BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CA 94109

DRAFT CEQA INITIAL STUDY
(September 3, 1999)

BACKGROUND

Project

Proposed amendments to BAAQMD Regulation 8, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks

Lead Agency

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Contact Person

Robert Cave, (415) 749-5048, e-mail: rcave@baaqmd.gov

Project Location

This rule applies within the area covered by the Bay Area Air Quality Management District. The District includes all of seven counties - Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa - and portions of two others - southwestern Solano and southern Sonoma.

Project Description

Regulation 8, Rule 40 is intended to control emissions of volatile organic compounds (VOCs) from soil contaminated by petroleum and other organic chemical leaks or spills and from activities associated with the removal or replacement of underground storage tanks. The rule was originally adopted by the BAAQMD in 1986.

The current rule limits VOC emissions by imposing daily limits on the amount of contaminated soil that can be aerated without controls. The amount of soil that can be aerated without control declines as the measured organic content of the soil increases. Aeration at rates exceeding these limits is permitted if emissions are reduced by at least 90% through the use of an emission control device.

The proposed amendments to the rule would:

- Effective June 1, 2000, prohibit uncontrolled aeration of contaminated soil.

- Define contaminated soil as soil having an organic content exceeding 50 ppmw.
- Add provisions for the use of an OVA as a real time monitor of compliance.
- Exempt from the rule small volumes of contaminated soil or soil contaminated by small accidental spills.
- Impose emission reduction measures for excavation and removal of contaminated soil.
- Add more specific reporting requirements for soil excavations and tank removals.
- Clarify that the rule applies to landfills which use contaminated soil as landfill cover.

These amendments are being proposed to implement two ozone control measures of the San Francisco Bay Area 1999 Ozone Attainment Plan (SS-09, Prohibition of Contaminated Soil as Alternative Cover at Landfills, and SS-10, Prohibition of Contaminated Soil Aeration). This plan was developed in response to EPA's 1998 revocation of the Bay Area's status as an attainment area for the national 1-hour ozone ambient air quality standard and was adopted by the BAAQMD Board of Directors on June 16, 1999.

Environmental Setting

The BAAQMD is classified as a nonattainment area for the California and federal ambient air quality standards for ozone. The environmental setting for this rule is fully described in the final EIR prepared for the Bay Area 1991 Clean Air Plan, the 1994 and 1997 addenda to that EIR, and the San Francisco Bay Area 1999 Ozone Attainment Plan.

Other Approvals Required

None

Summary of Potential Environmental Impacts

A check beside an impact category below indicates that, for the category, this project involves at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

_____ Aesthetics	_____ Agriculture Resources	_____ Air Quality
_____ Biological Resources	_____ Cultural Resources	_____ Geology / Soils
_____ Hazards/Hazardous Mat'l	_____ Hydrology/Water Quality	_____ Land Use/Planning
_____ Mineral Resources	_____ Noise	_____ Population/Housing
_____ Public Services	_____ Recreation	_____ Transportation/Traffic
_____ Utilities/Service Systems	_____ Mandatory Findings of Significance	
___X___ No Potentially Significant Impacts		

DETERMINATION

On the basis of this initial evaluation:

___X___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

_____ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

_____ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_____ I find the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

_____ I find that, although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (1) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures from the EIR that are imposed upon the proposed project.

_____ _____

Robert Cave Date
Air Quality Engineer

ENVIRONMENTAL IMPACT CHECKLIST

(Note: All answers are explained on attached sheets.)

