CHAPTER 3

ENVIRONMENTAL ANALYSIS - ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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CHAPTER 3.0

ENVIRONMENTAL ANALYSIS
Environmental Setting, Impacts, and Mitigation Measures

3.1 INTRODUCTION

3.1.1 ENVIRONMENTAL RESOURCES ADDRESSED

A Notice of Preparation (NOP) was prepared for the ISOCI facility on October 12, 1995 (see Appendix A). The NOP identified the following environmental resources as being potentially significant, requiring further analysis in the EIR: earth resources, air resources, water resources, land use, risk of upset, human health, transportation and circulation, noise, light and glare, utilities/energy/natural resources, public services, and aesthetics. The following environmental resources were considered to be less than significant: plant life, animal life, population, housing, recreation, and cultural resources.

Since the preparation, release and circulation of the NOP, the CEQA Guidelines have been amended, including Appendix G, the Environmental Checklist Form. The Environmental Checklist Form reflects the environmental resources that need to be evaluated through the CEQA process. The amended checklist generally renames some of the environmental resources and lists environmental resources in alphabetical order. This ~~Draft~~ *Final* EIR has been prepared to reflect the new checklist and, based on the NOP, will evaluate the topics identified in Table 3.1-1. Table 3.1-1 identifies the environmental resources that were found potentially significant in the NOP and indicates where the resources are evaluated in this ~~Draft~~ *Final* EIR.

TABLE 3.1-1

~~Draft~~ Final EIR Format Compared To The Environmental Resources Addressed In The NOP

ENVIRONMENTAL RESOURCES EVALUATED IN ~~DRAFT~~ *FINAL* EIR	CEQA RESOURCES IDENTIFIED IN THE NOP
Aesthetics	Aesthetics, Light and Glare
Air Quality	Air Resources, Human Health
Geology and Soils	Earth Resources
Hazards and Hazardous Materials	Risk of Upset
Hydrology and Water Quality	Water Resources
Land Use and Planning	Land Use
Noise	Noise
Public Services	Public Services
Transportation and Traffic	Transportation and Circulation
Utilities and Service Systems	Utilities/Energy/Natural Resources

The following environmental resources were considered to be less than significant based on the NOP and will not require further evaluation in this EIR:

- Agriculture Resources
- Biological Resources (plant and animal life)
- Cultural Resources
- Mineral Resources
- Population and Housing
- Recreation

3.1.2 ORGANIZATION OF ENVIRONMENTAL ANALYSIS

Each environmental resource section is organized into the following subsections: (1) Environmental Setting; (2) Regulatory Background; (3) Thresholds of Significance; (4) Environmental Impacts; (5) Mitigation Measures; and (6) Level of Significance After Mitigation. A description of each subsection follows.

3.1.2.1 Environmental Setting

CEQA Guidelines §15125 requires that an EIR include a description of the physical environmental conditions in the vicinity of the proposed project as they exist at the time the NOP is published, or if no NOP is published, at the time the environmental analysis is commenced, from both a local and regional perspective. ~~This subchapter describes the existing environment around ISOCI before issuance of the Part B permit.~~ The discussion for the environmental resources addressed in this EIR includes both a regional and local setting. The analyses included in this subchapter focus on those aspects of the environmental resource areas that could be adversely affected by ISOCI as determined in the Notice of Preparation (see Appendix A), and not those environmental resource areas determined to have no potential adverse impact from the proposed project.

Per the DTSC guidelines and consistent with CEQA case law, the environmental baseline or setting for the ISOCI facility includes those activities currently permitted under the Part A permit. The existing ISOCI facility operations are those that have been approved under the Part A applications submitted to DTSC in 1986 and as amended and approved by DTSC. Therefore, the facility operations that will be used for the "baseline" or to describe the environmental setting are those activities that have been allowed under the Interim Status Document. The Part A permit application did not provide specific site information, e.g., an accurate site plan. Therefore, ISOCI and the DTSC came to an agreement on what was included in the Part A application (see Table 2-1).

The ISOCI facility currently is operating and has been operating at the existing site since 1976. Chapter 3.0 describes the facility and environmental resources affected by the facility as it currently exists, and analyzes the impacts associated with the continued operation of the facility as proposed in the Part B permit application (ISOCI, 1997). The baseline for the ISOCI facility is the date of the most recent Part A approval from the Department of Toxic Substances Control.

3.1.2.2 Regulatory Background

Statutes and regulations applicable to the environmental resource being evaluated for potential impacts are provided in this section. The agencies responsible for enforcement of these statutes and regulations as they relate to the proposed project are also described.

3.1.2.3 Thresholds of Significance

This section identifies the criteria used to determine when physical changes to the environment created as a result of the project approval would be considered significant. The levels of significance for each environmental resource were established by identifying significance criteria. These criteria are based upon those presented in the California Environmental Quality Act (CEQA) environmental checklist, the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook (SCAQMD, 1993), the City of Los Angeles CEQA Guidelines (City of Los Angeles, 1998) or other local guidelines or ordinances, as applicable.

The significance determination under each impact analysis is made by comparing the facility as it currently is permitted to operate with the operations of the entire facility as proposed in the Part B permit application.

3.1.2.4 Environmental Impacts

The potential impacts associated with each discipline are either quantitatively analyzed where possible or qualitatively analyzed where data were insufficient to quantify impacts. The impacts are compared to the significance criteria to determine the level of significance.

The impact sections of this subchapter focus on those impacts that are considered potentially significant per the requirements of the California Environmental Quality Act. An impact is considered significant if it leads to a "substantial, or potentially substantial, adverse change in the environment." Impacts from the project fall within one of the following categories:

> **No Impact:** There would be no impact to the identified resource as a result of the project.
>
> **Less Than Significant:** Some impacts may result from the project; however, they are judged to be less than significant. Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource. A “less than significant impact” applies where the environmental impact does not exceed the significance threshold.
>
> **Potentially Significant But Mitigation Measures Can Reduce Impacts to Less Than Significant:** Significant adverse impacts may occur; however, with proper mitigation, the impacts can be reduced to less than significant.

Potentially Significant or Significant Impacts: Adverse impacts may occur that would be significant even after mitigation measures have been applied to minimize their severity. A "potentially significant or significant impact" applies where the environmental impact exceeds the significance threshold, or information was lacking to make a finding of insignificance.

3.1.2.5 Mitigation Measures

This section describes feasible mitigation measures that could minimize potentially significant or significant impacts that may result from project approval. CEQA Guidelines (§15370) defines mitigation to include:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

In accordance with CEQA statutes (§21081.6), a mitigation and monitoring program would be required to be adopted by DTSC to demonstrate and monitor compliance with any mitigation measures identified in this EIR. The program would identify specific mitigation measures to be undertaken, when the measure would be implemented, and the agency responsible for oversight, implementation and enforcement.

3.1.2.6 Level of Impacts After Mitigation

This section provides a summary as to the level of impact to the environmental resource after imposition of any required feasible mitigation measures. If no mitigation measures are required, a statement to that effect is provided.

3.2 AESTHETICS

3.2.1 ENVIRONMENTAL SETTING

This section discusses the visual character of the study area, the significant views, light and glare. The site and area surrounding the ISOCI facility is an urban area. The areas adjacent to ISOCI primarily contain industrial or commercial facilities.

The topography of the area surrounding the facility is essentially flat. The area surrounding ISOCI is an urbanized area characterized by heavy industrial development, which includes recycling and manufacturing facilities. The ISOCI facility is bounded to the west by Soto Street, to the south by a commercial buildings, to the east by railroad tracks and to the north by various industrial buildings. The Atchison, Topeka, and Santa Fe Railroad Yard (Hobart Yard), a major railroad terminal and train staging area is located just east of the ISOCI facility.

A visual field survey was conducted of the facilities and adjacent areas in February 2005. The developed and natural environments were noted during the survey to define the overall visual character of the area. Photographs of the facility and adjacent properties were taken at various locations described in Figure 3.2-1, which is a map of the area. Photographs corresponding to the letters on the map are found on Figures A through G. The figures show the views from Soto Street, the motor vehicle entrance at ISOCI and inside the ISOCI facility.

No natural scenic features occur within the facility. Views of the ISOCI site generally include the concrete walls and fences that prevent entrance to the facility. The site is surrounded by an eight foot high wall. Access to the site is provided through the west gate, which provides access to vehicles and trucks, are traveling in/out of the facility. A gate at the east end of the property provides rail access to the site.

Views of the site generally consist of fences and the west gate, with partial views of structures (tanks) from Soto Street. Trucks can be seen at the ISOCI facility. Views of the surrounding area include typical urban development associated with industrial land uses such as buildings, concrete and other types of walls, gates, and heavy equipment.

The major industrial sites in the area include EKCO Metals and the Ace Paper Company, as well as other manufacturing and commercial facilities. Virtually all of the area immediately surrounding the ISOCI facility contains commercial or industrial land uses. The nearest residential area is located approximately one-quarter mile north of the facility. Residential areas are located south of ISOCI in the City of Huntington Park; southeast of the facility in the cities of Maywood and Bell; east of the facility in East Los Angeles; north of the facility in the Boyle Heights area of the City of Los Angeles; and west of the facility in the City of Los Angeles. The City of Vernon is located immediately south of the ISOCI facility. The entire City of Vernon is zoned for industrial and commercial land uses.

Lighting is required at the ISOCI facility to provide safe working conditions. Existing light sources at the facility include lights on tanks and processing equipment. The major (most noticeable) sources of light and glare in the project area are the city's street lights along Soto Street and Washington Boulevard.

FIGURE 3.2-1

Figure A - Looking from Soto Street at the entrance to ISOCI looking north/northeast.

Figure B - Looking from across Soto Street at the entrance to ISOCI looking northeast.

Figure C – Truck loading/unloading operation within the facility.

Figure D – Truck loading/unloading operation within the facility.

Figure E – View of tanks, secondary containment, and loading area looking northwest.

Figure F – Railspurs in rear of facility looking east.

3.2.2 REGULATORY BACKGROUND

The State of California and the City of Los Angeles have recognized the value of access to visual resources through planning and zoning regulations which designate, preserve, and enhance public views. Through the General Plan, Community Plans, and the designation of scenic resources, the City of Los Angeles specifies development standards which help to prevent the obstruction of views. These standards include the regulation of building height, mass, and floor to area ratios, as well as landscaping and grading, which are the principal issues in view obstruction. Individual specific or master plans may include additional standards such as view-sensitive site planning, structure design and grading requirements, transfer of development rights to avoid development in sensitive viewsheds, and preservation of mountain ridges and other visual resources to minimize aesthetic impacts. The City of Los Angeles has implemented an number of aesthetic-related regulations as part of the City's municipal code (City of Los Angeles, 1998).

The proposed project is located within the Boyle Heights Community Plan (City of Los Angeles, 1998b). The relevant goals, objectives, and policies of the community plan pertaining to aesthetics related to the proposed project are identified below.

Objectives:

- To preserve designated industrial lands for industrial uses.
- To conserve the existing industry in order to contribute to the tax base for the City and as a potential employment resource for community residents.
- To improve the quality of industrial developments and to protect the amenities of adjacent areas.

Policies:

- That industrial uses, wherever possible, be clearly defined and separated from other uses by freeways, flood control channels, highways, and other physical barriers.
- That a transition of industrial uses be developed, where feasible from intensive uses to less intensive uses in those areas adjacent to residential uses.

3.2.3 THRESHOLDS OF SIGNIFICANCE

Impacts on aesthetics and light/glare will be considered significant if:

- The project will block views from a scenic highway or corridor, or block views of a scenic vista.

- The project will adversely affect the visual continuity of the surrounding area, damage scenic resources, or substantially degrade the visual character or quality of the site.

- The project adds lighting which would adversely affect nighttime views in the area or add glare to residential or sensitive receptors.

3.2.4 PROJECT ENVIRONMENTAL IMPACTS

3.2.4.1 Scenic Highways

There are no scenic highways or corridors or scenic vistas in the vicinity of the ISOCI facility (City of Los Angeles 1998b). New structures associated with the facility will generally not be noticeable to the public as they will be constructed within the confines of the existing facility. The public views of the ISOCI facility associated with the proposed project are not expected to noticeably change. Therefore, no significant impacts to scenic highways, corridors or vistas are expected.

3.2.4.2 Alteration of Visual Continuity

The topography of the area surrounding the facility remains flat and the adjacent properties are developed. The land use of the surrounding area has been zoned M3-1 (heavy industrial) by the City of Los Angeles. The land uses immediately surrounding the facility are also zoned for heavy industrial uses.

Issuance of the Part B is not expected to significantly change the current views of the ISOCI facility. The views from surrounding areas would still include the fences and gates associated with the facility. The proposed facility modifications are not expected to be noticeable to the general public driving or walking on Soto Street, because: (1) Soto Street is graded separate from the ISOCI facility; (2) the existing fences will remain unchanged and will remain the predominate feature visible to the public; and (3) the proposed facility modifications will be within or near existing containment areas and are not expected to be visible from outside of the facility. The tops of some of the new storage tanks may be visible to areas adjacent to the ISOCI facility. This impact would be less than significant as all areas surrounding the ISOCI facility are industrial. The views of the facility are expected to remain consistent with other land uses along Soto Street. Therefore, issuance of the Part B is not expected to have significant impacts on views and aesthetics.

