Bay Area Air Quality Management District
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PROPOSED AMENDMENTS TO DISTRICT REGULATION 8, RULE 40: AERATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS

PRELIMINARY STAFF REPORT

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REGULATION 8, RULE 40:
AERATION OF CONTAMINATED SOIL AND REMOVAL OF UNDERGROUND STORAGE TANKS

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PRELIMINARY STAFF REPORT

REGULATION 8, RULE 40: Aeration of Contaminated Soil and Removal of Underground Storage Tanks

Executive Summary

Amendments to Regulation 8, Rule 40 (8-40) are being proposed in order to achieve emission reductions incorporated into the Final San Francisco Bay Area Ozone Attainment Plan (OAP) adopted June 1999. The United States Environmental Protection Agency (EPA) called for submittal of the OAP in a notice published July 10, 1998, which revoked the region's ozone attainment status. A key plan element of the OAP is the Emission Inventory of Volatile Organic Compounds (VOCs). Using 1995 as a base year, the Emission Inventory found that uncontrolled aeration of contaminated soil in the Bay Area results in emissions of 4.07 tons per day of VOC.

8-40 was adopted in 1986 to reduce the potential for nuisance complaints and to prevent any one site from exceeding the New Source Review (Regulation 2, Rule 2) standard of 150 pounds per day (1986 standard). Depending on the level of contamination, the current rule allows aeration of contaminated soil at various daily rates to stay below the daily limits. As such, the current rule provides limited emissions reductions, because the emissions may be simply spread out over time. Under current Regulation 2, Rule 2, aeration projects are exempt from permitting so long as the aeration project is completed in three months or less. An aeration project could potentially emit as much as 6.75 tons of VOC in this 90-day period and not be required to obtain a permit, nor control emissions from aeration of the soil.

Most of the Air Quality Management Districts (AQMDs) and Air Pollution Control Districts (APCDs) throughout California have adopted prohibitory rules specific to soil aeration or in-house policy memorandums or other procedures which often repeat the same aeration rate table as found in 8-40. Only the South Coast Air Quality Management District (SCAQMD) and the Ventura APCD have prohibitory rules which effectively ban the aeration of contaminated soil except for limited exemptions. These two Districts are in the extreme and severe categories respectively for non-attainment for the Federal ozone standard.

Major proposed amendments to Regulation 8, Rule 40 include:

- Effective June 1, 2000, uncontrolled aeration of contaminated soil may not be performed.
- Contaminated soil is defined as soil having an organic content exceeding 50 ppmw.
- Exemptions for small volumes of contaminated soil or that due to limited accidental spills are added.
- Provisions are added for the use of an OVA as a real time monitor of compliance.

- Emission reduction measures are added for excavation and removal of contaminated soil.
- More specific reporting requirements for soil excavations and tank removals.

The proposed amendments to Regulation 8, Rule 40 would prohibit uncontrolled aeration of contaminated soil beyond set exemption limits, effective June 1, 2000. District-wide emission reductions as a result of adoption of the proposed amendments are estimated to range between 2.6 and 2.8 tons per day of VOC.

Background

Emission Source

VOC contaminated soil comes from a variety of sources including spills at chemical processing plants and petroleum refineries, pesticide spills, and leaks from storage tanks and product delivery systems. With over 34,000 cases reported as of March 1999, by far the most common source of VOC contaminated soil in California is from leaking underground storage tanks (LUST). Of the nearly 16,000 currently open LUST cases in California, roughly a quarter are within the San Francisco Bay Area. Regional water quality boards or local implementing agencies often require excavation and/or remediation of VOC contaminated soil to protect nearby groundwater sources as well as human health and safety. Remediation processes include biodegredation, soil vapor extraction either in-situ (soil remains in place) or ex-situ (soil is treated above ground after first being excavated), thermal treatment, asphalt incorporation, and aeration or landfarming. Air emissions from these latter two techniques are virtually uncontrolled and have been estimated to account for over 4 tons of VOC per day District wide. Much of this uncontrolled aeration occurs at solid waste disposal sites, where the contaminated soil is used as daily cover material. Nearly 400,000 tons per year of VOC contaminated soil is excavated and transferred to solid waste landfills throughout the Bay Area.

Means for Controlling Emissions

Since passive aeration of soil relies on ambient environmental effects (sunlight and convective winds), emission controls would be difficult to implement while still allowing aeration to take place; however, there are many other means of decontaminating soil in which emissions may be significantly controlled. These treatment methods may be performed in-situ or ex-situ.

