4.9 HAZARDS

Would the proposal involve:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) A risk of accidental explosion or release of hazardous substances (including but not limited to oil, pesticides, chemicals or radiation)?	☐	☐	☒	☐
b) Possible interference with an emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
c) The creation of any health hazard or potential health hazard?	☐	☐	☒	☐
d) Exposure of people to existing sources of potential health hazards?	☐	☐	☒	☐
e) Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☒	☐

SETTING

Regional Setting

A regulatory framework exists to reduce routine hazards, reduce risks of upset (accidents), and enhance response in the event of an upset or cleanup. The regulatory framework affecting the handling of hazardous materials and hazardous waste includes the Resource Conservation and Recovery Act; the California Hazardous Waste Control Law; Comprehensive Environmental Response, Compensation and Liability Act; the Superfund Amendments and Reauthorization Act; the California Hazardous Substances Account Act; the Clean Water Act; the Oil Pollution Act; the Hazardous Materials Release Response Plans and Inventory Act; the Occupational Safety and Health Act; the Asbestos Hazard Emergency Response Act; and the Toxic Substances Control Act. These laws are intended to control potential environmental and workplace hazards in industry. They apply, and would continue to apply, to all of the power plants.

Local Setting

A brief summary of conditions at each plant is given below. This information was obtained from existing reports and interested regulatory agencies (Entrix, 1996; Edison, 1996; Agency Meetings, 1997).

Alamitos

Power plants of this type typically handle sulfuric acid; caustics such as sodium hydroxide; hydrazine; sodium hypochlorite; sodium nitrate; mono-, di-, and trisodium phosphate; compressed hydrogen; compressed acetylene; and compressed oxygen. Typical hazardous wastes include asbestos debris, oily debris, heavy metal dust from duct sweeps, paint thinners and solvents, and used lubricating oils. Sodium hypochlorite and chlorine are used to clean the cooling water conduits. Residue from normal operation of the boilers is discharged to a retention basin; residue from cleaning of the boilers is collected in tanks, where it is monitored and treated before being discharged to the ocean. Alamitos power plant has 13 aboveground storage tanks, three underground storage tanks, one underground aqueous ammonia storage tank, one above ground aqueous ammonia storage tank, five retention basins, three transformer switch yards, and seven generating units that could be sources of contamination. The Alamitos plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. Recent soil tests at the site did not identify areas of significant contamination, although not all locations were investigated, however.

Cool Water

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Cool Water power plant has eight aboveground storage tanks, eight underground storage tanks, five retention basins, two transformer switch yards, and four generating units that could be sources of contamination. The Cool Water plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. Contamination with water treatment chemicals is known to have occurred. Problems have been reported by the RWQCB regarding a buildup of selenium in the retention ponds, but recent chemical tests have not found elevated concentrations of selenium in the ponds. The ponds have existed since 1984 and have liners one foot thick. Current regulations require liners on toxic ponds to be two feet thick. Water treatment chemicals (e.g., acids and bases used to lower and raise the pH of the water) have been identified in surface and subsurface soils in the vicinity of retention sumps and storage tanks that contain the chemicals. The Cool Water plant has used polychlorinated biphenyls (PCBs) and asbestos. Recent soil tests have identified minor contamination with arsenic, petroleum products, and volatile aromatic compounds at the Cool Water Plant. Edison is conducting ongoing studies at several plant locations, including a slag coal pit, a side stream discharge point, the evaporation basins, and the water treatment retention sump.

Ellwood

The Ellwood facility is fired by gas. In reviewing the *Cortese List* (State of California's Hazardous Waste and Substance Site List) as per Public Resources Code Section 21092.6, it was found that the Ellwood site was listed at 30 Los Armas Road, Goleta. The power plant's one transformer switch yard and one generating unit could be sources of contamination. Soil samples

collected near the perimeter of the power block contained low concentrations of arsenic. The plant site had one underground fuel storage tank, but the tank has been removed and the tank location remediated under supervision of the Santa Barbara County Environmental Health Services Division. The site also has one underground waste water tank. There is no evidence that the site has been contaminated significantly by PCBs or by other organic compounds.