3.2.4.3 Light and Glare

Lighting is required at the ISOCI facility for security and to provide adequate lighting so employees can work after daylight hours. Existing light sources at the ISOCI facility include flood lights near the office buildings and the rail car entrance. The light sources at the facility are expected to remain the same as currently it exists and are not expected to change due to the issuance of the Part B permit. The project is located about one-quarter mile from the closest residential or sensitive population. Numerous light sources are located between the facility and the residential areas; the most noticeable of which include street lights along Soto Street, Olympic Boulevard, Washington Boulevard, and other smaller streets. Therefore, issuance of the Part B is not expected to have significant impacts on lighting or glare.

3.2.5 MITIGATION MEASURES

No significant adverse visual, aesthetic, light or glare impacts are anticipated as a result of issuance of the Part B permit to ISOCI, and no mitigation measures are required.

3.2.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The impacts of the ISOCI facility on aesthetics and light and glare are considered to be less than significant.

3.3 AIR QUALITY

3.3.1 ENVIRONMENTAL SETTING

3.3.1.1 Meteorological Conditions

The proposed project site is located within the South Coast Air Basin (Basin) which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The meteorological information in this section of the EIR is summarized from the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), which should be consulted for further meteorological information. The climate in the Basin generally is characterized by sparse winter rainfall and hot summers tempered by cool ocean breezes. A temperature inversion, which traps the cool marine air layer and prevents vertical mixing, is the prime factor that allows contaminants to accumulate in the Basin. The mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The climate of the area is not unique, but the high concentration of mobile and stationary sources of air contaminants in the western portion of the Basin, in addition to the mountains impacts the air quality of the region.

<u>Temperature and Rainfall</u>

Temperature affects the air quality of the region in several ways. Local winds are the result of temperature differences between the relatively stable ocean air and the uneven heating and cooling that takes place in the Basin due to a wide variation in topography. Temperature also has a major effect on vertical mixing height and affects chemical and photochemical reaction times. The annual average temperature varies little throughout the Basin, averaging 62°F. With a less pronounced oceanic influence, the eastern portion of the Basin shows greater variability in annual minimum and maximum temperatures. The City of San Bernardino has an annual average temperature range from 37°F to 97°F, while the City of Santa Monica has an annual range between 47°F to 75°F. The coastal areas show little variation in temperature on a year round basis due to the moderating effect of the marine influence. On average, August is the warmest month while January is the coolest month. Most of the annual rainfall in the Basin falls between November and April. Annual average rainfall varies from nine inches in Riverside to 14 inches in downtown Los Angeles near the Facility.

Wind Flow Patterns

Wind flow patterns play an important role in the transport of air pollutants in the Basin. The winds flow from offshore and blow eastward during the daytime hours. In summer, the sea breeze starts in mid-morning, peaks at 10-15 miles per hour and subsides after sundown. There is a calm period until about midnight. At that time, the land breeze begins from the northwest, typically becoming calm again about sunrise. In winter, the same general wind flow patterns exist except that summer wind speeds average slightly higher than winter wind speeds. This overall pattern of low wind speeds is a major factor that allows the pollutants to accumulate in the Basin.

An annual wind "rose" for the Vernon area, which is representative of the wind conditions at the ISOCI site, is shown in Figure 3.3-1. Winds predominantly flow from the west to the east in the Vernon area. This wind rose shows the typical sea breeze pattern discussed above. The SCAQMD recommends the use of 1981 meteorological data, including wind flow data, because it is representative of meteorological conditions in the South Coast Air Basin and it provides more conservative (higher) results when used for dispersion modeling than data from other years.

3.3.1.2 Existing Air Quality

Local air quality in the Basin is monitored by the SCAQMD, which operates a network of monitoring stations throughout the Basin. The California Air Resources Board (CARB) operates additional monitoring stations.

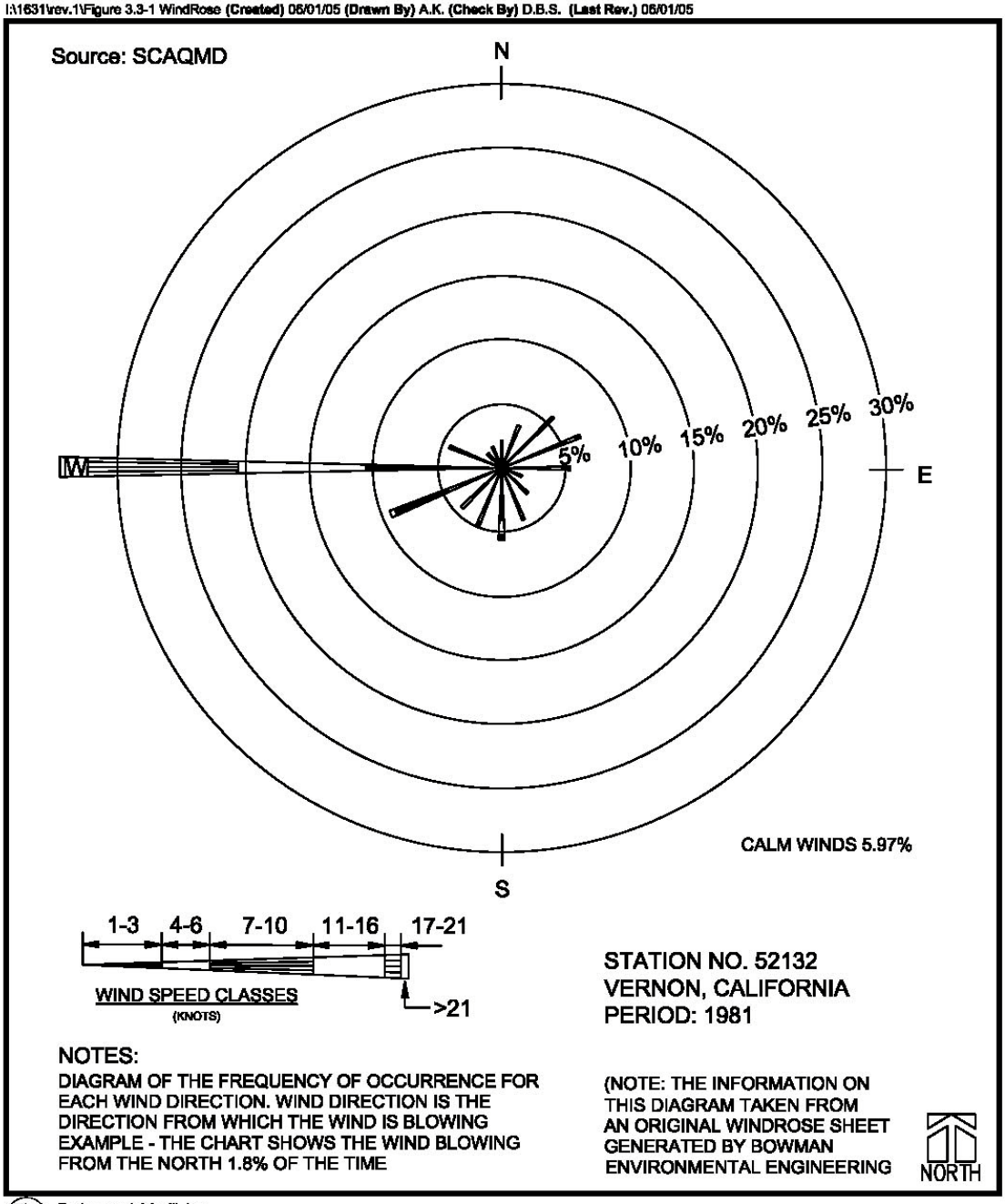
Criteria Pollutants

The sources of air contaminants in the Basin vary by pollutant but generally include on-road mobile sources (e.g., automobiles, trucks and buses), other off-road mobile sources (e.g., airplanes, ships, trains, construction equipment, etc.), residential/commercial sources, and industrial/manufacturing sources. Mobile sources are responsible for a large portion of the total Basin emissions of several pollutants.

Criteria air pollutants are those pollutants for which the federal and state governments have established ambient air quality standards or criteria for outdoor concentrations in order to protect public health with a margin of safety (see Table 3.3-1). National Ambient Air Quality Standards were first authorized by the federal Clean Air Act of 1970 and have been set by the U.S. EPA. California Ambient Air Quality Standards were authorized by the state legislature in 1967 and have been set by the CARB. Air quality of a region is considered to be in attainment of the standards if the measured concentrations of air pollutants are continuously equal to or less than the standards.

Mobile sources account for approximately 63 percent of volatile organic (VOC) emissions, 90 percent of the nitrogen oxide (NOx) emissions, 57 percent of the sulfur oxides (SOx) emissions, 97 percent of the carbon monoxide (CO) emissions, and 14 percent of the particulate matter less than ten microns (PM10) emissions in the Basin (SCAQMD, 2003a).

I:\1631rev.1\Figure 3.3-1 WindRose (Created) 06/01/05 (Drawn By) A.K. (Check By) D.B.S. (Last Rev.) 06/01/05



Environmental Audit, Inc.

WIND ROSE

Project No. 1631

Figure 3.3-1

TABLE 3.3-1

Ambient Air Quality Standards

POLLUTANT	NATIONAL STANDARDS	STATE STANDARDS
Ozone		
8-hour	0.08 ppm(1)	None
1-hour (federal)	0.12 ppm	0.09 ppm
Carbon Monoxide		
1-hour	35 ppm	20 ppm
8-hour	9 ppm	9 ppm
Nitrogen Dioxide		
1-Hour	None	0.25 ppm
Annual	0.053 ppm	None
Suspended Particulates		
PM10: 24-hour	150 ug/m^3(2)	50 ug/m^3
Annual	50 ug/m^3	20 ug/m^3, AA M(3)
PM2.5: 24-hour	65 ug/m^3	None
Annual	15 ug/m^3	12 ug/m^3, AAM(3)
Sulfur Dioxide		
1-hour	None	0.25 ppm
24-hour	0.14 ppm	0.04 ppm
Annual	0.03 ppm	None
Lead		
30-Day Average	None	1.5 ug/m^3
Quarterly Average	1.5 ug/m^3	None
Sulfate		
24-hour	None	25 ug/m^3
Visibility 8-hour (10 am to 6 p.m.)	None	10 miles for hours with humidity less than 70%
Hydrogen Sulfide		
1-hour	None	0.03 ppm
Vinyl Chloride		
24-hour	None	0.01 ppm

Notes:
(1) ppm = parts per million
(2) ug/m^3 = micrograms per cubic meter
(3) AAM = Annual Arithmetic Mean

Health-based air quality standards have been established by the U.S. EPA and the CARB for ozone, CO, NOx, PM10, SO_2, and lead. The California standards are more stringent than the federal air quality standards. California also has established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. Hydrogen sulfide and vinyl chloride currently are not monitored in the Basin because they are not a regional air quality problem but are generally

associated with localized emission sources. The Basin is designated as non-attainment for CO, PM10, and ozone for both state and federal standards. The Basin, including the project area, is classified as attainment for both the state and federal standards for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), sulfates, and lead.

Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations. In 2003, the district exceeded the federal and state standards for ozone at most monitoring locations on one or more days. The federal and state one-hour ozone standards were exceeded thirty-eight and ninety-one days respectively. The East and Central San Bernardino Mountains and the Santa Clarita Valley exceeded standards most frequently. Other areas that exceeded the state ozone standards included the San Gabriel Valley, San Fernando Valley, and Riverside County including Coachella Valley and San Bernardino Valley.

The federal PM10 standards were exceeded on two days in 2003 in Metropolitan Riverside County. None of the other monitoring stations exceeded the federal PM10 standards. The state PM10 standards were exceeded at all of the monitoring locations in the Basin including the coast, central Los Angeles, East San Fernando Valley, East San Gabriel Valley, Santa Clarita Valley, Central Orange County, Saddleback Valley, Riverside County excluding Metropolitan Riverside County and Lake Elsinore, the Coachella Valley and, San Bernardino County. The state standard was exceeded on a total of sixty-nine days in the Basin in 2003. The federal PM2.5 standard was exceeded at twelve monitoring locations in the Basin.

In 2003, neither federal nor state standards for NO_2, SO_2, CO, lead and sulfates were exceeded. Currently, the district is in attainment with the ambient air quality standards for lead, SO_2, and NO_2 (SCAQMD, 2004b). The SCAQMD predicts that the Basin will comply with the federal PM10 requirements by 2006, and the federal ozone standard by 2010 (SCAQMD, 2003a). Compliance with the state standards for ozone and PM10 are not expected until after 2010 (SCAQMD, 2003a).

Local Air Quality

The project site is located within the SCAQMD's Central Los Angeles monitoring area. Recent background air quality data for criteria pollutants for the Central Los Angeles monitoring station are presented in Table 3.3-2. The data generally indicate an improvement in air quality in recent years with decreases in the maximum concentrations of most pollutants (see Table 3.3-2). The air quality in the Central Los Angeles monitoring area is classified as attainment for the state and federal ambient air quality standards for CO, NOx, SOx, lead, and sulfate. The air quality in the area also is in compliance with the federal 24-hour and annual PM10 standard. The air quality in the Central Los Angeles area is not in compliance with the state and federal 1-hour and federal 8-hour average ozone standard, the state 24-hour PM10, and the federal PM2.5 standard.