In-situ treatment techniques include soil vapor extraction, biodegredation, and leaching. With approximately 200 permitted systems currently operating within the District, soil vapor extraction is the most commonly implemented of these treatment methods. The latter two techniques are usually associated with groundwater remediation and implementation is highly dependent on the nature of the contaminants as well as the soil and groundwater characteristics of the particular site. Biodegredation or leaching is most likely to be implemented at sites where

the contamination is low or consists of compounds of low volatility; therefore, air emissions from these methods are minimal in most cases.

Soil vapor extraction removes VOC from contaminated soils by mechanically drawing air through the soil matrix via an array of subsurface wells drilled in the area of highest contamination. The well casings are solid near the surface and slotted or perforated below grade so that vapor may be drawn from the surrounding soil. A vacuum pump or blower is connected either individually or by manifold to the array of wells to extract the vapor from the subsurface contaminant plume. Ventilation wells may be installed around the perimeter of the plume to encourage the flow of induced air toward the extraction wells. The vapor-laden air passes through a liquid/vapor separator, and is then processed through an aboveground treatment unit.

When the vapor extraction operation is first implemented, inlet vapor concentrations are often high enough to sustain a combustion based abatement device such as an internal combustion engine, or a thermal or catalytic oxidizer. As concentrations decline, supplemental fuel such as natural gas may be added to the vapor stream to maintain the oxidation reaction. As concentrations further decline, vapor abatement may take the form of adsorption by way of activated Carbon vessels or resin-based systems. In the case of soils contaminated with chlorinated solvents, these adsorption devices may be employed exclusively to prevent secondary emissions of hazardous pollutants. In some cases where recovery of the contaminant poses an economic benefit, condensation processes are employed as the above ground treatment method.

Ex-situ treatment techniques include ex-situ soil vapor extraction, asphalt incorporation, and thermal treatment. All ex-situ techniques involve excavation of the contaminated soil during which emissions of VOC and particulate matter can occur. Measures to minimize the release of these pollutants include:

- Covering soil stockpiles and pits with plastic sheeting or a layer of clean soil.
- Moistening the soil with water spray.
- Applying vapor suppressant foam or other material.
- Limiting the size of excavated stockpiles.
- Storing excavated soil in sealed containers.

Ex-situ soil vapor extraction incorporates the same methods as that for in-situ soil vapor extraction, however the VOC contaminated soils are excavated and placed in one or more covered piles. Horizontal slotted piping is placed within the pile to serve the same function as the vacuum extraction wells for the in-situ method. Treatment times are greatly decreased for this aboveground method due to the increased porosity in the soil created by the excavation. It is also much easier to verify soil cleanup due to improved access to the soil.

Asphalt incorporation involves the use of petroleum impacted soil as a partial substitute for stone aggregate in hot asphalt mixes. This mixture can then be utilized for asphalt paving. In practice, the contaminated soil feed is limited to less than 5 percent of the total mix to maintain final product quality and minimize air emissions from volatilization of the compounds. The soil contamination must consist of heavy-end petroleum products such as diesel or fuel oil, since light fraction hydrocarbons tend to act as a solvent, softening the asphalt cement binder. The constitution of the contaminated soil matrix (i.e. sandy soil) may also preclude its use as substitute aggregate. The inclusion of VOC laden soil in hot mix asphalt operations may require the addition of an afterburner to the aggregate dryer; however, average dryer temperatures and aggregate retention times are usually sufficient to completely oxidize the hydrocarbon contaminants. Prior to addition of the contaminated soil to the aggregate mix, it must be stored in such a way as to minimize emissions to the air. Due to the need for heavy end hydrocarbon contamination, asphalt incorporation is not likely to be used for soil which would otherwise be amenable to passive aeration.

Thermal treatment involves heat application and agitation of the soil to volatilize and/or destroy the contaminants depending on the intensity of the heat applied. The excavated soil is loaded into a rotary dryer or kiln for the application of heat, introduction of combustion air, and the addition of supplemental fuel should it be necessary to maintain proper combustion temperatures. The air stream is vented to a cyclone separator or bag house to remove particulate matter and may be processed through a heat exchanger/recovery device. In some cases, the desorption process occurs at a relatively low temperature and the air stream is vented through a condenser to recover the contamination. In most cases, however, the air stream is vented to a secondary thermal oxidizer to ensure complete combustion of the contaminants. These devices can process large amounts of soil relatively quickly with rates as high as 50 tons of soil per hour. VOC destruction rates routinely meet or exceed Best Available Control Technology abatement levels (>98.5% destruction).