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Aesthetics. Would the proposal:				
a. Have a substantial adverse effect on a scenic vista?	_____	_____	_____	X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	_____	_____	_____	X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	_____	_____	_____	X
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	_____	_____	_____	X
2. Agriculture Resources. Would the proposal:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	_____	_____	_____	X
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	_____	_____	_____	X
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	_____	_____	_____	X
3. Air Quality. Would the proposal:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?				X
4. Biological Resources. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	_____	_____	_____	X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	_____	_____	_____	X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	_____	_____	_____	X
5. Cultural Resources. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	_____	_____	_____	X
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	_____	_____	_____	X
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	_____	_____	_____	X
d. Disturb any human remains, including those interred outside of formal cemeteries?	_____	_____	_____	X
6. Geologic and Soils. Would the project:				
a. Expose people or structure to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to the Division of Mines and Geology Special Publication 42)	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
ii. Strong seismic ground shaking?				X
iii. Seismic-related ground failure, including liquefaction?				X
iv. Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?				X
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				X
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
7. Hazards and Hazardous Materials. Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous materials or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	_____	_____	_____	X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	_____	_____	_____	X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	_____	_____	_____	X
g. Impair the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	_____	_____	_____	X
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	_____	_____	_____	X
8. Hydrology and Water Quality. Would the project:				
a. Violate any water quality standards or waste discharge requirements?	_____	_____	X	_____
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net reduction in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	_____	_____	_____	X
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	_____	_____	_____	X
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	_____	_____	_____	X
f. Otherwise substantially degrade water quality?	_____	_____	_____	X
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	_____	_____	_____	X
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	_____	_____	_____	X
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	_____	_____	_____	X
j. Inundation by seiche, tsumani, or mudflow?	_____	_____	_____	X
9. Land Use and Planning. Would the project:				
a. Physically divide an established community?	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
10. Mineral Resources. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X
11. Noise. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
12. Population and Housing. Would the project:				
a. Induce substantial growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
13. Public Services. For any of the following public services, would the project require the construction of new or physically-altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives, thereby producing significant environmental impacts:				
a. Fire protection?			X	
b. Police protection?				X
c. Schools?				X
d. Parks?				X
e. Other public facilities?				X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
14. Recreation.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	_____	_____	_____	X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	_____	_____	_____	X
15. Transportation and Traffic. Would the project:				
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	_____	_____	X	_____
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	_____	_____	_____	X
c. Produce a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	_____	_____	_____	X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	_____	_____	_____	X
e. Result in inadequate emergency access?	_____	_____	_____	X
f. Result in inadequate parking capacity?	_____	_____	_____	X
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
16. Utilities and Service Systems. Would the project:				
a. Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board?	_____	_____	X	_____
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	_____	_____	_____	X
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	_____	_____	_____	X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	_____	_____	_____	X
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	_____	_____	_____	X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	_____	_____	_____	X
g. Comply with federal, state, and local statutes and regulations related to solid waste?	_____	_____	_____	X

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
17. Mandatory Findings of Significance.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	_____	_____	_____	X
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	_____	_____	_____	X
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	_____	_____	_____	X

DISCUSSION OF ENVIRONMENTAL IMPACTS

Proposed Amendments to Regulation 8, Rule 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks

Introduction

This section of the Initial Study explains the reasons for checking the particular items in the checklist. Explanations are provided both for those items involving some potential impact and those for which no impact is anticipated.

Background

The proposed amendments to Regulation 8, Rule 40 that constitute this project are being developed as part of a Bay Area strategy to reduce emissions of volatile organic compounds (VOCs), a chemical precursor to ozone formation. This strategy is set forth in the *Bay Area 1999 Ozone Attainment Plan* adopted by the Bay Area Air Quality Management District's Board of Directors on June 16, 1999.

Regulation 8, Rule 40 was originally adopted in 1986 and was intended to reduce the potential for nuisance complaints that result from uncontrolled aeration of contaminated soil. It was also intended to prevent any site from exceeding the trigger for new source review, which was 150 pounds per day in 1986. The rule did not and currently does not prevent VOC emissions from contaminated soil. Instead, it merely controls the rate at which the VOCs are emitted.

Contaminated soil is now generally aerated on-site or transported off-site. Under the current rule, contaminated soil transported off-site may be used as alternate daily cover for landfills provided that the aeration rate meets the specified requirements. Under Integrated Waste Management Board rules, contaminated soil is subject to a lower tax when it is used as daily cover material, thereby creating an economic incentive for this means of disposal.

Under the proposed amendments to Regulation 8, Rule 40, aeration of VOC contaminated soil, whether on-site or off-site, would no longer be permitted except in limited quantities (5 cubic yards or less) or when the soil is minimally contaminated (<50 ppmw VOC).