Criteria Pollutant Health Effects

A brief discussion of the health effects that can result from the exposure to the criteria pollutants, including sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone, respirable particulates, hydrogen sulfide, sulfates, and lead are presented below.

TABLE 3.3-2

Ambient Air Quality Central Los Angeles Monitoring Station (2000-2004) Maximum Observed Concentrations

CONSTITUENT	2000	2001	2002	2003	2004
Ozone:					
1-hour (ppm)	0.14	0.116	0.122	0.152	0.110
Federal Standard	(1)	(0)	(0)	(1)	(0)
State Standard	(8)	(8)	(8)	(11)	(7)
8-hour (ppm)	0.105	0.099	0.080	0.088	0.092
Federal Standard	(4)	(1)	(0)	(2)	(1)
Carbon Monoxide:					
1-hour (ppm)	7	6	5	6	4
	(0)	(0)	(0)	(0)	(0)
8-hour (ppm)	6.0	4.57	4.0	4.6	3.2
	(0)	(0)	(0)	(0)	(0)
Nitrogen Dioxide:					
1-hour (ppm)	0.16	0.14	0.14	0.16	0.16
	(0)	(0)	(0)	(0)	(0)
Annual (ppm)	0.0404	0.0378	0.0327	0.0338	0.0328
PM10:					
24-hour (ug/m^3)	80	97	65	81	72
Federal Standard	(0)	(0)	(0)	(0)	(0)
State Standard	(25%)	(33%)	(41.5%)	(9.8%)	(8.2%)
Annual (ug/m^3)					
Geometric	37.0	40.3	37.6	--	--
Arithmetic	40.0	44.2	39.3	34.6	32.7
PM2.5:					
24-hour (ug/m^3)	87.8	73.4	66.3	83.7	75.0
Federal standard	(3.3%)	(1.2%)	(0.3%)	(1.5%)	(0.6%)
Annual Arithmetic Mean	22.0	22.9	21.8	21.3	19.6
Sulfur Dioxide:					
1-hour (ppm)	0.08*	0.03	0.02	0.05*	0.08
	(0)	(0)	(0)	(0)	(0)
24-hour (ppm)	0.010*	0.010	0.016	0.006*	0.015
	(0)	(0)	(0)	(0)	(0)
Annual (ppm)	0.0009*	--	--	--	
Lead:					
30-day (ug/m^3)	0.06	0.06	0.05	0.15	0.03
	(0)	(0)	(0)	(0)	(0)
Quarter (ug/m^3)	0.05	0.05	0.03	0.15	0.03
	(0)	(0)	(0)	(0)	(0)
Sulfate:					
24-hour (ug/m^3)	16.4	15.9	15.2	14.6	12.7
	(0%)	(0%)	(0%)	(0%)	(0%)

Source: SCAQMD Air Quality Data Annual Summaries 2000-2004.

Notes: (18) = Number of days or percent of samples exceeding the state standard; -- = Not monitored; ppm = parts per million; ug/m^3 = micrograms per cubic meter; * = Less than 12 full months of data, and may not be representative.

Sulfur Dioxide (SO_2): Sulfur dioxide is a colorless gas with a characteristic strong suffocating odor. The gas irritates the mucous membranes of the eyes, nose and throat. Constriction of the bronchial tubes in the chest also can produce such symptoms as wheezing, shortness of breath, and chest tightness in asthmatics during exercise or other physical activities.

Carbon Monoxide (CO): Carbon monoxide is a colorless and odorless gas. Exposure to low concentrations of carbon monoxide over long periods of time can aggravate existing heart conditions and decrease exercise tolerance in these same people. Some impairment to the central nervous system may result from prolonged exposure. Exposure to CO by a pregnant woman may adversely affect the health of the fetus (SCAQMD, 1993a).

Nitrogen Dioxide (NO_2): Nitrogen dioxide may produce irritation of the eyes and mucous membranes. As reported in the CEQA Air Quality Handbook (SCAQMD, 1993a), there is some indication of a relationship between nitrogen dioxide and chronic pulmonary fibrosis. The handbook also reports that some increased incidence of bronchitis in children (two to three years old) has been observed at concentrations as low as 0.3 parts per million.

Ozone (O_3): Ozone is a bluish gas with a characteristic pungent odor. Ozone is an irritant to the eyes and all mucous membranes. Symptoms to ozone exposure can include dryness of the upper respiratory passages, irritation of the mucous membranes of the nose and throat, choking, coughing, and fatigue.

Respirable particulates (PM10): Respirable particulate matter consists of extremely small suspended particles or droplets that can lodge in the lungs contributing to respiratory problems. Respirable particulate matter can be inhaled, deposited in the lungs, and cause permanent lung damage. Respirable particulate matter also can interfere with the body's mechanism for clearing the respiratory tract or cause health impacts by acting as a carrier of an absorbed toxic substance (SCAQMD, 1993a).

Hydrogen sulfide: Hydrogen sulfide is a colorless gas typically associated with the odor of rotten eggs. Exposure to low concentrations can cause irritation of the eyes and upper respiratory tract. In industrial settings, exposure to higher concentrations can cause symptoms such as headaches, dizziness, and nausea.

Sulfates: Sulfates form from the atmospheric breakdown of sulfur dioxide. The health effects from inhalation are similar to those of sulfur dioxide.

Lead: Lead in the atmosphere occurs generally as particulate matter. The health effects associated with prolonged exposure to most lead under industrial conditions can include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurologic dysfunction. Low level exposure to lead in infants has been reported to result in changes in neurobehavioral performance (SCAQMD, 1993a).

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants which may cause or contribute to an increase in mortality or severe illness, or which may pose a potential hazard to human health. The California Health and Safety Code (§39655) defines a toxic air contaminant as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Under California's toxic air contaminant program (Assembly Bill 1807, Health and Safety Code §39650 et seq.), the CARB, with the participation of the local air pollution control districts, evaluates and develops any needed control measures for air toxics. The general goal of regulatory agencies is to limit exposure to toxic air contaminants to the maximum extent feasible.

Monitoring for toxic air contaminants is limited compared to monitoring for criteria pollutants because toxic pollutant impacts are typically more localized than criteria pollutant impacts. CARB conducts air monitoring for a number of toxic air contaminants every 12 days at approximately 20 sites throughout California (CARB) (Mike Redgrave, personal communication). A monitoring station in Los Angeles provides data that summarizes the ambient concentrations of various toxic air contaminants in the area. A summary of the most recent data from the Los Angeles station for various toxic air contaminants is in Table 3.3-3.

CARB has estimated cancer risk based on exposure to the background concentrations of toxic air contaminants in the Los Angeles area (see Table 3.3-4). CARB provides cancer risk estimates for carcinogens for which CARB recognizes a unit risk factor. A unit risk factor is needed to calculate cancer risk. The estimated background cancer risk at the Los Angeles monitoring station, based on CARB monitoring data is about 403 per million (see Table 3.3-4).

The SCAQMD measured toxic air contaminant concentrations as part of its Multiple Air Toxic Exposure Study, referred to as the MATES-II study. The purpose of the study is to provide a complete estimate of exposure to toxic air contaminants by individuals within the South Coast Air Basin. The SCAQMD conducted air sampling at about 24 different sites for over 30 different toxic air contaminants between April 1998 and March 1999. The SCAQMD has released a Final Report from this study which indicate the following: (1) cancer risk levels appear to be decreasing since 1990 by about 44 percent to 63 percent; (2) mobile sources generate the largest amount of toxic air contaminants and dominate the cancer risk, i.e. cause more than 90 percent of the risk; (3) about 70 percent of all risk is attributed to diesel particulate emissions; (4) about 20 percent of all risk is attributed to other toxics associated with mobile sources; (5) only about 10 percent of all risk is attributed to stationary sources; and (6) no local "hot spots" of high TAC exposure have been identified. The average carcinogenic risk in the Basin is about 1,400 per million people. This means that 1,400 people out of a million (or about 1.4 out of 1,000) are susceptible to contracting cancer from exposure to the known TACs over a 70-year period of time. The cumulative risk averaged over the four counties (Los Angeles, Orange, Riverside, and San Bernardino) of the South Coast Air Basin is about 980 in one million when diesel sources are included and about 260 in one million when diesel sources are excluded. Of the ten monitoring sites in the MATES II study, Los Angeles is the closest site to the ISOCI facility. The cancer risk at the Los Angeles site, based on monitoring data, was about 400 per

million from stationary and mobile sources. The cancer risk from mobile sources (alone) was about 275 per million. The complete Final Report on the MATES-II Study is available from the SCAQMD (SCAQMD, 2000).

TABLE 3.3-3

Ambient Air Quality for Toxic Air Contaminants Los Angeles – North Main Street 2003

POLLUTANT	ANNUAL AVERAGE	POLLUTANT	ANNUAL AVERAGE
VOC's	ppb/v(1)		ppb/v
Acetaldehyde	1.39	Formaldehyde	3.79
Benzene	0.853	Methyl Bromide	0.032
1,3-Butadiene	0.186	Methyl Chloroform	0.047
Carbon Disulfide	0.65	Methyl Ethyl Ketone	0.09
Carbon Tetrachloride	0.095	Methyl Tertiary Butyl Ether	0.36
Chloroform	0.048	Methylene Chloride	0.59
o-Dichlorobenzene	0.15	Perchloroethylene	0.109
p-Dichlorobenzene	0.16	Styrene	0.12
cis – 1,3 – Dichloropropene	0.05	Toluene	2.55
trans – 1,3 – Dichloropropene	0.05	Trichloroethylene	0.035
Ethyl Benzene	0.35	ortho-Xylene	0.46
PAH's	nanograms/m(2)		nanograms/m^3
Benzo(a)pyrene	0.061	Benzo(k)fluoranthene	0.035
Benzo(b)fluoranthene	0.081	Dibenz(a,h)anthracene	0.025
Benzo(g,h,i)perylene	0.239	Indeno(1,2,3-cd)pyrene	0.093
Inorganic Compounds(3)	nanograms/m(2)		nanograms/m^3
Aluminum	1,750.0	Nickel	6.4
Antimony	6.4	Phosphorus	60.0
Barium	93.5	Potassium	649.0
Bromine	9.2	Rubidium	3.4
Calcium	1,790.0	Selenium	1.2
Chlorine	1,310.0	Silicon	4,730.0
Chromium	8.0	Strontium	25.1
Cobalt	7.8	Sulfur	1,130.0
Copper	53.9	Tin	8.2
Hexavalent Chromium	0.07(4)	Titanium	159.0
Iron	1,970.0	Uranium	1.3
Lead	22.2	Vanadium	18.4
Manganese	35.6	Yttrium	2.0
Mercury	1.6	Zinc	106.0
Molybdenum	2.4	Zirconium	8.8

Source: California ARB website: Annual Toxics Summaries by Monitoring Sites, http://www.arb.ca.gov/adam/toxics/sitesubstance.html

(1) ppb/v = parts per billion by volume.

(2) nanograms/m^3 = nanograms per cubic meter.

(3) Data for Inorganic Compounds is from the year 2002-the most recent year with 12 consecutive months of monitoring data.

(4) Data is from year 2003- the most recent year with 12 consecutive months of monitoring data.

Lead concentrations once exceeded the state and federal standards by a wide margin, but have not exceeded state or federal standards at any monitoring station since 1982 (SCAQMD, 2003a).

TABLE 3.3-4

Cancer Risk Based On CARB Los Angeles Monitoring Station Data 2003

SUBSTANCE	CANCER RISK (per million)
Acetaldehyde	7
Benzene	79
Benzo(a)pyrene	0.07
Benzo(b)fluoranthene	0.009
Benzo(k)fluoranthene	0.004
1,3-Butadiene	70
Carbon Tetrachloride	25
Chloroform	1
Chromium (VI)	11
Dibenz(a,h)anthracene	0.01
para – Dichlorobenzene	10
cis – 1,3 – Dichloropropene	4
trans – 1,3 – Dichloropropene	4
Formaldehyde	28
Indeno(1,2,3-cd)pyrene	0.01
Lead	0.3*
Methylene Chloride	2
Nickel	2*
Perchloroethylene	4
Trichloroethylene	0.4
TOTAL	**248**

*2002 data
Source: California ARB website: Annual Toxics Summaries by Monitoring Sites, http://www.arb.ca.gov/adam/toxics/sitesubstance.html

Sensitive Populations

Sensitive populations are considered to be areas where groups of individuals accumulate who are more susceptible to the effects of air pollutants than are the population at large. Sensitive populations generally include schools, day care facilities, hospitals, and hospice/convalescent homes. The nearest sensitive population is the Lou Costello Jr. Recreation Center located about 0.75 mile north east of the ISOCI facility.

Certain state/local regulations and general public policy require that impacts of certain facilities on sensitive populations be evaluated. South Coast Air Quality Management District regulations require analysis of schools located within 1,000 feet of the project boundaries (South Coast Air Quality Management District Rule 212, Standards for Approving Permits). There are no schools located within 1,000 feet of ISOCI. This EIR evaluated the carcinogenic and non-carcinogenic

health impacts to sensitive populations located within about one mile of the ISOCI facility (see Section 3.9.3). The state and federal ambient air quality standards have been developed to take into account impacts on sensitive populations. Further, the regulations established for toxic air contaminants require that emissions be minimized to the extent feasible for all populations. Therefore, there are no special criteria that apply to the sensitive populations.