History of Control

In July of 1986, the BAAQMD Board of Directors adopted Regulation 8, Rule 40 (8-40) to reduce VOC emissions resulting from the aeration of contaminated soil and the removal of underground storage tanks. This action was taken in response to the growing number of these operations following the 1984 amendments to the Resource Conservation and Recovery Act (RCRA). These amendments developed a formal regulatory program to deal with the problem of leaks from underground storage tanks (USTs) and enabled states to enforce environmental standards for USTs, with most states encouraging the removal or replacement of all UST's after 25 years of service. In California, the State Water Resources Control Board (SWRCB) has required that all USTs installed before 1984 be removed, replaced, or upgraded by December 22, 1998. This deadline was established by the US EPA in the fall of 1988 and became a California State requirement soon thereafter.

As originally adopted in 1986, 8-40 limits the volume of soil that may be aerated in a given day depending on the level of VOC concentration in the soil. For soils contaminated with VOC greater than 50 ppmw, a table of allowed aeration rates was established to preclude exceedance of the 1986 New Source Review trigger of 150 pounds per day. For soil contaminated with VOC above 2,000 ppmw, the allowable aeration rates were determined based on modeled emissions so as not to create a public nuisance. Soils contaminated with known non-volatile organic compounds (initial boiling point greater than 302 degrees F) were exempted from the rule.

In addition to the aeration guidelines, tank decommission requirements were adopted to detail the manner in which the tank would be cleaned and/or purged of VOC. Any person performing an aeration project was required to notify the district by telephone 24 hours in advance of any aeration of any contaminated soil. A soil sampling procedure was included requiring one composite sample for every 50 cubic yards of contaminated soil to be collected and analyzed for organic content. In conjunction with the Board's adoption of 8-40, Regulation 2, Rule 1 was amended to exempt from permitting any soil aeration project which does not exceed three months duration.

8-40 was amended in February of 1989 to require written notification five days prior to startup of an underground storage tank removal and/or excavation or contaminated soil. Amendments also clarified the composite sampling requirements to ensure that they be representative of the entire soil pile. The written notification requirement was added to afford District staff ample time to schedule site inspections if deemed necessary. Guidelines were provided for the nature of the notification, with exemptions to ease the notification requirements in cases of emergency excavation operations required by State or Local authority, excavation to repair pipeline leaks, and excavation unrelated to UST activities. In October 1993, and June 1994, minor amendments to 8-40 were made to clarify some language and to identify the test methodology for determination of organic content of the soil.

Most of the single county Air Pollution Control Districts (APCDs) throughout California have adopted regulations to address emissions from aeration of contaminated soil, with many adapting the text of 8-40 to their individual regulation templates. The APCDs without prohibitory rules specific to soil aeration rely on in-house policy memorandums or other procedures which often repeat the same aeration rate table as found in 8-40. Only the South Coast Air Quality Management District (SCAQMD) and the Ventura APCD have prohibitory rules which effectively ban the aeration of contaminated soil except with limited exemptions. These two Districts are in the extreme and severe categories respectively for non-attainment of the Federal ozone standard.

In 1988, SCAQMD adopted Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil, to implement a Control Measure as part of the 1987 revisions to their Air Quality Management Plan. As originally proposed, Rule 1166 required control measures to

reduce emissions from excavated soil or removal of the soil in closed containers for off-site treatment or disposal. Soil contamination is defined by organic vapor analysis measurement of greater than 50 ppmv (expressed as hexane, C6) in the air space above the soil surface. On-site treatment of the soil required mitigation measures at least 90% efficient in reducing emissions of VOC under approval by the Executive Officer of SCAQMD. Persons handling or treating VOC contaminated soil were required to provide notification within 24 hours from detecting contaminated soil. The rule included exemptions for small volumes of soil or limited spill of VOC. Rule 1166 was amended in 1995 to clarify notification requirements and update the definitions and control requirements to reflect current treatment practices. Record keeping requirements were added along with the requirement that all persons excavating USTs or transfer piping obtain an approved mitigation plan prior to commencement of the excavation.

Ventura County APCD adopted Rule 74.29, Soil Decontamination Operations in 1995. This rule allows aeration of soil contaminated with gasoline, diesel fuel, or jet fuel, only if the aeration does not cause a nuisance, and provided that one of the following is met:

1. Contaminated soil does not emit vapors sufficient to cause a calibrated organic vapor analyzer to register 50 ppmv or more (as hexane) above background levels.

