



Air Pollution Control Board

San Diego County Air Pollution Control District

GOVERNING BODY

GREG COX
First District

DIANNE JACOB
Second District

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Third District

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Fourth District

JIM DESMOND
Fifth District

AGENDA ITEM

DATE: July 8, 2020

AP04

TO: Air Pollution Control Board

SUBJECT

NOTICED PUBLIC HEARING – DISCUSSION OF AMENDMENTS TO RULE 1210 – TOXIC AIR CONTAMINANT PUBLIC HEALTH RISKS – PUBLIC NOTIFICATION AND RISK REDUCTION (DISTRICTS: ALL)

OVERVIEW

On May 22, 2019 (AP01), the Air Pollution Control Board (Board) directed the Air Pollution Control Officer to: 1) evaluate the current toxic air pollutant significance threshold adopted by the Air Pollution Control District (District) under Rule 1210 (Toxic Air Contaminant Public Health Risks - Public Notification and Risk Reduction); 2) implement a regulatory process to amend Rule 1210, which includes industry and community partners, to obtain input on and analyze reducing the toxic air pollution significance threshold with the intent of improving public health, and 3) return to the Board with an analysis and a proposed rule no later than April 2020.

In September 1987, a new State law known as The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly) was enacted. The Hot Spots Act was adopted in response to the public's concerns about being exposed to unknown hazardous air pollutants that are emitted by businesses and industries and which may cause cancer or have other adverse, short- and long-term health effects. This law requires stationary sources of air pollutants to track and report the types and quantities of certain substances their facilities release into the air. Additionally, those facilities having localized impacts because of the hazardous air pollutants they emit must notify nearby residents of the elevated risks posed to residents.

In September 1992, the Hot Spots Act was amended by Senate Bill 1731 (Calderon) to require the owners of "significant risk" facilities reduce their risks below the level of significance (which is set by each air district in California and is reflected in their individually adopted risk reduction thresholds). It is this aspect of the Hot Spots Act that works to protect public health, as it generally mandates reductions of emissions of toxic air contaminants from those facilities within specified timeframes in order to reduce their risk to the public. District Rule 1210 was first adopted and implemented by the Board on June 12, 1996 (AP02), in order to establish the public notification and risk reduction thresholds and procedures.

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Rule 1210 regulates facilities for four types of public health risks: 1) Cancer risk, 2) Cancer burden, 3) Chronic (long term) non-carcinogenic risk, and 4) Acute (short term) non-carcinogenic risk. Cancer risk is expressed in terms of the increased number of chances in one million of developing cancer. Public notification is required when the facility-wide cancer risk is above 10 in one million. These notifications must occur once every two years and are designed to both inform the public of their risks and encourage more rapid emissions reductions by the affected facilities. Cancer risk reduction is required under Rule 1210 when the risk is above 100 in one million. Risk reduction generally entails reducing emissions of toxic air contaminants in order to reduce peoples’ exposure to them. A cancer risk of 100 in one million is a calculation of the probability that a person would contract cancer due to a facility’s emissions, but it does not mean that if one million people were exposed to that risk level, that 100 people would necessarily contract cancer. The District is one of the two large air districts in California that use the 100 in one million risk reduction threshold. Table 1 shows the risk reduction thresholds for the five large air districts in California.

Table 1. Risk Reduction Thresholds for the Large Air Districts

District	Risk Reduction Threshold
San Diego County APCD	100 in one million
San Joaquin Valley APCD	100 in one million
South Coast AQMD	25 in one million
Bay Area AQMD	10 in one million
Sacramento Metropolitan AQMD	10 in one million

The District investigated how the other large air districts implement their cancer risk reduction thresholds and it analyzed the emissions of facilities within San Diego county and their potential risks to the affected public. The types of facilities that tend to have higher risk levels include those that use diesel fuel-fired engines (diesel exhaust is a carcinogen), manufacturing companies that perform welding on metal substrates (especially stainless steel which, when welded, emits hexavalent chromium - a carcinogen), and facilities that combust renewable gases. For example, landfills that use landfill gas as engine fuel in electric generators can cause elevated risk levels due to the harmful byproducts of combustion that are emitted into the air, such as formaldehyde (a carcinogen). Based on this analysis, the District developed four potential options with regard to the cancer risk reduction threshold as shown in Table 2.