3.3.1.3 Existing ISOCI Operational Emissions

The emissions from the existing facility are associated with storage tanks, a backup electrical generator, loading/unloading emissions, boilers and heaters, pumps, valves, flanges and mobile sources. Operational activities have been divided into two major emission categories: On-site emissions and off-site emissions. Air emissions for both of the categories are described in more detail below. The primary air emissions include criteria pollutants, carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur oxides (SOx) and particulate matter less than 10 microns in diameter (PM10).

Onsite Emissions

The major source of emissions at the facility are fugitive volatile organic compound emissions. Table 3.3-5 identifies the on-site sources of emissions at the facility and the following briefly describes each source and the emission calculation methodology. More detailed information regarding emission calculations methodology, emission factors, and operation parameters are provided in Appendix C herein.

Boilers: The facility operates two boilers under the baseline condition which are used to provide steam for the treatment process. The equipment is fired by natural gas. The emissions of criteria pollutants were estimated using the South Coast Air Quality Management District emission factors for natural gas combustion (see Appendix C).

Heaters: The facility currently operates one heater, equipped with low NOx burners. The heater is fired by natural gas. The emissions of criteria pollutants were estimated using the South Coast Air Quality Management District emission factors for natural gas combustion (see Appendix C).

Storage Tanks: A number of existing tanks are used to store waste oils and recovered oil product including tanks 21, 22, 23, 24, 25, 26, 27, 40, 41, 42, 43, 47, 50, 100, 200, 300, 400, 500, 600, and 700. All tanks at the facility are fixed-roof tanks. The two significant types of emission releases from fixed-roof tanks are breathing loss and working loss. Breathing loss is defined as the release of vapor from a tank through vapor expansion and contraction which occurs as a result of changes in temperature and barometric pressure. This can occur without a change in the level of the liquid in the tank. Working loss results from the direct filling and emptying of tanks and is associated with displacing the vapor in the tank. Therefore, the total emissions from a tank is equal to the sum of the working loss and the breathing loss. Tank emissions were calculated

using methodology from the U.S. EPA. See Appendix C for the detailed storage tank emission calculations.

TABLE 3.3-5

Existing Air Emissions Associated With Sources At ISOCI (pounds per day)(1)

Equipment	CO	VOC	NOx	SOx	PM10
On-site Emissions					
Boilers/Heaters	18.26	2.59	24.15	0.23	2.94
Backup Generator	0.49	0.18	2.25	0.03	0.16
Storage Tanks	-	5.91	-	-	-
Loading/Unloading Racks	-	0.00	-	-	-
Fugitive Emissions(1)	-	25.83	-	-	-
Total Existing On-Site Emissions	18.75	34.51	26.40	0.26	3.10
Off-site Emissions					
Delivery Trucks	47.21	6.65	63.32	0.55	1.13
Employee Vehicles	8.84	0.95	0.95	0.01	0.05
Fugitive Dust	-	-	-	-	46.85
Rail cars (within Basin)	3.28	1.25	23.94	2.04	0.79
Total Existing Off-Site Emissions	59.33	8.85	88.21	2.60	48.82
Total Facility Existing Emissions(2)	78.08	43.36	114.61	2.86	51.92

(1) See Appendix C for detailed emission calculations.
(2) Total may not add due to rounding.

Loading/Unloading Emissions: The facility has existing loading/unloading stations for trucks and rail car bulk liquid loading operations. Approximately 64,000 gallons per day of waste oils are currently handled at the ISOCI facility. The estimate of emissions from the loading operation was made by the method used in the Hazardous Waste Treatment, Storage, and Disposal Facilities Air Emission Models Document (U.S. EPA, 1994). The emissions for the loading/unloading activities are provided in Appendix C.

Fugitive Emissions: The ISOCI facility includes a number of sources where fugitive volatile organic compound emissions may occur, i.e., pump seals, valves, and flanges. There are a number of valves, pumps and flanges associated with the storage tanks. The method used to calculate the emissions from these sources was based on the emission factors developed by the South Coast Air Quality Management District for valves, flanges, and pump seals. Fugitive emissions from the various components are calculated in Appendix C. The total number of each component for each unit was obtained from engineering drawings in the Part B permit application.

Air Emission Controls: The ISOCI facility does not currently have air emission controls at the site.

Off-Site Emissions

Off-site emissions are generated from delivery trucks, employee vehicles, fugitive dust, and railroad cars. Table 3.3-5 identifies the off-site sources of emissions at the facility and the following text will briefly describe each source and the emission calculation methodology.

Delivery Trucks: The facility currently receives an average of 30 truck deliveries, and a maximum of 45 truck deliveries, per day, of hazardous wastes. Table 3.3-5 shows expected emissions from truck deliveries to ISOCI. Emission calculations were completed using CARB's EMFAC2002 emission factors. More detailed emission calculations are provided in Appendix C.

Employee Vehicles: The existing ISOCI facility has 18 employees Table 3.3-5 shows expected emissions from employee vehicles at the ISOCI facility. Emission calculations were completed using CARB's EMFAC2002 emission factors. More detailed emission calculations are provided in Appendix C.

Fugitive Dust: Delivery trucks and employee vehicles generate fugitive dust while traveling on paved roadways. Calculations in Table 3.5-5 are based on 18 employee vehicles and 45 delivery trucks each day at the ISOCI facility. More detailed emission calculations are provided in Appendix C.

Rail Car Emissions: Hazardous wastes are also shipped to the ISOCI for recycling by rail car. Currently, approximately five rail cars per seven day work week make deliveries to the facility. The emissions from trains are based on the fuel consumption of the engine and U.S. EPA emission factors (U.S. EPA, 2003). More detailed emission calculations are provided in Appendix C.

3.3.1.4 Baseline Operational Emission Summary

The total emissions associated with the current operation of the ISOCI facility are summarized in Table 3.3-5. The estimated emissions for the operation of the existing facility are as follows: 78.08 pounds per day of carbon monoxide; 43.36 pounds per day of volatile organic compounds; 114.61 pounds per day of nitrogen oxides; 2.86 pounds per day of sulfur oxides; and 51.92 pounds per day of respirable particulate matter.

Existing emissions from the ISOCI facility are included in the Air Quality Management Plan. The Air Quality Management Plan identifies air emission reductions from existing sources and air pollution control measures that are necessary in order to comply with the state and federal ambient air quality standards (SCAQMD, 2003). The control strategies in the Air Quality Management Plan are based on projections from the local General Plans from various cities in Southern California (including the City of Los Angeles). Projects which are consistent with the local General Plans are consistent with the air quality related regional plans (SCAQMD, 1993).

3.3.1.5 Odor Complaints

The South Coast Air Quality Management District monitors and investigates odor complaints made about businesses located within the district. The South Coast Air Quality Management District has no record of any odor complaints having been filed against the ISOCI facility.

3.3.2 REGULATORY SETTING

Introduction

Ambient air quality standards in California are the responsibility of and have been established by both the United States Environmental Protection Agency and the California Air Resources Board. These standards have been set at concentrations which provide margins of safety for the protection of public health and welfare. Federal and state air quality standards are presented in Table 3.3-2. The South Coast Air Quality Management District has established levels of episode criteria and has indicated measures which must be initiated to immediately reduce contaminant emissions when these levels are reached or exceeded. The federal, state, and local air quality regulations are identified below in further detail.

Federal Regulations

The U.S. Environmental Protection Agency is responsible for setting and enforcing the National Ambient Air Quality Standards for ozone, carbon monoxide, nitrogen oxides, sulfur oxides, respirable particulate matter, and lead. The U.S. Environmental Protection Agency has jurisdiction over emission sources that are under the authority of the federal government including aircraft, locomotives, and emission sources outside state waters (Outer Continental Shelf). The U.S. Environmental Protection Agency also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the California Air Resources Board.

Federal regulations include the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 Code of Federal Regulations (CFR), Part 61), and Prevention of Significant Deterioration (PSD) (Title 40 of the Code of Federal Regulations, Part 52).

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

The NESHAPs establishes standards for emissions of specific pollutants. The authority for implementation of the National Emission Standards for Hazardous Air Pollutants has been delegated by U.S. Environmental Protection Agency to the South Coast Air Quality Management District and are referenced in South Coast Air Quality Management District Regulation X. The list of compounds designated as hazardous air pollutants was expanded to 189 compounds following passage of the Clean Air Act Amendments of 1990 (Title III) but regulations implementing these Amendments have not been developed. Title III may be applicable to ISOCI because it will regulate sources of toxic air contaminants.

Prevention of Significant Deterioration

Prevention of Significant Deterioration regulations provide pre-construction review of new/modified facilities to assure that air quality in attainment areas does not significantly deteriorate. The Los Angeles Basin is a sulfur dioxide and nitrogen oxide attainment area and Prevention of Significant Deterioration review is required for significant increases (40 tons per year) in sulfur dioxide or nitrogen oxide emissions. No major modifications are proposed to the ISOCI facility that would significantly increase sulfur dioxide or nitrogen oxide emissions so that Prevention of Significant Deterioration regulations are not applicable to this facility.

Title V Federal Permit Program

The Clean Air Act Amendments (Title V) also required a federal permit program that requires "major" sources of pollutants to apply for and receive a facility permit. A "major" source in the South Coast Air Basin is a source that emits eight tons per year of any one pollutant. This program is not expected to apply to ISOCI because ISOCI is not considered to be a "major" emission source. This program has been implemented by the South Coast Air Quality Management District.

California Regulations

The California Air Resources Board, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act, responding to the federal Clean Air Act, and for regulating emissions from consumer products and motor vehicles. The California Air Resources Board has established State Ambient Air Quality Standards for all pollutants for which the federal government has National Ambient Air Quality Standards and also has standards for sulfates, visibility, hydrogen sulfide and vinyl chloride. Hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. California standards are generally more stringent than the National Ambient Air Quality Standards. Federal and state air quality standards are presented in Table 3.3-2.

California also has established a state air toxics program (Assembly Bill 1807, Tanner). This program requires that the California Air Resources Board prepare a list of contaminants that are potentially toxic. The California Air Resources Board and the Office of Environmental Health Hazards Assessments (OEHHA) prepare reports that serve as the basis for identification of a toxic air contaminant. The Office of Environmental Health Hazards Assessments reviews the health effects information available and develops potency data, while the California Air Resources Board gathers the exposure information. The public is given an opportunity to review the report and make written and oral comments during the review process. The Scientific Review Panel reviews the scientific accuracy of the report and prepares its findings which are sent to the California Air Resources Board governing board for approval and formal identification of the emission as a toxic air contaminant. Following listing as a toxic air contaminant, the California Air Resources Board may take action to regulate emission sources of specific toxic air contaminants. To date, these regulations do not apply to ISOCI.

The Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill 2588), and as amended by Senate Bill (SB) 1731, requires operators of certain stationary sources to inventory air toxic emissions from their operations and, if directed to do so by the local air district, prepare a health risk assessment to determine the potential health impacts of such emissions. ISOCI has not been required to report under the requirements of Assembly Bill 2588 to date.

Local Regulations

The South Coast Air Basin is under the jurisdiction of the South Coast Air Quality Management District which has regulatory authority over stationary source air pollution control. The South Coast Air Quality Management District and the Southern California Association of Governments jointly are responsible for air quality planning in the Basin and development of the Air Quality Management Plan (AQMP). The Air Quality Management Plan establishes the strategies that will be used to achieve compliance with federal National Ambient Air Quality Standards and state ambient air quality standards (SCAQMD, 2003). The South Coast Air Quality Management District generally regulates stationary sources of air pollutants. There are numerous South Coast Air Quality Management District regulations that apply to ISOCI operations. These regulations are outlined briefly below.

Regulation II, Permits, and Regulation III, Fees: These regulations specify requirements and permit fees to construct and operate stationary equipment. Rule 201 establishes the general requirements for obtaining South Coast Air Quality Management District permits. Rules 203, 204, 205, 210 and 212 establish standards for approving permits and establishes permitting timeframes. In addition, Rule 212 requires public notification of a significant project. Rule 219 identifies equipment which does not require a permit. Regulation III establishes fees applicable to South Coast Air Quality Management District engineering evaluations, permit fees, and annual emission fees. These regulations will apply to new equipment at the ISOCI facility.

Regulation IV, Prohibitions: Regulation IV establishes allowable emission limitations for pollutants from various emission sources, as well as inspection and maintenance provisions. These rules include Rule 401 - Visible Emissions, Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 404 - Particulate Matter Concentration, and Rule 405 - Solid Particulate Matter which may apply to sources at ISOCI.

Regulation IX, New Source Performance Standards: U.S. Environmental Protection Agency has delegated authority to the South Coast Air Quality Management District to implement and enforce federal New Source Performance Standards (NSPS) regulations. The federal New Source Performance Standards regulations have been adopted by the South Coast Air Quality Management District under Regulation IX and are identical to the federal requirements and are not expected to apply to sources at ISOCI.