1. Aesthetics

The proposed rule will in some cases result in the installation of treatment equipment at sites where contaminated soil is located, typically at gas stations or former gas stations. Under the proposed amendments, there is a potential for a

temporary increase in noise from the operation of the equipment at these sites. However, under the existing rule, there is a potential for odors from the soil aeration allowed by the rule. Most of these sites are located in commercial or industrial areas where the minor increases in noise would be insignificant and would be balanced by the likely decrease in odor impacts. The rule also allows contaminated soil to be removed from the site for treatment at another more appropriate location to mitigate aesthetic impacts. As a result, no significant aesthetic impacts are expected.

The amendments will not affect scenic highways and vistas, degrade the existing visual character of any site, create light and glare, or have other demonstrable negative aesthetic effects.

2. Agriculture Resources

This rule primarily affects current or former industrial sites, gas station sites, and landfills. It does not affect agricultural land or resources.

3. Air Quality

The proposed rule amendments will benefit air quality in the Bay Area by reducing emissions of VOCs and toxic air contaminants. These amendments, in conjunction with other measures included in the Bay Area 1999 Ozone Attainment Plan, are intended to help the Bay Area attain the national 1-hour ambient air quality ozone standard.

The proposed rule amendments will require the use of “active” soil processing equipment as opposed to “passive” aeration at affected facilities. This active equipment may mechanically draw air through the soil, or rely on the application of heat to drive the removal of VOCs from soil. While combustion emissions may occur if a generator is used to power the blowers drawing air through the soil, combustion emissions from the application of heat to the soil are much more likely to be significant. Both of these active systems drive the VOCs into a vapor stream which is then amenable to emission control technology.

One possible control technology involves venting VOCs to a thermal oxidizer, or afterburner. Afterburners incinerate VOCs and emit nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM). The amounts of combustion products emitted depend on the quantities of soil processed and the nature of the equipment used. The greatest potential for combustion emissions occurs when heat is applied to the soil via a rotary kiln, and vapor emissions are abated by thermal oxidation.

Using source test data for a typical rotary kiln, Table 1 on the following page shows emissions that would be expected for a site processing 300 tons of soil, which is typical for a gas station tank pull involving two 10,000 gallon tanks.

Table 1

Projected Increase in Combustion By-Product Emissions Using Regenerative Thermal Oxidation

Criteria Pollutant	CO	NOx	VOC	PM
Daily Emissions per Facility (lbs)	15	76	0.3	14.7
Level Considered Significant by District (lbs/day)	82.8[a]	80[b]	80[b]	80[c]

[a] The maximum emissions limit for CO from a thermal oxidizer is RACT, which for the District is 0.8 lbs CO per MMBtu.
[b] BAAQMD CEQA Guidelines.
[c] Combustion PM is essentially PM_{10}, BAAQMD CEQA Guidelines.

Any active soil processing equipment will require permits from the District. District regulations require any afterburner to include Best Available Control Technology to minimize combustion emissions. In addition, the rate of soil processing can be modified to ensure that emissions remain below levels of significance. Compliance with District regulations and permit conditions for treatment equipment will ensure that these emission impacts are not significant.

4. Biological Resources

These amendments will in some cases result in the installation of control equipment at sites where contaminated soil is located, typically current and former industrial sites and gas stations. Any construction of off site active soil processing facilities is most likely to occur at sites currently employing passive aeration techniques. No construction outside of these locations is expected, so no significant adverse effects are anticipated to endangered or threatened species or habitats, locally-designated species or habitats, wetlands, or wildlife migration corridors. No conflicts with local, regional, or state plans, policies, or ordinances are expected. Reduced emissions of VOCs and toxic air contaminants such as benzene will benefit wildlife and habitats.

5. Cultural Resources

No activity at locations other than current or former industrial or gas station sites and landfills is expected. Therefore, no significant impacts are expected to historic, archeological, or paleontological resources, or to human remains.

6. Geology and Soils

The proposed amendments will not result in any significant effects outside of existing industrial, commercial, and landfill facilities, and thus no significant effects on geologic resources or exposure of people to geologic hazards are anticipated.

7. Hazards and Hazardous Materials

The proposed amendments will require the use of abatement equipment to control VOC emissions at some sites. One potential control technology is carbon adsorption which is commonly used for abatement of VOCs from a variety of sources. When the carbon becomes saturated with VOCs it must be "regenerated", often using steam. Eventually the carbon cannot be regenerated anymore and must be replaced. The spent carbon is considered a hazardous waste and must be disposed of accordingly. Additionally, treatment of the soil may not be pursued at some sites and the contaminated soil may be disposed of at a Class III solid waste facility.