Table 2. Options for Cancer Risk Reduction Threshold

Option	Risk Reduction Threshold	Number of Facilities Above Threshold
1	10 in one million	8
2	25 in one million	1
3	50 in one million	1
4	100 in one million (current rule)	Zero

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Potential amendments to Rule 1210 also include:

- 1) A technology review option for facilities that cannot get below the Board adopted risk reduction threshold due to technological limitations.
- 2) Updating the economic cost threshold used to determine if a facility that must reduce their risk can reduce their risk sooner than the five year initial deadline or, if they are allowed longer to do so, by changing from looking at the average return on equity (which is a measure of profitability in relation to a company's worth) to looking at either the annual profits for businesses, or for non-profit organizations and government or military facilities, the annual operational budget.
- 3) Adding a voluntary risk reduction option under Options 2, 3, and 4 in Table 2, for facilities that must perform a public notice but are below the risk reduction threshold; and
- 4) Increasing the required frequency of facility risk analysis to better capture changing emissions and conditions at facilities where higher risks may develop.

Facilities have expressed concerns about currently proposed changes at the State level that would increase the number of chemicals that must be evaluated under the “Hot Spots” Program from 679 to approximately 1,400 and the effect this increase might have on facility risk levels. These concerns arise because the health data about the chemicals newly proposed to be listed are not yet available and businesses cannot determine how their risk levels will be impacted by those changes and the proposed Rule 1210 amendments. Furthermore, the Air Pollution Control District Advisory Committee found that additional data is needed to substantiate the proposed thresholds in order to consider and support a specific proposed threshold.

In light of the above information, today’s request is for the Board to consider and approve an extension of 18 months to further refine the data and the proposed rule by working with stakeholders and the State to develop a better understanding of how the proposed amended Rule 1210 and the State’s expanded chemical list would affect the facilities and public health. The District would present progress reports to the Board at six-month intervals in order to keep the Board informed of its progress in addressing industry concerns and developing a proposed amended rule that is protective of public health.

RECOMMENDATION

AIR POLLUTION CONTROL OFFICER

1. Approve an 18-month extension to the prior direction to bring to the Board an analysis and proposed rule no later than April 2020, such that the new deadline will be October 2021.
2. Direct the District to provide progress reports to the Board every six months regarding the development of an amended rule.

FISCAL IMPACT

There is no fiscal impact associated with this recommendation. There will be no change in net General Fund cost and no additional staff years.

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BUSINESS IMPACT STATEMENT

There is no impact to businesses from the recommendation, since the current requirements will stay in affect during the proposed 18-month delay. However, potential rule amendments are not required by state or federal law or regulation, so any amendments would impose new requirements on the affected facilities. There are eight facilities with risk levels above the threshold in Option 1, one facility above the thresholds in Options 2 or 3, and no facilities are above the threshold in Option 4. A facility has various ways to reduce its risk, including cutting emissions, changing exhaust stack parameters to better disperse pollutants, relocating equipment away from people, and employing alternate processes that have fewer air pollutant emissions. It is not possible to estimate an affected facility's actual costs to comply with Options 1, 2 or 3 because the facilities have a number of available options and technologies for controlling/reducing emissions and their risks. This said, the costs associated with controlling air pollutant emissions from specific types of equipment and operations are generally known and are presented here for informational purposes. The examples here include diesel fuel combustion, renewable fuel combustion and welding, especially the welding of stainless steel.

Risk from diesel engine exhaust can be reduced by several methods, including the installation of diesel particulate filters or diesel oxidation catalysts on existing engines, the replacement of engines with newer, lower emitting engines, or the conversion of operations to run on electricity. The cost to purchase and install a diesel particulate filter or diesel oxidation catalyst ranges from \$6,000 to \$135,000, depending on the size of the engine.

For welding emissions, the necessary reductions could be accomplished by utilizing advanced welding techniques that use less filler material and produce less smoke or by capturing and controlling welding smoke emissions. Controlling individual welding stations can cost \$1,000 to more than \$10,000.

For engines combusting renewable gases, removing contaminants from the renewable gas and adding an oxidation catalyst on the engine exhaust would reduce harmful emissions and their risk. The cost to install such a system ranges from \$350,000 to \$750,000 depending on the size of the engine.