Regulation X, National Emission Standards for Hazardous Air Pollutants: The U.S. Environmental Protection Agency has delegated authority to the South Coast Air Quality Management District to implement and enforce federal National Emission Standards for

Hazardous Air Pollutants regulations. The federal National Emission Standards for Hazardous Air Pollutants have been adopted by the South Coast Air Quality Management District under Regulation X and are identical to the federal National Emission Standards for Hazardous Air Pollutants requirements (see above). These regulations are not expected to be applicable to ISOCI.

Regulation XI, Source Specific Standards: This regulation establishes emission limitations on specific stationary sources. The rules that potentially apply to ISOCI include: (1) Rule 1146.1 which limits emissions of nitrogen oxides from process heaters; (2) Rule 1173 which limits emissions of volatile organic compounds from fugitive sources, e.g., pumps, valves, and flanges; and (3) Rule 1176 which limits emissions of volatile organic compounds from sumps and wastewater separators.

Regulation XIV, Toxics and Other Non-Criteria Pollutants: This regulation establishes emission limitations on toxics and non-criteria pollutants. SB 1731 (Health and Safety Code Sections 44360, 44380.5 and 44390 et seq.) required the South Coast Air Quality Management District to develop a program to reduce the health risk from existing stationary sources of air toxics in accordance with specified requirements. Rule 1402 was developed to implement risk reduction requirements of SB 1731. A health risk assessment will be required for the new sources at the ISOCI facility to comply with these regulations.

3.3.3 THRESHOLDS OF SIGNIFICANCE

The impacts of the proposed project on air quality will be considered significant if the project exceeds any of the thresholds of significance developed by the SCAQMD. The significance thresholds are included in Table 3.3-6.

3.3.4 ENVIRONMENTAL IMPACTS

3.3.4.1 Construction Emissions

Construction of new facilities at the ISOCI site is proposed to include the installation of several tanks and processing units. Construction activities could result in emissions of carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NOx), sulfur oxides (SOx), and respirable particulate matter less than 10 microns in diameter (PM10) associated with construction equipment, construction vehicle emissions, fugitive construction emissions, and fugitive emissions from construction vehicles.

TABLE 3.3-6

SCAQMD CEQA Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TAC, AHM, and Odor Thresholds		
Toxic Air Contaminants (TACs)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants		
NO_2 1-hour average annual average	 20 ug/m^3 (= 1.0 pphm) 1 ug/m^3 (= 0.05 pphm)	
PM10 24-hour annual geometric mean	 2.5 ug/m^3 1.0 ug/m^3	
Sulfate 24-hour average	 1 ug/m^3	
CO 1-hour average 8-hour average	 1.1 mg/m^3 (= 1.0 ppm) 0.50 mg/m^3 (= 0.45 ppm)	

PM10 = particulate matter less than 10 microns in size, ug/m3 = microgram per cubic meter; pphm = parts per hundred million; mg/m3 = milligram per cubic meter; ppm = parts per million; TAC = toxic air contaminant; AHM = Acutely Hazardous Material; NO_2 = Nitrogen Oxide; CO = Carbon Monoxide; VOC = Volatile Organic Compounds; SOx = Sulfur Oxide.

Construction activities have been divided into three major emission categories: construction equipment, construction trucks and construction worker vehicles, and fugitive dust sources. Each of the major categories has been broken down into the following components for which air emissions have been calculated in more detail below.

1. Construction Equipment

2. Construction Trucks and Construction Worker Vehicles
   - Transport Trucks
   - Construction Worker Vehicles

3. Fugitive Construction Emissions (Dust Sources)
   - Grading Operations - tractors, bulldozers
   - Trenching Operation - backhoe excavation
   - Wind Erosion
   - Vehicles on paved and unpaved roads

Daily construction emissions were calculated for peak construction days. Peak day emissions are the sum of the highest daily emissions from construction equipment, construction trucks and construction worker vehicles, and fugitive dust sources. Overall construction emissions are summarized in Table 3.3-7. Detailed construction emissions are summarized in Appendix C.

TABLE 3.3-7

ISOCI Construction Emissions Summary
(pounds per peak day)

Construction Activities	Estimated Emissions				
	CO	VOC	NOx	SOx	PM10
Construction Equipment	253.02	14.86	51.77	4.90	3.29
Vehicle Emissions	17.39	2.22	14.84	0.13	0.29
Fugitive Construction	0	0	0	0	40.70
Fugitive Road Dust	0	0	0	0	10.80
Total Emissions	270.41	17.08	66.61	5.03	55.08
SCAQMD Thresholds	550	75	100	150	150
Significant?	**No**	**No**	**No**	**No**	**No**

Construction Equipment

On-site equipment will be a source of combustion emissions. Construction equipment may include a crane, forklift, backhoe, grader and compactor to be used to clear the construction site and construct new structures. Equipment is assumed to be operational for approximately eight hours on a typical workday. Emission factors for construction equipment are taken from the SCAQMD CEQA Air Quality Handbook, Table A9-8-A and A9-8-C (SCAQMD, 1993). Estimated emissions for a peak day during construction activities are shown in Table 3.3-7. Detailed emission calculations are provided in Appendix C.

Construction Trucks and Construction Worker Vehicles

Emissions are expected from delivery trucks and from employee vehicles associated with construction activities. The emissions from these sources are calculated in this section.

Transport Trucks: Trucks bringing supplies to the construction site and construction equipment will be a source of construction emissions. Primary emissions generated include combustion emissions from the diesel and gasoline-fueled engines during idling and while operating. Emissions are based on the estimated number of trips per day per activity, and the round trip travel distances. Daily delivery, dump and flatbed trucks are assumed to travel 50 miles per trip. Light duty trucks travel 16.2 miles per trip (SCAG, 2000) making four trips per day. Emission factors, and their sources, and other assumptions used to estimate emissions from trucks are shown in Appendix C. Estimated emissions for a peak construction day during construction activities are shown in Table 3.3-7.

Construction Worker Vehicles: Construction emissions also include emissions from construction worker vehicles traveling to and from the work site. It has been estimated that there will be a maximum of 12 vehicles traveling to the site each weekday during construction. Each vehicle is assumed to travel 16.2 miles to/from work each day (SCAG 2000). Emissions from employee vehicles are presented in Table 3.3-5. Emissions from employee vehicles were calculated using emission factors from CARB EMFAC2002 for 2005 (Version 2.2). Estimated emissions for a peak day during construction activities are shown in Table 3.3-7.

Fugitive Construction Emissions

It is assumed that grading, excavation, and earth-moving activities may be required for the development of foundations at the site. Emissions associated with these activities have been included herein to provide a worst case analysis of potential construction impacts.

During construction activities, water used as a dust suppressant will be applied, if applicable, in the construction area during grading, excavation, and earth-moving activities to reduce fugitive dust emissions. Application of water reduces emissions by a factor of approximately 34 to 67 percent (SCAQMD, 1993). It is assumed herein that water application reduces emissions by 34 percent. Fugitive dust suppression, often using water, is a standard operating practice and is one method of complying with South Coast Air Quality Management District Rule 403. Fugitive dust emission estimates have been adjusted to reflect dust suppression procedures.

Grading Operations: Material cleared from the construction area will either be removed from the site or will be temporarily stockpiled on-site, if grading activities are required. Emissions from stockpiles were calculated for grading operations using an emission factor of 7.7 pounds per hour from the SCAQMD CEQA Air Quality Handbook, Table A9-9-F (SCAQMD, 1993). Assumptions include an average soil silt content of 7.5 percent for overburden, and a moisture content of 2.0 (SCAQMD, 1993).

Trench Excavation: Excavation of trenches is assumed to require the operation of one backhoe during construction activities. A peak of one 0.5cubic yard per day of material is assumed to be excavated. Trench spoils are assumed to weigh approximately one ton per cubic yard and to be temporarily stockpiled alongside the trench. The default emission factor of 0.0035 pound per ton was taken from SCAQMD CEQA Air Quality

Handbook, Table A9-9-G for storage pile filling (SCAQMD, 1993). Daily respirable particulate matter emissions from trench excavation activities are estimated to be less than one pound per day during the construction period (see Appendix C).

Wind Erosion: Trench soils are expected be stored in temporary stockpiles adjacent to the trenches, assuming trenching operations are required. Fugitive dust emissions due to wind erosion are dependent on the exposed surface areas of bare earth. The surface area of exposed soil within the construction site and temporary stockpiles are expected to vary on a daily basis. The amount of acreage disturbed per day is estimated to range from 0.25 to 0.50 acre. An emission factor for storage piles of 19.800 pounds per day per acre was calculated from the SCAQMD CEQA Air Quality Handbook, Table A9-9-E (SCAQMD, 1993). Assumptions used in deriving the emission factor include a silt content of 7.5 percent for overburden, 34 precipitation days per year (Basin average), wind speed exceeding 5.4 meters per second 50 percent of the time, and respirable particulate matter a fraction of 50 percent. These assumptions were default values taken from Tables A9-9-E-1 and A9-9-E-2 of the SCAQMD CEQA Air Quality Handbook (SCAQMD, 1993).

Fugitive Emissions From Construction Vehicles

Vehicles and trucks traveling on paved and unpaved roads are also a source of fugitive emissions during the construction period. The emissions estimates for travel on paved roads assumed that 14 vehicles per day associated with construction workers and light duty trucks will travel on paved roads. The fugitive emissions for trucks assumes delivery trucks will travel on paved roads. Emissions of dust caused by travel on paved roads were calculated using the U.S. EPA's, AP-42, Section 13.2.1 emission factor for travel on paved roads and using the CARB's Methodology 7.9 to determining the appropriate silt loading. The ISOCI site is paved on all surfaces in which trucks travel. Therefore, fugitive dust would not be generated from trucks on unpaved roads.

Construction Emission Summary

Controlled construction emissions are summarized in Table 3.3-7, together with the South Coast Air Quality Management District's threshold levels for construction emissions. The construction phase of the ISOCI project is not expected to exceed the South Coast Air Quality Management District's significance thresholds for any criteria pollutants. Therefore, the emissions from construction activities are below the significance criteria established by the South Coast Air Quality Management District and the air quality impacts during the construction phase are considered to be less than significant.

3.3.4.2 Operational Emissions

Operational activities at the site have been divided into two major emission categories: On-Site and Off-Site Emissions. Air emissions for both of the categories are discussed in more detail below. The sources, concentrations, and significance of the emissions associated with operation

of the ISOCI facility are addressed in this section. The methodology, emission factors, and operational parameters shown below and in Appendix D are based on the information provided in the health risk assessment prepared for the ISOCI facility. Further details on specific assumptions, formulas, and methodologies used to calculate emissions have been summarized from the Health Risk Assessment and are shown in Appendix D herein.

On-Site Emissions

On-site emissions are associated with a variety of emission sources at the site which include storage tanks, boilers, a heater, pumps, valves, flanges, oil/water separator, centrifuge, loading/unloading, drums, as well as emissions from mobile sources, e.g., trucks and trains.

The major source of emissions at the facility are fugitive volatile organic emissions. Table 3.3-8 identifies all existing and proposed sources of emissions at the facility and the following text will briefly describes each source and the emission calculation methodology. The methodology, emission factors, and operation parameters shown below are based on the information provided in the health risk assessment prepared for the ISOCI facility (DTSC, 2005). More detailed emission calculations are provided in Appendix D herein.

Boilers/Heaters: The facility proposes to operate two boilers, two heaters, and an oil heater to provide steam for the treatment process. The equipment will be fired by natural gas. The emissions of criteria pollutants were estimated using the South Coast Air Quality Management District emission factors for natural gas combustion (see Appendix D). South Coast Air Quality Management District Rule 1134 requires that industrial heaters and boilers use low nitrogen oxide burners to achieve a performance standard of 0.05 pounds of nitrogen oxides per million British thermal units (Btu) of natural gas consumed. ISOCI will be required to comply with this rule requirement. Therefore, the emission calculations for nitrogen oxides assume that the new boilers/heaters will use low nitrogen oxide burners (see Table 3.3-8).

Backup Generator: The emissions of criteria pollutants from the backup generator were estimated using the South Coast Air Quality Management District emission factors for diesel combustion (see Appendix D), assuming the generator operates for a maximum of 250 hours per year, as limited by the SCAQMD permit.

Storage Tanks: All tanks at the facility are fixed-roof tanks. The two significant types of emission releases from fixed-roof tanks are breathing loss and working loss. Breathing loss is defined as the release of vapor from a tank through vapor expansion and contraction, which occurs as a result of changes in temperature and barometric pressure (U.S. EPA, 1985). This can occur without a change in the level of the liquid in the tank. Working loss results from the direct filling and emptying of tanks and is associated with displacing the vapor in the tank. Therefore, the total emissions from a tank is equal to the sum of the working loss and the breathing loss. See Appendix D for the detailed storage tank emission calculations. The emissions from the storage tanks are shown in Table 3.3-8.

Oil/Water Separator: The oil/water separator is a potential source of volatile organic compound emissions since this piece of equipment is used to remove oil from water. The emissions from the ISOCI oil/water separator were based on U.S. EPA AP-42 emission factors (see Appendix D).