El Segundo

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The El Segundo power plant also stores and uses mixtures of water and ammonia. El Segundo plant has three aboveground storage tanks, one underground aqueous ammonia storage tank, two retention basins, one transformer switch yard, and four generating units that could be sources of contamination. Soil and groundwater beneath the El Segundo plant has been contaminated with petroleum hydrocarbons from a release at the Chevron refinery. Chevron is actively remediating the soil and groundwater beneath the site by vapor extraction and pump-and-treat. Several other locations at the plant have been affected by petroleum contamination, including areas near the displacement oil tank, and the aboveground storage tanks. Edison currently is implementing a groundwater quality monitoring program in the vicinity of the retention basin and the boiler chemical cleaning basin. Quarterly monitoring reports are submitted to the California Department of Toxic Substances Control. The plant also has the potential for PCB contamination, although recent tests in the vicinity of transformers did not detect PCB contamination. A high-density residential area is about 150 feet south of the fuel storage tanks.

Etiwanda

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Etiwanda station stores and uses mixtures of water and ammonia. Etiwanda power plant has nine aboveground storage tanks, one underground storage tank, four retention basins, two transformer switch yards, and five generating units that could be sources of contamination. The Etiwanda plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. Contamination with water treatment chemicals is known to have occurred. According to the Phase I report, soil at the Etiwanda facility potentially is contaminated with chromium and arsenic. Six features at the plant were recently determined to be contaminated with low levels of arsenic; these included pipelines, cooling towers, surface discharge, sulfuric acid tanks, water softener and brine pit, and landfill areas. No chromium contamination was reported. Arsenic is a bioaccumulative toxin that can get into the air as dust. Hazardous waste handling violations are known to have occurred at the Etiwanda plant, specifically related to copper residues from cooling tower sludge. The Etiwanda plant also has the potential for PCB contamination, and low concentrations of PCBs and petroleum products recently have been measured in soils in the vicinity of transformers. Edison is conducting ongoing studies at the plant's retention basins and boiler cleaning basin.

Highgrove

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. Diesel fuel for the San Onofre Nuclear power plant was once stored at Highgrove. The Highgrove power plant has five aboveground storage tanks, six underground storage tanks, two retention basins, one transformer switch yards, and four generating units that could be sources of contamination. The Regional Water Quality Control Board stated that the plant discharges saline water at higher than normal levels. In the past, the Regional Water Quality Control Board required the Highgrove plant to line its saline water discharge ponds to prevent groundwater contamination. A Notice of Violation was received from the RWQCB for exceedance of copper and lead discharge limits. The Highgrove plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. Five site features have been identified as having minor concentrations of arsenic in soil; these include the cooling towers, pipelines, septic tanks and seepage pits, filter water processing area, and north agricultural area. he Highgrove plant also has the potential for PCB contamination, although recent tests have not detected PCBs at concentrations that call for remediation. Edison is conducting ongoing studies for contamination at the Highgrove plant's retention basins, oil/water separator, and demineralizer sump.

Huntington Beach

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Huntington Beach power plant has ten aboveground storage tanks, one underground storage tank, two retention basins, two transformer switch yards, and five generating units that could be sources of contamination. The Huntington Beach plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. Recent soil samples collected near the West fuel storage tank have tested positively for hydrocarbons. The plant also has the potential for PCB contamination, but soil tests have not tested positive. Edison currently is implementing a water quality monitoring program to evaluate potential impacts to soil and groundwater at the retention basins and at the Former Oil Reservoir at Units 3 an 4, where contamination by hydrocarbons, and metals has been detected.

Long Beach

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. Long Beach power plant has six aboveground storage tanks, one underground storage tank, two retention basins, two transformer switch yards, and seven combustion generating units that could be sources of contamination. The Long Beach power plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons, but little hydrocarbon contamination was found in recent soils analyses. Groundwater is known to be contaminated at the nearby Long Beach Naval Complex. Edison is in the process of implementing a Groundwater Quality Monitoring Program to address potential

groundwater contamination by volatile organic hydrocarbons in the vicinity of the retention basin.

Mandalay

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Mandalay station stores and uses mixtures of water and ammonia. Mandalay power plant has five aboveground storage tanks, one above ground aqueous ammonia storage tank, three retention basins, two transformer switch yards, and three generating units that could be sources of contamination. The Mandalay plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. At least three past oil spills have been cleaned up. A 1,000-gallon gasoline underground storage tank was removed in 1995, and the County of Ventura Environmental Health Division determined that the site was clean. The plant also has the potential for PCB contamination, but no test evidence of PCB contamination has been found. Edison is in the process of implementing a Water Quality Monitoring Program to address potential impacts to soil and groundwater in the vicinity of the retention basins.