2. Amount of contaminated soil is less than 10 cubic yards, and contains less than 8,000 ppmw VOC.

3. Soil is contaminated by a leaking UST used in an agricultural operation.

4. Soil contamination resulted from a spill or release of less than one barrel (42 gallons) of gasoline, diesel fuel, or jet fuel.

5. Contaminated soil is used as alternative daily cover at a permitted Class III Solid Waste Disposal site. Gasoline contamination soil cannot exceed 100 ppmv, Diesel contaminated soil cannot exceed 1,000 ppmv.

If none of these criteria apply, an exemption request may be granted for aeration projects which result in VOC emissions of less than 200 pounds per rolling 12-month period. The project must not take place within 1,000 feet of a school and cannot cause a public nuisance.

The APCDs adjacent to BAAQMD allow limited uncontrolled aeration projects to occur with some districts requiring permits for larger projects or if toxic compounds are present. The Monterey Bay Unified APCD is the only district which requires permits for all aeration projects. Allowable aeration rates are determined case-by-case through emissions modeling to ensure that the operation does not result in a cancer risk of greater than 10 in 1,000,000. On-site aeration projects within Northern Sonoma County APCD are exempt from permitting provided the aeration is performed according to a table similar to that listed in 8-40 with reduced aeration

rates for sites near residences. Should the aeration project result from off-site imported soil, it would require a permit and then be subject to control requirements. Yolo/Solano AQMD, and Sacramento Metropolitan AQMD have in-house policies allowing the aeration of contaminated soil provided it is performed according a table similar to that listed in 8-40 and emissions of toxic compounds do not pose an unacceptable level of risk. Permits are required in some cases where emissions exceed set levels or BACT is triggered (50#/day for Sacramento, 10#/day for Yolo-Solano). Lake County AQMD does not require permits nor have any prohibitory rules regarding aeration of contaminated soil; however, aeration of contaminated soil is allowed only in rural areas away from residences. San Joaquin Valley Unified APCD does not normally require permits, but does have a prohibitory rule with a table similar to that in 8-40. Exemptions from the rule are allowed for small volumes of soil or for contamination resulting from accidental spillage of one barrel (42 gallons) or less of liquid VOC.

Purpose of Proposed New Amendments

Amendments to Regulation 8, Rule 40 are being proposed in order to achieve emission reductions incorporated into the San Francisco Bay Area OAP which has been approved for submittal to US EPA by the California Air Resources Board (July 22, 1998). A key plan element of the OAP is the Emission Inventory of VOC. Using 1995 as a base year, the Emission Inventory found that uncontrolled aeration of contaminated soil in the Bay Area results in emissions of 4.07 tons per day of VOC. The proposed amendments to Regulation 8, Rule 40 would prohibit uncontrolled aeration of contaminated soil beyond set exemption limits. Adoption of the proposed amendments will result in emission reductions estimated to range between 2.6 and 2.8 tons per day of VOC for the year 2000.

Under current BAAQMD Regulations 2-2 and 8-40, aeration projects in the Bay Area can emit up to 150 pounds of VOC a day without the need for a District operating permit so long as the aeration project is completed in three months or less. An aeration project could potentially emit as much as 6.75 tons of VOC in this 90-day period and not be required to obtain a permit, nor control emissions from aeration of the soil.

Proposed Amendments

The goal of the amendments is to effectively ban uncontrolled aeration of soils contaminated with VOC above 50 ppmw. This will be done by defining “contaminated soil” as that which has an organic content exceeding 50 ppmv or which registers 50 ppmv (expressed as methane, C1) measured above the surface of the soil. This latter criterion is included to allow onsite compliance determination without the time lag associated with reliance on Laboratory testing. The major changes to the standards administrative requirements will become effective June 1, 2000. A few additional definitions and clarifications of requirements will become effective immediately upon adoption of the amendments by the BAAQMD Board of Directors. The

regulation will be amended again some time after the effective date to remove the outdated requirements.

The amendments by section are as follows:

8-40-100 GENERAL

8-40-101 Description: The words "to describe an acceptable aeration procedure" will be deleted to clarify that uncontrolled aeration projects will not be allowed after June 1, 2000. Removal of these words should not affect aeration projects performed after adoption but prior to the effective date.