TABLE 3.3-8

Air Emissions Associated With Project-Related Sources At ISOCI (pounds per day)

Equipment	CO	VOC	NOx	SOx	PM10
On-site Emissions(1)					
Boilers/Heaters	18.90	3.22	24.78	0.87	3.57
Backup Generator	0.49	0.18	2.25	0.03	0.16
Storage Tanks	-	2.11	-	-	-
Oil Water Separator	-	16.92	-	-	-
Centrifuge	-	0.02	-	-	-
Filter Press	-	0.46	-	-	-
Dissolved Air Flotation Unit	-	0.03	-	-	-
Drum Storage/Handling	-	1.12	-	-	-
Loading/Unloading Racks	-	0.02	-	-	-
Fugitive Emissions	-	39.83	-	-	-
Total On-site Operational Emissions	19.39	63.91	27.03	0.90	3.73
Off-site Emissions(1)					
Worker Vehicle Emissions	2.26	0.24	0.24	0.00	0.01
Truck Emissions	95.68	13.90	133.78	1.24	2.42
Fugitive Dust	-	-	-	-	103.83
Rail Car Emissions (within Basin)	6.49	2.46	47.34	4.03	1.56
Total Off-site Operational Emissions	104.43	16.60	181.36	5.27	107.82
Project Emissions Summary					
Total Operational Emissions	123.82	80.51	208.39	6.17	111.55
SCAQMD Thresholds	**550**	**55**	**55**	**150**	**150**
Significant?	**NO**	**YES**	**YES**	**NO**	**NO**

(1) See Appendix D for detailed calculations.

Solids Treatment Unit: ISOCI proposes to treat the solids which are generated at its facility as a result of the various waste treatment processes designed to remove water from the waste. These solids will be stabilized by the addition of commercial chemicals prior to disposal off-site. A plate and frame press and centrifuge be utilized as part of the solids treatment unit. Solids are generated at the facility in screening filters and in storage and treatment tanks where they settle to the bottom of the tanks. Wastewater/oily solids (tank bottoms) will be pumped from the storage and treatment tanks through a plate and frame filter press which retains the solids and passes the remaining liquid back

to a tank. Bottom residues which are mostly solids will be removed from other tanks and process vessels by pumping, and collected in a tank, for further processing in the centrifuge and stabilization mixer. Distillation bottoms resulting from the distillation of waste solvents or glycols also may be processed through the solids treatment unit. Chemicals and stabilization solids (e.g., cement) may be added to facilitate waste management and meet disposal criteria at various off-site disposal facilities.

The modifications to ISOCI include a centrifuge that will be used to separate solids from liquid materials. There is the potential for volatile organic compound emissions from the centrifuge which are calculated in Appendix D. The estimated emissions from the centrifuge are shown in table 3.3-8.

The proposed modifications also include a plate and frame filter press. The purpose of the system is to effectively separate the water from waste oil by passing it through a filter. After filtration, a higher concentration of oil is obtained. The plate and frame filter press will be used to separate liquids from solids. The solids are later pressed to remove excess liquids and produce a drier solid. The estimate of emissions from the plate and frame filter press were calculated using a method developed by the U.S. Environmental Protection Agency (U.S. EPA, 1994) (see Appendix D). The estimated emissions from the filter press are shown in Table 3.3-8.

Drum Storage/Handling: The only potential air emissions from the storage drums are associated with volatile organic compounds which can volatilize, form an air plume, and migrate off-site. There is no other mechanism by which other compounds (non-volatile organic compounds, particulates, etc.) stored in drums can become airborne and be released to the surrounding environment during routine facility operations.

The 55 gallon drums are designed to be stored with a sealed lid and bung so that the potential for breathing loss is minimal and assumed to be negligible (U.S. EPA, 1994). The U.S. Environmental Protection Agency studied the emissions from waste treatment, storage and disposal facilities and concluded that, while emissions from 55 gallon drums were limited, minor emissions could occur. The U.S Environmental Protection Agency developed an emission factor for drums containing volatile organic compounds of 10^{-4}, i.e., if 10,000 pounds of drummed waste were moved, one pound is assumed to be lost (U.S EPA, 1994). This emission factor calculates to be about 11 grams per drum. Therefore, the total volatile organic compound emissions were calculated using an U.S. Environmental Protection Agency derived emission factor (U.S. EPA, 1994) for each volatile organic compound or flammable waste handled (see Appendix D). The emissions from the storage of drums are shown in Table 3.3-8.

Valves/Flanges/Pump Seals: The ISOCI facility includes a number of sources where fugitive volatile organic compound emissions may occur, i.e., pump seals, valves, and flanges. Emissions from the glycol distillation unit, and the antifreeze filtration unit, are limited to fugitive emissions from valves, pumps and flanges. The oil/water separator also has pumps, valves, and flanges that may release air emissions. In addition, there are a number of valves, pumps and flanges associated with the storage tanks.

The method used to calculate the emissions from these sources was based on the emission factors developed by the U.S. Environmental Protection Agency and the permitting requirements of the South Coast Air Quality Management District. The emissions from the valves, flanges, and pump seals were based on emission factors developed by the U.S. Environmental Protection Agency. However, the South Coast Air Quality Management District requires the use of best available control technology for new emission sources. Best available control technology includes daily inspection of pumps and quarterly inspections of valves and flanges. The South Coast Air Quality Management District has estimated that the more frequent inspection requirements result in an emission reduction of about 80 percent (SCAQMD, 1994).

Control of fugitive emissions involves minimizing leaks and spills through equipment changes, procedure changes, and improved monitoring, housekeeping and maintenance practices. Fugitive emissions from the various components are calculated in Appendix D.

Loading/Unloading Emissions: The facility has loading/unloading stations for trucks and rail car bulk liquid loading operations. The estimate of emissions from the loading operation was made by the method used in the Hazardous Waste Treatment, Storage, and Disposal Facilities Air Emission Models Document (U.S. EPA, 1994). The emissions for the loading/unloading racks are provided in Appendix D. The emissions from loading and unloading are shown in Table 3.3-8.

Off-Site Emissions

Off-site emissions are expected from delivery trucks and from employee vehicles. In addition, ISOCI receives hazardous waste via rail car. The emissions from these sources are calculated below.

Truck Emissions: Trucks bringing in hazardous wastes to the facility are a source of emissions. Primary emissions generated include combustion emissions from the diesel-fueled engines during idling and while operating. Emissions are based on the estimated number of trips per day per activity and the round trip travel distances. Trucks are assumed to travel 25 miles for off-site trips (see Appendix D). Emissions from trucks were calculated using emission factors from CARB's EMFAC2002 model. Estimated emissions for a peak day during construction activities are shown in Table 3.3-8.

Employee Vehicles: Off-site emissions also include emissions from employee vehicles traveling to and from the work site. It has been estimated that there will be a maximum of 30 vehicles traveling to the site each work day. Each vehicle is assumed to travel 16.2 miles to/from work each day (SCAG, 2000). Emissions from employee vehicles were calculated using emission factors from CARB's EMFAC2002 model. Estimated emissions for a peak day during construction activities are show in Table 3.3-8.

Rail Car Emissions: The operation of the ISOCI facility includes hazardous waste shipped to the facility via rail car. Currently, approximately five rail cars per day make deliveries to the facility. Emissions from rail cars have been estimated herein assuming the project will increase deliveries to approximately 10 rail cars per day (or 35 rail cars per week) to the facility. The emissions from trains are based on the U.S. EPA emission factors (U.S. EPA 2003) fuel consumption of the engine. The additional annual rail fuel consumption within the Basin associated with 35 rail car trips to the site per seven day work week have been calculated in Table 3.3-8.

Operational Emission Summary

The total emissions associated with operation (existing plus proposed facilities) of the ISOCI facility are summarized in Table 3.3-8, together with the South Coast Air Quality Management District's significant impact threshold levels. The South Coast Air Quality Management District has established these thresholds based on scientific and factual data that is contained in the federal and state Clean Air Acts (SCAQMD, 1993). Section 182(e) of the federal Clean Air Act identifies ten tons per year of volatile organic gases as the significance level for stationary sources of emissions in extreme non-attainment areas for ozone. The South Coast Air Basin is the only extreme non-attainment area in the United States. The South Coast Air Quality Management District has converted this emission threshold to a pounds per day threshold for the operational phase of a project (SCAQMD, 1993). The South Coast Air Quality Management District considers: (1) emission increases less than the threshold levels to be less than significant on air quality; (2) these emissions are not expected to result in increased air concentrations of individual pollutants; and (3) that no noticeable change in air quality as measured through air monitoring would be predicted to occur.

The total ISOCI emissions (both on- and off-site sources) are compared to the South Coast Air Quality Management District significance thresholds in Table 3.3-8. The total proposed project emission increases for carbon monoxide, sulfur oxides, and respirable particulate matter are less than the South Coast Air Quality Management District significance criteria and, therefore, are considered to be less than significant. The total proposed project emission increases for nitrogen oxides and volatile organic compounds exceed the South Coast Air Quality Management District significance criteria and, therefore, are considered significant.

3.3.4.3 Construction and Operational Phase Activities Overlap

Construction activities will take place while the ISOCI facility is conducting normal treatment operations. Therefore, the construction emissions will overlap with the existing facility operational emissions. Table 3.3-9 shows the estimated daily air emissions generated while the existing facility is operating and the proposed project is being construction, i.e., existing facility emissions plus construction emissions.

TABLE 3.3-9

ISOCI Construction/Operation Emissions Overlap
(pounds per day)

Equipment	CO	VOC	NOx	SOx	PM10
On-site Emissions					
Existing On-Site Operational Emissions(1)	18.75	34.51	26.40	0.26	3.10
Construction Emissions(2)	253.02	14.86	51.77	4.90	43.99
Total On-Site Overlap Emissions	271.77	49.37	78.17	5.16	47.09
Off-site Emissions					
Existing Off-Site Emissions(1)	59.33	8.85	88.21	2.60	48.82
Construction Emissions(3)	17.39	2.22	14.84	0.13	11.09
Total Off-Site Overlap Emissions	76.72	11.07	103.05	2.73	59.91
Total Construction/Operation Emissions Overlap					
Construction/Operational Overlap	348.49	60.44	181.22	7.89	107.00
SCAQMD Thresholds	**550**	**55**	**55**	**150**	**150**
Significant?	NO	YES	YES	NO	NO

(1) See Table 3.3-5
(2) See Table 3.3-7, includes construction equipment and fugitive construction dust.
(3) See Table 3.3-7, includes vehicle emissions and fugitive road dust.

On-site and off-site emissions associated with the overlap of construction and operation emissions are expected to be less than the significance thresholds established by the South Coast Air Quality Management District for carbon monoxide, sulfur oxides, and respirable particulate matter. Nitrogen oxide and volatile organic compounds emissions associated with the construction/operation overlap are expected to exceed the South Coast Air Quality Management District thresholds and are considered to be significant. The emissions overlap would be temporary in nature and cease following the completion of the construction activities.

3.3.4.4 Carbon Monoxide Hot Spots

The potential for high concentrations of carbon monoxide associated with truck/vehicle traffic was considered and evaluated per the requirements of the South Coast Air Quality Management District California Environmental Quality Act, Air Quality Handbook (SCAQMD, 1993). The Handbook indicates that any project that could negatively impact levels of service at local intersections may create a carbon monoxide hot spot and should be evaluated. Since the traffic analyses herein (see Section 3.7 - Transportation/Circulation) indicates that there is no significant impact at local intersections, no significant increase in carbon monoxide is expected from the proposed project such that a hot spot or high concentration would be created (SCAQMD, 1993). The project impacts on carbon monoxide hot spots are considered to be less than significant.

3.3.4.5 Air Quality Management Plan

The control strategies in the Air Quality Management Plan are based on projections from the local General Plans from various cities in Southern California (including the City of Los Angeles). Projects which are consistent with the local General Plans are consistent with the air quality related regional plans (SCAQMD, 1993). ISOCI is considered to be consistent with the air quality related regional plans since it is in compliance with the City of Los Angeles' General Plan. Existing emissions from the ISOCI facility are included in the Air Quality Management Plan. The Air Quality Management Plan identifies air emission reductions from existing sources and air pollution control measures that are necessary in order to comply with the state and federal ambient air quality standards (SCAQMD, 2003). New sources at the ISOCI facility are required to comply with the South Coast Air Quality Management District's New Source Review regulations which include the use of Best Available Control Technology and the requirement that all new emissions be offset.

3.3.4.6 Impacts Of Toxic Air Contaminants

A health risk assessment has been developed to assess the potential impacts associated with the emissions of toxic air contaminants from activities at the ISOCI facility and the related impacts associated with exposure to emissions. The results of the health risk assessment are summarized in this section. For further details, the health risk assessment should be consulted (DTSC, 2005). The health risk assessment evaluated the ISOCI facility as outlined in the Part B permit application including the emission sources and the allowable waste codes.

The HRA can be outlined as an eight-step process including facility characterization, exposure scenario selection, air dispersion and deposition modeling, estimation of media concentrations, quantifying exposure, risk and hazard characterization, uncertainty interpretation, and risk evaluation.

In July 1998, U.S. EPA Office of Solid Waste and Emergency Response (OSWER) published the Human Health Risk Assessment Protocol (HHRAP). The HHRAP was developed to provide national guidance and consolidate information previously prepared by the U.S. EPA in other risk assessment guidance and methodology documents. The HHRAP and the DTSC guidance were reviewed and found to be based on the same fundamental risk calculations, exposure factors (e.g., frequency, duration, body weight, daily intake rate), and exposure pathways and provide the basis for the HRA.