Ormond Beach

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Ormond Beach station also stores and uses mixtures of water and ammonia. The plant is situated in an area of agricultural, recreational, industrial, and government uses. In reviewing the *Cortese List* (State of California's Hazardous Waste and Substance Site List) as per Public Resources Code Section 21092.6, it was determined that the Ormond Beach site was listed. The Ormond Beach power plant has two former hazardous waste storage areas, seven aboveground storage tanks, two above ground aqueous ammonia storage tanks, three retention basins, one transformer switch yards, and two generating units that could be sources of contamination. There is evidence that soils and groundwater at the former hazardous waste storage areas may have been affected by volatile organic carbons or metals. The Ormond Beach plant has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons. It also has the potential for PCB contamination. Edison is in the process of implementing a Water Quality Monitoring Program to address potential impacts to soil and groundwater in the vicinity of the retention basins and in the canal bed soils.

Redondo

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The Redondo station also stores and uses mixtures of water and ammonia. Redondo power plant has a hazardous waste storage area, six aboveground storage tanks, one underground aqueous ammonia storage tank, two underground storage tanks, one resin tank, three retention basins, one transformer switch yards, and eight generating units that could be

sources of contamination. It has been identified as having the potential for surface or subsurface contamination with petroleum hydrocarbons, and it also has the potential for PCB contamination. Soils near the oil/gas separator and in the vicinity of some of the storage tanks have potentially been affected by petroleum hydrocarbons and volatile organic hydrocarbons. The closest residences are 50 feet from the fence line. Subsurface investigation of surface impoundments, including the resin tank and retention basins, is currently being conducted by Edison. The investigation includes soil and groundwater sampling at the tank and basins.

San Bernardino

Power plants of this type typically handle the types of hazardous materials listed for the Alamitos plant, above. The San Bernardino power plant has three aboveground storage tanks, four underground storage tank, two retention basins, three transformer switch yards, and two generating units that could be sources of contamination. Violations of the plant's discharge limits for copper, chromium. dissolved solids, and chlorides are known to have occurred. Oil and grease spills have also occurred (e.g., a ruptured fuel oil pipe spilled fuel oil at one point). The plant, therefore, has the potential for surface or subsurface contamination with petroleum hydrocarbons. Minor contamination with arsenic was detected near the plant's cooling towers. Wastewater from cleaning boilers was stored temporarily in cleaning-waste ponds before being permanently removed; however, these ponds were lined and are not necessarily contaminated. Soil at the plant is potentially contaminated with vanadium. Edison is conducting ongoing investigations of potential contamination in the vanadium-impacted area and the retention basins areas. The station also has the potential for PCB contamination, but recent soil tests detected no PCB contamination. Residences are across the street from the plant.

CHECKLIST ISSUES

a) Accident Risks

This checklist issue focuses on the risks due to potential accidents or upsets as a result of the project. Health hazards due to the routine use of hazardous substances are discussed under Section 4.9c.

Power plants store and use hazardous materials. The power plants were designed and built to operate using either fuel oil or natural gas as the primary fuel. Natural gas, when used for fuel, is supplied on demand by a pipeline network. Adequate fuel oil supplies are maintained at all the plants that burn fuel oil, and some fuel is stored at the plants that burn natural gas. The electricity-generating equipment requires lubricating oils, and equipment maintenance requires use of various solvents and other hazardous materials. Hazardous materials commonly used at the power plants include various oils and other petroleum products, solvents, acids, bases, flammables, and a variety of chemicals, including ammonia, used for routine maintenance and water treatment. Compressed gases are also handled at the plants.

Accidents can occur whenever hazardous materials are used. For example, fuel used to power the plants could spill or possibly ignite under upset conditions. Similarly, the ammonia handled at some of the power plants could be released. Additionally, some plants that do not currently handle ammonia may install NO_x emission controls that require ammonia.

Risks of upset can be reduced through design, operations, maintenance, regulatory, and administrative controls. Design standards are developed through industry groups, various independent institutes, and government agencies. Operational controls include automatic devices to control and monitor process variables, and documented procedures for manual operations. Routine preventive maintenance and inspections of critical equipment help to prevent potential equipment failures. Administrative controls include operator training, documentation of equipment inspection and maintenance history, and procurement controls over contractors and vendors. These types of controls are required by law and regulation. Various requirements address accident risks through additional means. For example, the risk of accidentally releasing fuels and other hazardous materials to nearby waters must be addressed by Spill Prevention Control and Countermeasure Plans.