8-40-112 Exemption Sampling: A 15 minute time period for cover removal has been specified to allow for sampling of soil contained in inactive soil piles.

8-40-116 Exemption, Small Volume: This section has been added to exempt small projects (less than one cubic yard of soil) from regulatory control requirements.

8-40-117 Exemption, Accidental Spills: This section exempts soil contaminated by less than 5 gallons of VOC liquid from regulatory control.

8-40-200 DEFINITIONS

8-40-202 Aeration: The definition of aeration has been changed, replacing the words "contaminated soil" to "soil containing organic compounds." This change was necessary since "Contaminated Soil" is defined as soil which contains more than 50 ppmw organic compounds. Effective June 1, 2000, uncontrolled aeration will be limited to soil which contains 50 ppmw or less VOC.

8-40-205 Contaminated Soil: The definition has been amended to allow for the use of on-site measurement via organic vapor analyzer as a means of determining compliance. Soils which cause such a device to register greater than 50 ppmv at a distance of three inches above the soil surface, would now be defined as "contaminated soil." This is in addition to the previous determination by soil sampling and subsequent laboratory analysis. Soil sampling and analysis will remain as the definitive method for determining if the soil is contaminated should the two methods provide conflicting results.

8-40-211 Organic Concentration: This definition has been added to differentiate measurement by soil sampling (organic content) from measurement by organic vapor analyzer (organic concentration).

8-40-300 STANDARDS

8-40-301 Uncontrolled Soil Aeration: The current standard has been clarified somewhat by the addition of "Soil" in the title, and the word "spread" in the body of the description. An express reference to the use of contaminated soil as alternate daily cover at solid waste disposal sites has been added as well. This practice has always been subject to this rule; however, the regulated community may not be uniformly aware that this is the case. Effective June 1, 2000, aeration of contaminated soil may only occur provided the mitigation methods are in place as addressed in sections 8-40-304 through 306.

8-40-302 Controlled Aeration: A sunset clause has been added to allow this practice until the effective date of June 1, 2000. To date, BAAQMD has not received any proposals for projects employing a control device so as to increase the rate of allowed aeration. Some time after the effective date, this section will be deleted.

8-40-303 Storage Piles: This section has been deleted and two sections have been added differentiating between "Active storage piles" and "Inactive storage piles" (see below).

8-40-304 Active Storage Piles: Effective June 1, 2000, all contaminated soil shall be kept visibly moist or be treated with an approved vapor suppressant to minimize emissions of organics into the atmosphere.

8-40-305 Inactive Storage Piles: This section describes the covering requirements previously addressed in section 8-40-303. The use of "clean" soil as a cover is not allowed. A one-hour time limit for applying the cover is established for inactive storage piles.

8-40-306 Contaminated Soil - Excavation and Removal: This section provides the mitigation steps necessary to reduce emissions of VOC for soil excavation projects. Effective June 1, 2000, all soils shall be subject to the mitigation requirements unless sample results show that the organic content is less than 50 ppmw. A field measurement of organic content registering less than 50 ppmv does not serve as a basis for deeming the soil to be not contaminated. Procedures for minimizing emissions during excavation, storage, and transfer of the soil off-sight are included. A time limit of 14 days is established for treatment, backfill, or removal of all contaminated soils.

8-40-310 Underground Storage Tanks - Removal and Replacement: Amendments to this section, effective June 1, 2000, require that soils disturbed and/or excavated as part of a UST removal are subject to the mitigation steps addressed in the previous sections.

8-40-311 Vapor Freeing: This section has been amended to reflect the tank degassing requirements as stated in Regulation 8, Rule 5, Storage of Organic Liquids. The previous

limitation based on the volume of organic liquid in the tank was difficult to verify in the field for most cases, and so was not enforceable.

8-40-400 ADMINISTRATIVE REQUIREMENTS

8-40-401 Reporting, Removal or Replacement of Tanks: The reporting requirements have been amended to include procedures employed to meet the requirements addressed in sections 8-40-301 through 8-40-306. For cases where advance notification is not possible (emergency excavations and tank removals) a five-day limit has been added for subsequent submittal of written notification. All reporting amendments are effective immediately.

8-40-402 Reporting, Excavation of Soil: The reporting requirements have been amended to include procedures employed to meet the requirements addressed in sections 8-40-301 through 8-40-306. For cases where advance notification is not possible (emergency excavations and tank removals) a five-day limit has been added for subsequent submittal of written notification. Notification will also include an estimate of the quantity of soil to be excavated as well as the average organic content of the soil.