A HRA Protocol based on the HHRAP was prepared and submitted to the DTSC (EAI, 2004). The HRA has been prepared using the methodology and assumptions outlined in the HRA Protocol and comments received on the Protocol from DTSC.

<u>Emission Calculations</u>

The emission sources at the facility are associated with a variety of emission sources at the site which include storage tanks, boilers, heaters, pumps, valves, flanges, waste water treatment, oil/water separator, centrifuge, loading/unloading, drums, and other fugitive emission sources, as

well as emissions from mobile sources, e.g., rail and truck idling. The emission estimates for these sources were based on emission factors developed by the South Coast Air Quality Management District, U.S. Environmental Protection Agency, or engineering assumptions and are described in more detail in Section 3.3 - Air Quality and Appendix D.

Air Quality Modeling

The most recent version of the Industrial Source Complex (ISC3) model (version 00101) was used to estimate the downwind concentration of air pollutants. This model is approved by the U.S. Environmental Protection Agency for air quality modeling. Model defaults were set according to the South Coast Air Quality Management District recommendations and U.S. Environmental Protection Agency procedures outlined in the Guidelines on Air Quality Models (revised) document (Title 40 CFR, Part 51, Appendix W).

The local meteorological data used with the dispersion model has been preprocessed by the South Coast Air Quality Management District to include consideration of "calms periods." The regulatory default "calms processing routine" was not used per the South Coast Air Quality Management District recommendations. The average concentrations predicted by the model when using the "no calms processing" assumption are higher than the concentrations predicted under the "calms processing" assumption. Therefore, the predicted health impacts using "calms processing" would be lower than those predicted using "no calms processing."

One year of binary meteorological data were used for the dispersion modeling. The South Coast Air Quality Management District has recommended the use of 1981 meteorological data compiled from the Vernon and Los Angeles International Airport surface stations. The Vernon monitoring station is the closest station available to the facility and is considered representative of meteorological conditions in the area. (See Figure 3.3-1 for a windrose of the area.) The South Coast Air Quality Management District recommends the use of the 1981 meteorological data because it is representative of meteorological conditions in the South Coast Air Basin and it provides more conservative (health protective or worst-case) results when used for dispersion modeling than data from other years. The 1981 meteorological data includes conditions for every hour of the year. The ISC3 model calculates ground level concentrations for every hour of the year which allows for the worst case conditions and maximum concentrations to be predicted.

Chemicals of Concern

The operation of the ISOCI facility has the potential to generate emissions of various volatile organic compounds. Some of these chemical compounds are considered to be carcinogenic (causes cancer), toxic, or hazardous. The chemicals of concern for the operation of the ISOCI facility were determined by evaluating the types of waste that the ISOCI facility handles as outlined in the Part B permit application submitted to the Department of Toxic Substances Control. Due to the nature of the operations at the ISOCI site, most of the chemicals of concern are volatile organic compounds that can volatilize and migrate off-site. The chemicals of concern that were evaluated in the HRA for ISOCI are outlined in Table 3.3-10.

TABLE 3.3-10

Chemicals of Potential Concern Evaluated in the HRA

COPC	Carcinogen	Noncarcinogen - Chronic	Noncarcinogen - Acute
Acetaldehyde	X	X	--
Acrolein	--	X	X
Acrylonitrile	X	X	--
Ammonia	--	X	X
Aniline	X	X	--
Arsenic	X	X	X
Benzene	X	X	X
Beryllium	X	X	--
Butadiene, 1,3-	X	--	--
Cadmium	X	X	X
Carbon Tetrachloride	X	X	X
Chlorine	--	X	X
Chloroethene (vinyl chloride)	X	X	X
Chloroform	X	X	X
Copper	--	--	X
Dichlorobenzene, 1,4 (dichlorobenzene, p)	X	X	--
Dichloroethane, 1,1	X	--	--
Dichloroethylene, 1,1 (vinylidene chloride)	--	X	--
Dioxane, 1,4	X	X	X
Epichlorohydrin	X	X	X
Ethylbenzene	--	X	--
Ethylene Dibromide	X	X	--
Ethylene Dichloride	X	X	--
Formaldehyde	X	X	X
Hexane	--	X	--
Hexavalent Chromium	--	X	X
Hydrofluoric Acid	--	X	X
Lead	X	--	X
Manganese	--	X	--
Mercury	--	X	X
Methylene Chloride	X	X	X
Naphthalene	X	X	--
Nickel	X	X	X
PAHs[(1)]	X	--	--
Propene	--	X	--

TABLE 3.3-10 (concluded)

Chemicals of Potential Concern Evaluated in the HRA

COPC	Carcinogen	Noncarcinogen - Chronic	Noncarcinogen - Acute
Selenium	--	X	X
Styrene	--	X	X
Tetrachloroethylene	X	X	X
Toluene	--	X	X
Trichloroethane, 1,1,1-	X	--	--
Trichloroethylene	X	X	--
Xylenes (o-, m- & p-)	--	X	X

(1) Modeled as Benzo(a)pyrene.

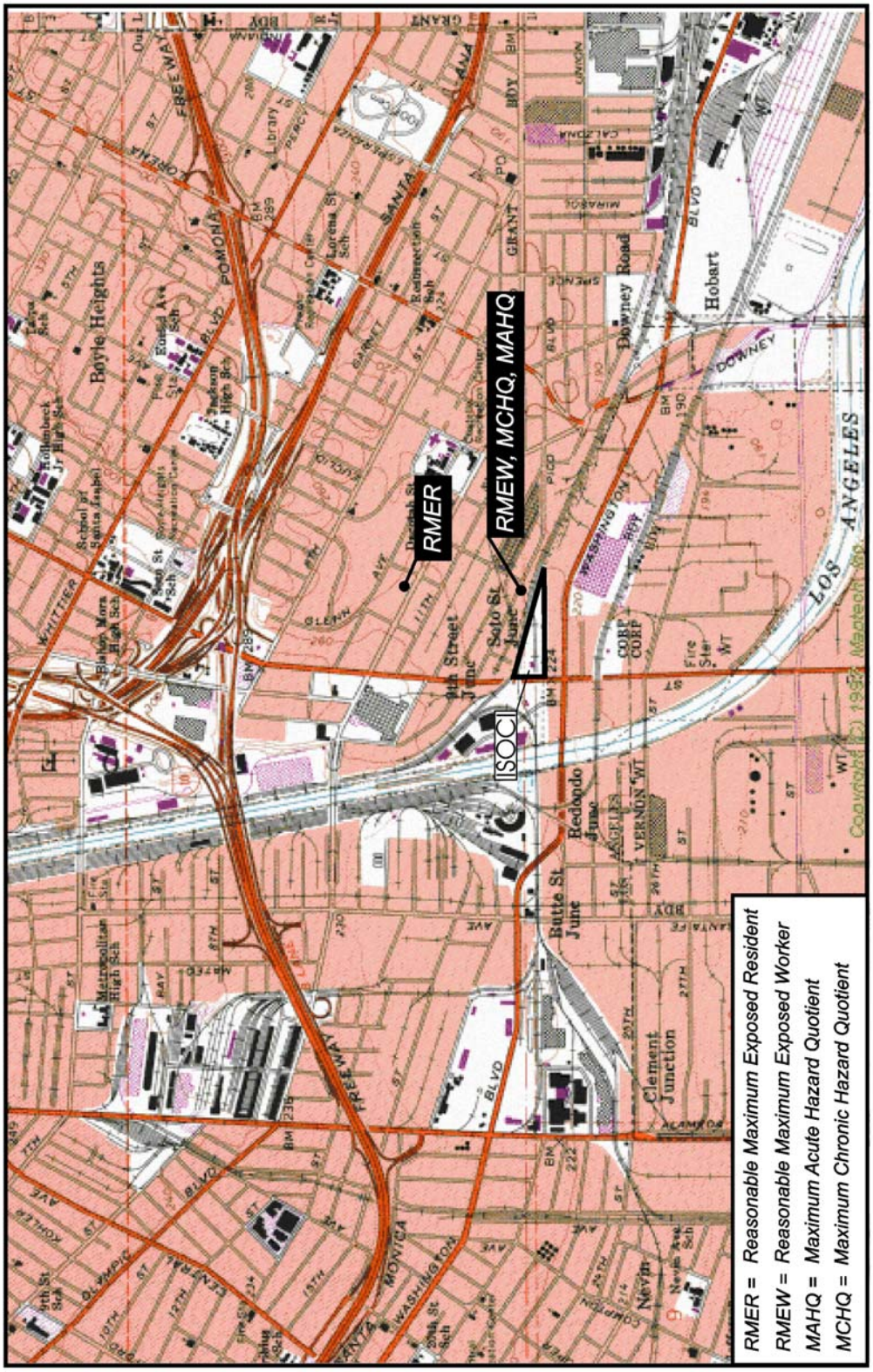
Exposure Assessment

Exposure pathways occur directly – via inhalation and indirectly – via subsequent ingestion of water, soil, vegetation, or animals contaminated by the COPCs. The HHRAP recommends exposure pathways associated with the adult and child resident scenarios to be inhalation of vapors and particulates, incidental ingestion of soil, ingestion of drinking water from surface water sources, and ingestion of homegrown produce. For the acute risk scenario, the only pathway considered is the inhalation of vapors and particulates. The HHRAP does not recommend including the dermal exposure to soil pathway based on available data, which indicate the contribution of dermal exposure to soil to the overall risk is typically small. As such, the dermal exposure pathway was not included in the HRA.

The ISOCI facility does not generate particulate toxic emissions and is not near a surface water drinking source. Therefore, only inhalation of vapors, incidental ingestion of soil, and ingestion of home grown produce are valid exposure pathways. The ISOCI facility does not emit dioxins or furans; therefore, the mother's milk exposure pathway is not considered a valid pathway.

Health Impacts

The results of the health risk assessment are summarized in Table 3.3-11. The incremental increase in carcinogenic health risk to the Reasonable Maximum Exposed Resident (adult plus childhood exposure) and Reasonable Maximum Exposed Worker associated with potential exposure to contaminants from the ISOCI facility are summarized in this section. Also summarized are the carcinogenic health risks for the identified sensitive populations. The locations of the Reasonable Maximum Exposed Resident, Reasonable Maximum Exposed Worker and maximum hazard index locations are shown in Figure 3.3-2.



ENVIRONMENTAL AUDIT, INC.®

MAXIMUM IMPACT LOCATIONS
INDUSTRIAL SERVICE OIL COMPANY, INC

Figure 3.3-2

Project No. 1631
N:\1631\Rev.1\Maximum Impact Locations.cdr

TABLE 3.3-11

Summary Of Health Risk Assessment

Carcinogenic Health Risks:	
Significance Criteria for Carcinogenic Risks	10 per million
Reasonable Maximum Exposed Worker (RMEW)	5.8 per million
Reasonable Maximum Exposed Resident (RMER)	1.2 per million
Maximum Exposed Sensitive Population	1.0 per million
Non-carcinogenic Health Risks:	
Significance Criteria for Non-Carcinogenic Risks	1.0
Chronic Hazard Index	0.188
Acute Hazard Index	0.011

Reasonable Maximum Exposed Worker (RMEW): The health risk modeling results predicted an estimated increase in cancer risk to the Reasonable Maximum Exposed Worker due to exposure to contaminants emitted from the ISOCI facility of 5.78×10^{-6} or about 5.8 in a million for all sources. The Reasonable Maximum Exposed Worker is based on a 25-year occupational exposure period. The Reasonable Maximum Exposed Worker location is graphically shown in Figure 3.3-2.

Approximately forty four percent of the cancer risk to the Reasonable Maximum Exposed Worker is attributed to exposure to fugitive emissions from tanks 21 through 27 followed by the fugitive emissions from solid waste drums (23 percent of the risk). Forty five percent of the cancer risk at the Reasonable Maximum Exposed Worker is attributed to exposure to benzene. The cancer risk to the Reasonable Maximum Exposed Worker is dominated by exposure to pollutants through the inhalation pathway (see Table 3.3-12).

TABLE 3.3-12

Cancer Risk by Pathway for Reasonable Maximum Exposed Worker

Pathway	Occupational Cancer Risk Contribution[1]	Percent Contribution
Soil Ingestion	2.16E-08	0.37%
Produce Ingestion	0.00E+00	0.00%
Inhalation	5.76E-06	99.63%
Totals	5.78E-06	100.00%

The cancer risk to the Reasonable Maximum Exposed Worker (5.8 per million) does not exceed the significance threshold of 10 per million. Therefore, there is no potential for significant carcinogenic health impacts to the Reasonable Maximum Exposed Worker.

Reasonable Maximum Exposed Resident (RMER): The incremental increase in cancer risk to the Reasonable Maximum Exposed Resident due to potential exposure to contaminants from the ISOCI facility was estimated to be 1.16 x 10^{-6} or 1.2 in a million. The Reasonable Maximum Exposed Resident cancer risk was arrived at by first selecting receptors that were located in identified residential areas only. The maximum exposure of the identified residential receptors was then chosen as the Reasonable Maximum Exposed Resident.