Similarly, accident risks posed to neighboring communities by hazardous materials found at the plants are addressed through Hazardous Materials Business Plans and, if required, Risk Management Plans. Injury and Illness Prevention Plans and, if required, process safety management plans are required to minimize the risks potential accidents pose to workers.

Edison has agreed to provide any new owners with all of Edison's informational materials and training documents related to worker health and safety and to hazardous materials handling and storage.

Conclusion

Under divestiture, any new owner would be required to comply with all worker and public safety laws and regulations, just as is the case for Edison now. Furthermore, Edison will provide each new owner with information about Edison's operating procedures and compliance plans. Because of these laws and circumstances, this potential impact of the project would be less than significant.

b) Emergency Response Plans

Each power plant currently maintains its own Emergency Response Plan; a Spill Prevention, Control, and Countermeasure Plan; and an Accident and Fire Prevention Manual. These plans would have to be updated by the new plant owners as part of their regulatory compliance process. Future plant equipment and operational procedures would likely be generally similar to those that currently exist at least in so far as the hazards. Possible equipment or procedural changes that

could affect existing emergency response plans would be addressed as these plans are updated by any new owners.

Conclusion

Because the project is unlikely to affect emergency response plans or evacuation plans, the potential impact of the project would be less than significant.

c) Creation of Health Hazards

Hazardous Materials Exposure

Operation and maintenance of the generating units require using various hazardous materials including natural gas and fuel oil. Factors that influence the health effects of exposure to a hazardous substance include the dose to which the person is exposed, the frequency and duration of exposure, the exposure pathway, and individual susceptibility. Pathways of exposure to hazardous materials depend on the chemical and physical properties of the substance. The four common exposure pathways are inhalation, ingestion, absorption (direct contact with skin or eyes), and injection (skin puncture or cut).

The health effects of exposure to hazardous chemicals vary greatly and are specific to each chemical. Possible health effects may be acute (immediate, or of temporary severity) or chronic (long-term, recurring, or resulting from repeated exposure). Acute effects can include burns or injuries to body organs or systems, such as from exposure to corrosive, reactive, or ignitable materials. Chronic effects can include systemic or organ damage, birth defects, and cancer.

The following types of hazardous materials are representative of those found at the power plant to be divested.

- *Petroleum Products.* Power plants typically store petroleum products for fuel, lubricants, and other uses. The refined petroleum products used at the power plants are made up of complex mixtures of compounds derived from crude oil. Potential health hazards from short-term exposure to these petroleum products can include respiratory tract irritation, and skin and eye irritation. Long-term exposure to high concentrations of some petroleum hydrocarbons (such as benzene or polyaromatic hydrocarbons) has shown the potential to cause more serious systemic effects in humans, including cancer. Potential routes of exposure to petroleum hydrocarbons include inhalation of volatile compounds, and incidental ingestion or direct contact with the oils.

- *Ammonia.* At the plants that handle mixtures of water and ammonia, the mixtures are stored on site for use in emissions abatement equipment. Ammonia is a pungent liquid (when mixed with water) that can pose potential health hazards. It requires precautions during handling to protect skin and eyes from exposure, to prevent inhalation, and to prevent contact with incompatible chemicals, such as acids or oxidizing agents. Ammonia fumes have a very sharp, pungent odor characteristic of smelling salts. Potential health hazards include difficulty breathing or irritation of tissue or exposed membranes. Vapors

of ammonia could irritate the nose and eyes, cause skin irritation, or damage clothing. Potential exposure to ammonia may occur through incidental ingestion, direct contact, or through inhalation of fumes.

- *Polychlorinated Biphenyls* are another potentially hazardous class of compounds. Several of the power plants to be divested have used PCBs. While the manufacture of PCBs has been banned since 1977, some older pieces of electrical equipment still contain PCBs. Transformers and other ancillary equipment associated with power plants contain oil, some of which contains PCBs. Potential human exposure to PCBs may occur through inhalation of contaminated air or through contact with contaminated soils, resulting in irritation. PCBs are also toxic and are probable human carcinogens.

- *Asbestos.* Insulation and other building materials may contain asbestos. Asbestos causes lung cancer and asbestosis in humans. Inhalation of airborne particulates is the primary mode of asbestos exposure. Asbestos causes adverse health impacts if human exposure is permitted during demolition or renovation, whereupon asbestos fibers can be released unless proper precautions are taken. Government regulations limit emissions of asbestos from asbestos-related demolition or construction activities, and specify precautions and safe work practices that must be followed to minimize the potential release of asbestos fibers.