There could potentially be an accidental release during storage, handling or transport of contaminated soil or spent carbon. Various local, State and federal regulations impose requirements on the storage, handling, transport and disposal of hazardous waste. These regulations include those stated in Section 40 of the Code of Federal Regulations and Title 22 of the California Code of Regulations. Compliance with applicable regulations will reduce this impact to a level of insignificance.

8. Hydrology and Water Quality

The proposed amendment to Regulation 8, Rule 40 will require the use of abatement equipment to control VOC emissions at affected facilities. If spent carbon from a carbon adsorption system is steam regenerated, this could result in small amounts of wastewater requiring treatment. Carbon adsorption is commonly used for VOC abatement from a variety of sources at present. The additional carbon required for use at contaminated soil sites is not likely to tax the wastewater collection and treatment capabilities already in place at regeneration facilities.

The increased costs associated with treatment might provide a slight disincentive to remediate contaminated soils. Contaminated soils left in the ground untreated could adversely affect groundwater quality. Local, state and federal regulations require the clean-up of petroleum-contaminated soils. Also, contaminated

properties usually must be cleaned up prior to sale, providing a further incentive. Compliance with applicable regulations will reduce this impact to a level of insignificance.

The amendments will be implemented at existing industrial, commercial, and landfill facilities, and, as a result, no impacts are anticipated to groundwater supplies, drainage patterns, runoff, or water quality. The use of water spray to mitigate emissions of VOCs during the excavation and removal of contaminated soil will result in only small amounts of wastewater. Should this wastewater be generated in significant amounts, it would be collected and disposed according to existing water quality regulatory requirements. People or structures will not be exposed to flooding and other water hazards.

9. Land Use and Planning

The proposed amendments to Regulation 8, Rule 40 may result in the installation of control equipment at some current or former industrial or gas station sites. The amendment are not expected to physically divide any community or conflict with any land use or conservation plan, policy, or regulation. No significant effects on local planning, zoning, or land use are anticipated.

10. Mineral Resources

The proposed rule amendments will require the use of “active” soil processing equipment as well as the use of abatement equipment at affected facilities. Natural gas may be used to fire a rotary kiln to drive the removal of contaminates or as supplemental fuel for thermal oxidation equipment used abate emissions of VOCs. The amount of gas consumed would be such a tiny fraction of the total amount consumed in the region that this is considered a negligible increase. Implementation of these control measures is not expected to result in the loss of a known mineral resource or mineral resource recovery site.

11. Noise

The proposed amendments will result in the use of treatment equipment at some sites. One common method of treatment involves heating contaminated soil in a rotary kiln, with the resulting VOC emissions controlled by an afterburner. Both rotary kilns and afterburners generate noise when operating. These rotary kilns and afterburners would, in many cases, be located at soil treatment facilities or landfills, far enough away from any sensitive receptors so that they would not be subject to noise from the equipment.

Some rotary kilns and afterburners associated with contaminated soil cleanup could potentially be located at the site of contamination with sensitive receptors nearby. Use of this equipment would require excavation of the soil, thus

earthmoving equipment would already be operating at these sites. There are other means of treating soil which would not pose such a significant potential for noise. Soil vapor extraction by mechanically drawing air through the soil with abatement by carbon, or by thermal oxidation may be constructed such that noise is substantially mitigated. There are currently several systems operating through the Bay Area. Therefore, given the temporary nature of the kiln and afterburner activity where there is relatively modest noise generated in comparison to other noise already occurring, infrequency of this occurrence, and the availability of other treatment methods amenable to noise mitigation for sensitive sites, this is expected to be a less than significant impact.

12. Population and Housing

The proposed amendments impact existing commercial, industrial, and landfill facilities and will have no impacts on population or housing. No growth inducement or displacement of people or housing is anticipated.

13. Public Services

The proposed amendments will require the use of abatement equipment at some sites. One possible abatement technology involves venting VOCs to a thermal oxidizer, or afterburner. Afterburners combust VOCs and thus may pose a slight increase in the risk of fire at affected facilities. Similar systems currently in use at sites throughout the Bay Area have had minimal impact on demand for fire services. The afterburners would be installed at existing industrial, commercial, and landfill facilities, and the small incremental risk of fire due to the addition of afterburners is not expected to significantly increase demand for fire services.