The location of the Reasonable Maximum Exposed Resident is shown in Figure 3.3-2. Forty six percent of the cancer risk to the Reasonable Maximum Exposed Resident is attributable to exposure to fugitive emissions from from tanks 21 - 27 (32 percent) followed by fugitive emissions from solid waste drums. Forty nine percent of the cancer risk to the Reasonable Maximum Exposed Resident is attributed to exposure to benzene emissions. Virtually all of the cancer risk is attributed to exposure through the inhalation pathway (see Table 3.3-13).

TABLE 3.3-13

Cancer Risk by Pathway for Reasonable Maximum Exposed Resident

Pathway	Cancer Risk	Percent Contribution
Soil Ingestion	1.25E-09	0.11%
Produce Ingestion	3.46E-09	0.30%
Inhalation	1.16E-06	99.60%
Totals	1.16E-06	100.00%

The cancer risk to the Reasonable Maximum Exposed Resident (1.2 per million) is less than the significance threshold of 10 per million. Therefore, no significant carcinogenic health impacts to residents are expected.

Sensitive Populations: The maximum incremental increase in cancer risk to a sensitive population was estimated to be 1.04×10^{-6} (1.0 per million) for adults and 0.47×10^{-6} (0.5 per million) for children at the Lou Costello Recreation Center. All of the cancer risk is attributed to exposure through the inhalation pathway. The cancer risk at all other sensitive populations is estimated to be less than 1.04 per million.

The cancer risk to the sensitive populations (highest impact of 1.04 per million) is less than the significance threshold of 10 per million. Therefore, no significant impacts to sensitive populations are expected.

Chronic Health Effects: To address cumulative impacts, the estimated daily intake for each pollutant was compared to the reference dose and the results for all pollutants were added together to derive the chronic hazard index. The estimated hazard index for chronic exposure is 0.188. Exposure to formaldehyde provides the largest contribution of 38 percent followed by ethylene dibromide contributing approximately 26 percent to the total hazard quotient. Emissions from solid waste drums provides the major contribution (40 percent) to the total chronic hazard quotient. The location of the maximum chronic hazard impact is shown in Figure 3.3-2. Chronic health impacts associated with the ISOCI facility do not exceed the significance criteria of 1.0 and are not potentially significant.

Acute Health Effects: The facility emits pollutants which may have acute health effects. The estimated maximum hourly concentrations of each pollutant were compared to the acute reference exposure levels for each pollutant. The maximum acute hazard quotient is 0.011. Exposure to chloroform provides the largest contribution to the acute hazard quotient (approximately 96 percent) Emissions from solid waste drums provide the major contribution (84 percent) to the total hazard quotient. Acute health impacts associated with the ISOCI facility do not exceed the significance criteria of 1.0 and are not potentially significant.

It should be noted that the hazard index calculation assumes that all pollutants equally impact the various target organs of the body, e.g., the lungs, kidneys, liver, gastrointestinal tract, reproductive organs, etc. This assumption provides an initial screen of health impacts and is a health conservative assumption but is generally not true since compounds usually impact specific organs.

The most current methodologies were used in preparing the Health Risk Assessment and several layers of conservative assumptions were made in the risk assessment process. Air emissions are from fugitive sources so that direct measurements of emissions were not possible. Conservative air emission calculations were employed. Because many such assumptions were made the results are likely to lead to an overestimation of the true potential risk probabilities and hazard ratios. The most significant sources of uncertainty are the toxicological data which are primarily obtained from high exposure animal studies and assumed to be valid for humans.

3.3.5 MITIGATION MEASURES

The impacts associated with operation of the proposed project are expected to be significant for NOx and VOC emissions so feasible mitigation measures are required. The dominant source of NOx emissions is from trucks and the dominant source of VOC emissions is fugitive emissions and the oil water separator associated with the proposed project (see Table 3.3-8).

On January 18, 2001, United States Environmental Protection Agency's (U.S. EPA) 40 Code of Federal Regulations (CFR) §§80, 500 published a final rule on diesel fuel standards. As of June 1, 2006, refiners must begin selling highway diesel fuel that meets a maximum sulfur standard of 15 ppmw. The 2006 deadline was issued to ensure that adequate supplies of ultra low sulfur diesel or ULSD would be available to meet the demand in 2007, when according to the U.S. EPA, all on-road, diesel-fueled vehicles (new and existing) must be equipped to run on ULSD fuel. In Los Angeles, heavy-duty trucks and buses contribute more than a quarter of the nitrogen oxide (NOx) pollution and 14 percent of the particulate matter less than 2.5 microns in diameter (PM 2.5) pollution from mobile sources. Pollution-control devices for heavy-duty engines are sensitive to sulfur and will not work unless the amount of sulfur in the fuel is reduced (U.S. EPA, 2003). Such pollution-control devices include diesel particulate traps and catalysts.

The SCAQMD's Rule 431.2 – (Sulfur Content Of Liquid Fuels, amended on September 15, 2000) contains a sulfur limit requirement consistent with the one later adopted by U.S. EPA. The current sulfur limit for diesel fuel sold for use in California is 500 ppmw which was approved by CARB in 1988 (Section 22 of Title 13, California Code of Regulations or CCR). SCAQMD Rule 431.2 requires a reduction in the sulfur content of diesel to 15 ppmw starting mid-2006. Most California diesel fuel currently in use contains an average of 140 ppmw of sulfur. The SCAQMD is expecting a reduction of 130 ppmw in sulfur due to the new limit (CARB, 2003).

SCAQMD Rule 431.2 will reduce the emissions of pollutants from diesel combustion, including SOx and particulates. The SCAQMD estimates that amendments to Rule 431.2 will reduce SOx from diesel emissions by 2.7 to 10.1 tons per day, reduce particulates from diesel emissions by 1.1 tons per day, and reduce particulate matter equivalents produced by diesel emissions (assuming SOx becomes particulate ammonium sulfate) by 6.6 tons per day in the South Coast Air Basin. SCAQMD Rule 431.2 will indirectly reduce the emissions of pollutants from diesel engines by enabling the use of vehicle pollution control devices, such as particulate traps and NOx catalysts installed in a vehicle's exhaust system, that remove pollutants from tailpipe emissions. Exhaust emission control devices such as the "catalytic converter" have been used in gasoline-fueled automobiles for approximately 30 years. Exhaust emission control devices have not been widely used in trucks, buses and other heavy equipment that run on diesel fuel, however, because these devices are very sensitive to sulfur levels in the fuel and will not function effectively when fuel has high sulfur levels. These control devices will result in substantial reductions of fine particulate matter and NOx emissions that result from combustion in all types of diesel fueled combustion sources. The analysis also shows that the emissions reductions expected due to implementation of SCAQMD Rule 431.2 will prevent approximately 696 cancer cases from occurring due to lifetime exposure (SCAQMD, 2000).

As the above rules and fuel requirements become effective, the NOx emission factor for trucks is expected to decrease. Using the EMFAC2002 model, it was determined that by the year 2012, the NOx emissions from trucks that visit ISOCI will be reduced by about 57% (see Table 3.3-14). Therefore, the existing rules and regulations that are currently being implemented on diesel truck engines will eventually reduce truck emissions but not to less than significant. The regulations that will reduce emissions from trucks become effective in the near future. However, it will take several years before the truck fleet has turnover sufficiently to reduce NOx emissions. NOx emissions associated with the ISOCI project will remain significant. ISOCI does not own a dedicated fleet of trucks so that mitigation measures that would require use of the lower sulfur diesel fuels and NOx catalysts are not feasible to implement on trucks that visit the ISOCI facility because: (1) ISOCI does not have control (own) over the trucks that visit their facility; and (2) requiring these mitigation measures on trucks would be expected to result in the trucks traveling to another oil recycling facility, rather than installing addition control equipment.

TABLE 3.3-14

Estimate Air Emissions At ISOCI by 2012
(pounds per day)

Equipment	CO	VOC	NOx	SOx	PM10
Total On-site Operational Emissions	19.38	63.91	27.03	0.90	3.73
Worker Vehicle Emissions	2.26	0.24	0.24	0.00	0.01
Truck Emissions (Model year 1965-2012)	54.91	9.55	76.45	0.17	1.69
Fugitive Vehicle Emissions	-	-	-	-	103.83
Rail Car Emissions (within Basin)	6.49	2.46	47.34	4.03	1.56
Total Operational Emissions	83.04	76.16	151.06	5.1	110.82
SCAQMD Thresholds	**550**	**55**	**55**	**150**	**150**
Significant?	**NO**	**YES**	**YES**	**NO**	**NO**

(1) See Appendix D for detailed calculations.

Another source of NOx emissions is railcar activities, i.e., railcar idling. Elimination of these activities at the ISOCI facility would have no impact to the surrounding community as the railcars would continue to transit on the railroad tracks adjacent to the ISOCI facility. ISOCI should investigate the feasibility of using electric or hybrid switch engines for delivery of railcars to the facility. These engines do not use or use substantially less diesel fuel and generate less emissions of diesel exhaust. ISOCI does not control the railcar operations so it has no control over the type of railcar engine used to deliver railcars to the facility. However, electric or hybrid switch engines should be used, if they are available. No other feasible mitigation measures have been identified for railcar emissions because they would continue to be generated in the area with or without the project, due to the location of the ISOCI facility with respect to the local rail yards.

Because railcars travel through various states, only the U.S. EPA has the authority to regulate emissions from locomotive engines. The U.S. EPA has established emission standards for NOx,

VOCs, CO, particulate matter, and smoke for newly manufactured and remanufactured diesel-powered locomotives and locomotive engines which have been previously unregulated. The U.S. EPA estimates that the NOx emissions will be reduced by about 62 percent from their current levels to levels for locomotives manufactured after 2004 (U.S. EPA, 1997). Reducing emissions of NOx and particulate matter would also be expected to reduce emissions of toxic air contaminants. The actual emission reductions are a function of the date that new locomotives come into service and are used to transport materials to/from the facility. Since the date at which this conversion actually happens is uncertain and not guaranteed, the emissions from project-related railcars are not expected to change.

The impacts associated with operation of the proposed project are expected to be significant for VOC emissions so feasible mitigation measures are required. The VOC emission impacts are located within an industrial area where few workers are present so exposures are limited. First, in developing the Health Risk assessment it was determined that additional air pollution control equipment would be required on the fuel blending tank (Tank 600) because of the potentially high vapor pressure material (RCRA wastes) that could be stored in this tank. Therefore, the following mitigation measures are required:

AQ-1 Storage tank 600 is required to comply with SCAQMD Rule 1178 – Further Control of VOC Emissions from Storage Tanks at Petroleum Facilities. This rules requires that fixed roof tanks that store organic liquid with a vapor pressure of 0.1 psia or greater have vapor control installed that is capable of 95 percent emission reduction, or convert the fixed roof tank to an internal or external floating roof tank.

AQ-2 Additional air pollution control must be considered for the oil water separator, e.g., carbon adsorption or other equivalent control which would be about 90 percent efficient in reducing emissions of VOC.

Fugitive components are sources of emissions primarily due to leaks. Therefore, the following mitigation measure is required:

AQ-3 An inspection and maintenance program would require monitoring fugitive components on a monthly basis. Components that do not leak during two successive monthly inspections will revert to a quarterly inspection interval. Implementation of an inspection and maintenance program is expected to reduce emissions from fugitive sources as sources that were found to leak would require fixing.

Implementation of the above mitigation measures would be expected to reduce emissions from wastewater separators from 16.92 to 1.7 pounds per day; and reduce fugitive emissions by about 80 percent from 39.83 to about 8 pounds per day. Therefore, the overall VOC emissions from the ISOCI facility would be about 33.5 pounds per day, which is less than the significance criteria of 55 pounds per day. Therefore, the overall VOC emissions are expected to be mitigated to less than significant.

In addition, emission offsets are required for new and modified permitted emission sources by SCAQMD Regulation XIII. Emission offsets are required for emission increases, when the total

facility emissions exceed four tons per year associated with stationary sources, thus minimizing the impacts associated with emissions from stationary sources. Because some of the sources at ISOCI are exempt from air quality permits, it is doubtful that emission increases exceed four tons for permitted equipment and require offsets.

3.3.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The construction phase of the ISOCI project is not expected to exceed the South Coast Air Quality Management District significance thresholds for any criteria pollutants. Therefore, the emissions from construction activities are below the significance criteria established by the South Coast Air Quality Management District and the air quality impacts are considered to be less than significant.

The operational phase of the ISOCI project is expected to exceed the South Coast Air Quality Management District significance thresholds for NOx and VOC emissions due to increased truck emissions. New rules and regulations that limit emissions from diesel trucks are expected to minimize the NOx emissions and reduce emissions by 2012. However, NOx emissions would remain significant. VOC emissions are mostly due to on-site emission increases and can be reduced to less than significant with mitigation measures. The emissions of CO, SOx and PM10 are expected to be below the significance criteria established by the South Coast Air Quality Management District and the air quality impacts are considered to be less than significant.

The emissions from the ISOCI facility due to the overlap of construction and operational activities are considered to be significant for NOx and VOC emissions only because the South Coast Air Quality Management District significance threshold for NOx and VOC would be exceeded. This impact is temporary and would only occur during construction activities (several months).

The toxic air contaminant emissions from the ISOCI facility are expected to be less than significant for the Reasonable Maximum Exposed Resident, Reasonable Maximum Resident, and to local sensitive receptors. The toxic air contaminant emissions from the ISOCI facility are expected to be less than significant for chronic and acute health impacts.