Routine exposure to hazardous materials used at the divested plants poses potential hazards to plant workers, the public, and the environment. These hazards are minimized by handling these materials properly, as promoted by employee training, formal procedures, and reasonable precautions. Operational hazards can be reduced through various controls. Design standards are developed through industry groups, various independent institutes, and government agencies.

Operational controls include automatic devices to control and monitor process variables and documented procedures for manual operations. Routine maintenance and inspections of critical equipment help to minimize routine exposure. Administrative controls include operator training, documentation of equipment inspection and maintenance histories, and procurement controls over contractors and vendors.

New owners of the divested plants would be required by regulations of federal and State Occupational Safety and Health Administration (OSHA), County Health Departments, and local Fire Departments to prepare and implement safety procedures similar to those that are currently in place. Among the regulatory requirements intended to minimize occupational exposure are those that require the preparation and implementation of Hazard Communication Plans to ensure that workers understand the hazards they encounter on the job and take appropriate actions.

Routine off-site exposure of individuals and the environment to hazardous materials used at the power plants occurs through limited routes: air emissions, water discharges, and hazardous waste disposal. Hazardous waste disposal is discussed below. Air emissions are discussed in Section 4.5, and water releases are discussed in Section 4.4.

Hazardous Waste

The principal hazardous materials handled at the plants -- ammonia, diesel oil, and natural gas -- are consumed during use and produce little residual waste. Nevertheless, all of the plants to be divested generate some hazardous waste (e.g., waste oil). The California Department of Toxic Substances Control regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the Resource Conservation and Recovery Act and the California Hazardous Waste Control Law. Both laws impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. Hazardous waste generators are held liable for harm to individuals or the environment caused by their hazardous wastes, regardless of the disposal method selected. This liability provides an incentive to dispose of hazardous wastes in a manner that is as safe as possible.

Electromagnetic Fields

Electric power lines, generators, transformers, and other devices that handle electric currents produce electric and magnetic fields (electromagnetic fields or EMFs, as termed in the popular press). EMFs oscillate at a frequency of 60 hertz (i.e., 60 cycles per second). The strength of the EMF generated by an alternating current varies with voltage; wire type, spacing, and location; and other factors. Field strength decreases rapidly with distance from the source. EMFs are produced by power lines, house wiring, all electrical appliances, and wherever electrical currents are flowing.

A controversy exists whether there are any health effects from exposure to EMFs. Experiments have shown that magnetic fields can cause biological effects in living cells, but it is not known whether these biological effects have any relevance to human health. To address these questions, the Commission undertook an investigation in 1991, working with the California Department of Health Services (DHS), electric utilities and a "consensus group" made up of experts and consumers vitally interested in this subject. Due to the lack of scientific or medical conclusions about potential health effects from utility electric facilities and power lines, the Commission adopted, in 1993, interim measures that help to address public concern on this subject, including the deployment of no/low-cost steps to reduce EMF levels in new or upgraded facilities, residential and workplace EMF measurement programs available to utility customers, and an education and research program managed by DHS.

Pending conclusive scientific evidence of possible harm from utility facilities, the Commission has pursued a policy of avoiding any unnecessary new exposure if it can be avoided at a cost that is reasonable. The Commission is awaiting the results of the DHS-managed research program and, in the interim, relies upon DHS to provide guidance about any future identified public health risk.

The incremental effects of the project stems from an unquantifiable tendency of new owners to operate plants at higher levels. As discussed in Section 3, it is not feasible to predict how this tendency might manifest itself at particular plants. Given this uncertainty, and the Commission's pending conclusion about the health risks posed by EMF, this project has no impacts associated with EMFs that can be considered significant.

Conclusion

The project would likely affect operations at the power plants to be divested, as well as the other plants in the Western Region. Particularly in the case of the divested plants, hazardous materials use and hazardous waste generation could increase. However, this increase is unlikely to be as great as the proportional increases in plant operations. The controls placed on the use of hazardous materials would be expected to be similar to those in place now, particularly because new owners would be subject to the same regulatory requirements applicable to hazardous materials handling as are presently enforced.

Although hazardous waste generation could increase as a result of the project, site-specific handling procedures equivalent to those currently in place are reasonably foreseeable. Therefore, as with increased hazardous material use, there would be no substantial change in the on-site hazards posed by any increased hazardous waste generated at the plants. The increase in hazardous waste generation would not be expected to be substantial because much of the hazardous material used on site is consumed through use and the additional quantities of waste would be relatively small when compared with the volume of hazardous waste already generated and disposed of by other entities throughout the State of California. Because the increase in hazardous waste generation would not be substantial, and because it would be handled in a manner similar to how it is handled now, this impact would be less than significant.

