents mailing list. Postcards noticing the document and any public meetings also are sent to all San Pedro and Wilmington addresses. A free copy of documents is provided to community organizations.

The LAHD also consults with affected community groups through the Port Community Advisory Committee (PCAC), a special stakeholder advisory committee of the Los Angeles Board of Harbor Commissioners. This committee, which meets monthly, includes representatives from a number of community groups. The PCAC also has subcommittees and focus groups that address a broad range of environmental issues, including studies on those impacts that might result in disproportionate impacts on relevant populations. Greater detail regarding PCAC involvement and Port outreach is available in Appendix C.

5.5.1 Alternative Forms of Distribution

The Recirculated Draft EIS/EIR for the Berth 97-109 Container Terminal project has been distributed directly to numerous agencies, organizations, and interested groups and persons for comment during the formal review period. The Draft EIS/EIR also has been made available for review at the LAHD, Environmental Management Division, and at three Los Angeles public library branches: Central, San Pedro, and Wilmington. In addition to the printed copies, the Draft EIS/EIR also is available in electronic format on the LAHD website, at: http://www.portoflosangeles.org/Environmental/publicnotice.htm, and is available at no cost on CD-ROM.

5.5.2 Spanish Translation

With a large Hispanic population adjacent to the Port, meeting notifications and executive summaries of major environmental documents will be provided in Spanish as well as English. The Executive Summary of this Draft EIS/EIR is available in a Spanish translation. The purpose is to assist Spanish-speaking members of the local community in understanding the purpose of the Draft EIS/EIR, project overview, project description,

environmental impacts, alternatives to the proposed Project, areas of controversy, and issues to be resolved.

The LAHD also provides an interpreter at public meetings, where required, and publishes its regular community newsletter, *The Main Channel*, in both English and Spanish.