Another possible control technology is carbon adsorption which is commonly used for abatement of VOCs from a variety of sources. When the carbon becomes saturated with VOCs, it must be “regenerated”. Eventually the carbon cannot be regenerated anymore and must be replaced. The spent carbon is considered a hazardous waste and must be disposed of accordingly. There could potentially be an accidental release during storage, handling or transport of spent carbon. However, the quantity of hazardous waste would be very small, and it is not expected to significantly increase demand for emergency response services. Also, various local, State and federal regulations impose requirements on the storage, handling, transport and disposal of hazardous waste. These regulations include those found in Section 40 of the Code of Federal Regulations and Title 22 of the California Code of Regulations. Compliance with applicable regulations will further reduce the significance of this impact.

Implementation of the proposed control measures will not increase demand for police protection, schools, parks, or other public services.

14. Recreation

The proposed amendments will, in some cases, result in the temporary installation of treatment equipment at existing industrial, commercial, and landfill facilities, but no construction outside of affected facilities is expected. Implementation of the proposed control measures will not increase use of local or regional parks and recreation facilities, or involve construction of new recreational facilities.

15. Transportation and Traffic

The proposed amendments may result in some trucks hauling contaminated soil to treatment facilities instead of to landfills. Any increase in truck trips to treatment facilities would be very small and would likely be balanced by a corresponding decrease in trips to landfills. In addition, some soil that would have been hauled under the rule prior to amendment may be treated on-site under the amendments. As a result, the proposed amendments are not expected to significantly affect vehicle trips, congestion, parking, emergency access, bicycle and pedestrian safety, alternative transportation policies, or rail, waterborne or air traffic.

16. Utilities and Service Systems

The proposed amendments could interfere with underground pipeline repair, relocation, or new service connections if contaminated soils are encountered during excavation. However, these impacts are not expected to significantly delay such projects. Impacts, if any, are likely to be cost impacts.

The amendments are likely to result in the use of active soil processing equipment and thermal abatement equipment at some sites. Rotary kilns and afterburners burn natural gas. Because the amount of gas consumed would be such a tiny fraction of the total amount consumed in the region, this is considered an insignificant increase. Implementation of these measures is not expected to significantly affect power or natural gas systems.

If carbon adsorption is used, the carbon must be “regenerated”, often using steam, after the carbon becomes saturated with VOCs. If spent carbon is steam regenerated, this could result in small amounts of wastewater requiring treatment. Carbon adsorption is commonly used for VOC abatement and the additional use of carbon as a result of these amendments is not likely to overtax existing regeneration facilities abilities to comply with regulatory standards. The Regional Water Quality Control Board has established water quality discharge standards that industrial and commercial facilities must meet. Implementation of these control measures will not result in new or substantially altered water treatment or distribution systems.

17. Mandatory Findings of Significance

The proposed amendments will contribute to the improvement of the quality of the environment in the Bay Area by reducing air pollutant emissions. Any construction that would result from the amendments would consist of very minor and generally temporary modifications at existing industrial and commercial sites. Such modifications will not adversely affect fish and wildlife populations or habitats, rare or endangered plant or animal communities, or important historical resources.

The purpose of the amendments is to attain and maintain the national 1-hour ambient air quality ozone standard. Implementation of the plan will thus achieve environmental benefits for the region.

Any construction resulting from the proposed amendments will consist of very minor and generally temporary modifications at existing industrial and commercial sites, and thus the cumulative impact of such modifications to the physical environment will be insignificant. Other potential cumulative impacts – such as energy consumption, air and water emissions, noise, or hazardous waste generation and transport associated with the operation of air pollution abatement equipment – will be subject to a variety of local, State and federal regulations, and will be extremely small in comparison to existing activity in the region. The environmental effects of the amendments are individually insignificant and incrementally insignificant. Therefore, the effects of the proposed amendments are not “cumulatively considerable” per CEQA Guidelines 15065(c).

The proposed amendments will have beneficial effects on human beings by reducing ozone levels in the region. They are also expected to reduce other air pollutants, particularly toxic air contaminants such as benzene, resulting in further benefits to public health.