Because of the infeasibility to predict increased electrical generation at particular plants, and the Commission's pending conclusion on EMF health risks, there is no significant impacts associated with EMFs from the project.

d) Exposure to Existing Hazards

Because of the fuels, water treatment chemicals, and other hazardous materials historically used at the power plants and discussed above, all of the twelve stations to be divested could have contaminated soils, structures, or equipment. Phase I and Phase II environmental site assessments have identified potential surface or subsurface contamination at specific facilities. Known conditions are summarized above under "Setting." The transfer of plant ownership may advance the time at which existing hazards are remediated.

Primary categories of contaminants that are potential contributors to surface or subsurface contamination are petroleum hydrocarbons (primarily in oil storage tank and power block areas), PCBs (primarily in transformer areas), ammonia (primarily in chemical storage tank areas), heavy metals, and water treatment chemicals (primarily from chemical storage and mixing areas).

Although soil contaminants have been identified as recognized environmental conditions at several of the plants, the same chemicals could have been used at other plants in the past and could, therefore, present a risk to human health at other facilities. These existing conditions would likely be of concern to future owners of divested plants. Hazards related to soil or structural contamination can be reduced by proper remediation under the oversight of proper regulatory authorities, such as the California Department of Toxic Substances Control or local County Health Departments. Worker safety related to remediation activities is promoted by federal and State OSHA regulations.

Permits may need to be obtained prior to any remediation work, and a remediation plan is usually prepared before such work begins. Remediation plans, and sometimes permits themselves, require that specified precautions be taken during remediation in order to protect human health and the environment. Examples of procedural and operational controls that typically are implemented during remediation activities include covering soil stockpiles to prevent erosion and reduce infiltration, installation of a leachate control system to capture any leachate generated, construction of a containment cell to prevent runoff, installing treatment systems for treating groundwater, surface water, or air containing hazardous substances, collecting and analyzing test samples, watering disturbed areas to reduce dust generation, and wearing proper personal protective equipment to prevent worker contact with contaminated soil or groundwater. Many of these controls are contained in permits requirements that are issued by the regulatory agencies overseeing remediation activities.

Whatever entities own these plants, Edison or any future purchasers, they would be subject to the same environmental and worker safety laws, rules, and regulations. The plants, under whatever ownership, would be expected to conform to all pertinent environmental and safety requirements. In addition, Edison has agreed to provide any new owners with all of Edison's informational materials and training documents related to hazardous materials handing and storage.

Conclusion

Worker safety and public health are potentially at risk whenever hazardous wastes are encountered. Heavy metals, such as chromium and copper, are bioaccumulative toxins. Soils contaminated with petroleum hydrocarbons pose threats to water quality and the environment, especially if removed and disposed of improperly. Health effects of known contaminants can be avoided.

At each Edison plant site to be divested, appropriate Phase I and Phase II Environmental Site Investigations have been conducted. These reports document known site conditions, and would be provided to prospective new owners as part of the due diligence process, and to appropriate regulatory agencies as part of the remediation process. Therefore, all likely areas of known and potential contamination will be known to prospective buyers.

The manner in which sites are remediated would be an important issue when ownership is transferred. would All required remediation necessary to protect human health and the environment would be conducted in accordance with applicable laws and regulations under the oversight of local agencies prior to any earth-moving or demolition activities in the affected areas. Furthermore, under terms of the Purchase and Sale Agreement, Edison will be responsible for any legally required remediation of existing contaminated soil and ground water at the divested plants that is necessitated by on-going operations of existing plant facilities and, therefore, will be responsible for remediation activities that are part of the ownership transition. Therefore, this impact would be less than significant because of current agreements and the regulatory environment.

To the extent that the transfer of ownership and associated due diligence will identify site contamination and lead to its remediation, a beneficial impact on the environment might result.

e) Flammable Brush, Trees, or Grass

Each power plant currently maintains its own Accident and Fire Prevention Manual. Such a manual would have to be prepared and maintained by any new plant owners as part of their regulatory compliance process with the Fire Marshall. Furthermore, the project would not affect fire hazards related to brush, trees, or grass because no changes to any facility footprints are currently foreseeable and distances between the facilities and any brush, trees, or grass would not likely change.

Conclusion

Because no substantial increase in fire hazard would be anticipated, this impact would be less than significant.