8-40-403 Reporting, Aeration of Soil: The word "contaminated" has been removed since after June 1, 2000, uncontrolled aeration of soils will be allowed only it the organic content is 50 ppmw or less. Telephone notification at least 24 hours prior to excavation has been changed to written notification at least 5 days prior to the excavation. The words "degree of contamination" have been deleted to specify that the notification provide the organic content of the soil. The language regarding estimations of the soil contamination has also been made more specific.

8-40-404 Reporting, Soil Excavation During Pipeline Leak Repairs: The reporting requirements have been amended to include procedures employed to meet the requirements addressed in sections 8-40-301 through 8-40-306. The words "degree of contamination" have been deleted to specify that the notification provide the organic content of the soil.

8-40-405 Reporting, Soil Excavation Unrelated to Underground Storage Tank Activities: The reporting requirements have been amended to include procedures employed to meet the requirements addressed in sections 8-40-301 through 8-40-306. The words "degree of contamination" have been deleted to specify that the notification provide the organic content of the soil. A five-day limit has been added for subsequent submittal of written notification.

8-40-600 MANUAL OF PROCEDURES

8-40-601 Soil Sampling: Reference to "aeration," and "uncontaminated" have been removed to accommodate the proposed changes to the Regulation. The time frame for

sampling after excavation has been reduced from 24 hours to 12, to reduce the potential for natural aeration to occur prior to determining contamination of the soil.

8-40-602 Measurement of Organic Content: Reference to obsolete Regional Water Quality Control Board analytical methods has been removed, and additional EPA sampling methods have been provided.

8-40-604 Measurement of Organic Concentration: This section has been added to provide the methodology for use of an Organic Vapor Analyzer for real-time determination of contamination.

8-40-605 Analysis of Samples, Initial Boiling Point: This section has been added to provide the Analysis methodology for determining exemption under 8-40-113, due to non-volatility of the contaminating compounds.

Emissions and Emission Reductions

As part of the Final San Francisco Bay Area Ozone Attainment Plan (OAP) adopted June 1999, an Emission Inventory has been prepared identifying emissions of major source categories using 1995 as a base year. For the source category of Contaminated Soil Aeration, VOC emissions were found to be 4.07 tons per day. This value was estimated based on a review of the written reports submitted in 1990, as required by Regulation 8, Rule 40. For each soil aeration event, a generalized emission factor was established of 2,370 pounds VOC. This assumes that the soil aeration project emits 120 pounds per day initially, with emissions halving every tenth day, and emissions set at zero for the 90th day.

In 1990, BAAQMD had 1254 reported tank excavation events, with the annual number exceeding 1,100 for the years 1991 and 1992. For the base year of 1995, the number of excavation events was assumed to be 1254. The product of the number of excavation events and the generalized emission factor yields annual emissions of 1,486 tons, and daily emissions of 4.07 tons. The total number of excavation events is expected to decline following 1998 as a result of compliance with the mandated deadline for UST retrofits. For the year 2,000, the number of excavation events is expected to be 953. This would yield annual emissions of 1,130 tons and daily emissions of 3.09 tons.

The mitigation requirements of the proposed amendments are assumed to result in a reduction in emissions of between 85% and 90%. This is consistent with the assumed reduction of 90% for similar amendments made in 1995 to SCAQMD Regulation 1166. The daily emissions reduction as a result of these amendments beginning June 1, 2000 would then range between 2.62 and 2.77 tons per day.

Economic Impacts

Under Health and Safety Code Section 40920.6, the District is required to perform an incremental cost analysis for a proposed rule. To perform this analysis, the District must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. This analysis has not yet been completed.

Environmental Impacts

Pursuant to the provisions of the California Environmental Quality Act (CEQA), District staff will be conducting an initial study to determine the environmental effects of these amendments to District Regulation. When this initial study is completed it will be made available to the public as required by State CEQA Guidelines.

Regulatory Impacts

Section 40727.2 of the Health and Safety Code requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements, the district may simply note this fact and avoid the analysis otherwise required. A detailed review of the regulatory requirements for this source type has not yet been completed.

Conclusion

Pursuant to the California Health and Safety Code, Section 40727, regulatory amendments must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. District Staff has made every effort to provide drafted amendments which will meet these findings. This determination will be investigated and tested through the workshop and comment process. District staff is confident that these amendments will meet these findings when the final version goes before the Board for adoption.

REC:rec

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