ADVISORY BOARD STATEMENT

On March 11, 2020, the Air Pollution Control District Advisory Committee (Advisory Committee) considered the proposed amendments to Rule 1210. The Advisory Committee is comprised of a total of nine seats. Four of those seats are currently vacant. Of the five Advisory Committee members currently appointed, four attended the meeting, heard public testimony and expressed support for reducing the cancer risk reduction threshold, but found that additional data is needed to substantiate the proposed thresholds they are being asked to consider and, especially, to support a specific proposed threshold.

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BACKGROUND

The California Air Toxics “Hot Spots” Information and Assessment Act was enacted in 1987 to address public concerns over toxic air contaminant emissions. The Hot Spots Act requires local air pollution control districts to evaluate toxic air contaminant emissions from various businesses and determine which emissions present public health concerns. Next, it mandates facilities to develop and implement strategies to reduce their potential health risks to public health due to people's exposure to their emissions of toxic air contaminants when those health risks are above specified levels. The Air Toxics “Hot Spots” Program (Program) is implemented by the local air pollution control districts using guidance developed by the State Office of Environmental Health Hazard Assessment (OEHHA), the California Air Pollution Control Officers Association and the California Air Resources Board (CARB).

Under the Program, facilities emitting toxic air contaminants are required to provide the San Diego County Air Pollution Control District (District) with information to update the facilities’ toxic air contaminant emissions inventories at least once every four years. The District then reviews and verifies data submitted by facilities and compiles an inventory of emissions.

Facilities that emit toxic air contaminants in amounts potentially posing a public health risk must submit to the District a site-specific Health Risk Assessment (HRA) that examines the possible public health risks posed to their neighbors. The HRA incorporates pollutant dispersion estimates, human exposure assumptions and health effects information. Each HRA is reviewed by the District and OEHHA to ensure that it does not underestimate the risks and follows the most recent State guidelines. Once an HRA has been approved, Rule 1210 requires facilities with risks greater than specified levels to provide public notice to all persons in the affected area. In addition, those facilities with significant risks are also required to reduce those risks to below the District’s significance threshold within five years. For cancer risk, the current Rule 1210 public notification threshold is 10 in one million and the risk reduction threshold is 100 in one million.

Since the beginning of the State Program in 1989, the emissions of industrial toxic air contaminants have been reduced by a total of 88% (11 million pounds annually) within the San Diego region. Although the current emissions reduction trend is not as significant as in the early years of the Program, from 2009 to the present time the annual emissions of industrial toxic air contaminants have been reduced in the region by approximately 25%, or a total of 500,000 pounds per year. Due to these reductions industrial facilities now emit less than 3% of the total amount of toxic emissions in the region while mobile sources (such as cars and trucks) emit 42% and area sources (such as road dust, residential fuel combustion and pesticide applications) emit approximately 42%. The remaining 13% of the toxic air contaminant emissions come from natural sources such as wildfires and biogenic sources.

While industrial toxic emissions have been in decline, there is still a public risk of developing cancer due to the total amount of toxic air contaminants emitted by these facilities. That is, certain facilities still pose an increased cancer risk to their neighbors. As the scientific understanding

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grows about the effects of toxic air contaminants on the human body, OEHHA will occasionally refine its risk calculation methodology in order to be more protective of human health. Most recently, in 2015, OEHHA refined its methodology by incorporating the latest science in toxics exposure duration, age-based sensitivity factors and the varying breathing rates of different age groups. These changes may result in estimates of higher risks for facilities than previously calculated, as the updated risk calculation methodologies are designed to be increasingly protective of human health.

On May 22, 2019, in an effort to better protect and improve public health, the Board directed the Air Pollution Control Officer to evaluate the current cancer risk reduction threshold of Rule 1210, implement a regulatory process to lower the cancer risk threshold, including obtaining input from the public and affected businesses, and then return to the Board by April 2020 with the analysis and a proposed rule.

To start this process, the District looked at what the other four large California air districts have for their cancer risk reduction thresholds. The Sacramento Metropolitan Air Quality Management District (Sacramento) uses 10 in one million, the South Coast Air Quality Management District (South Coast) uses 25 in one million, and the San Joaquin Valley Air Pollution Control District (San Joaquin) uses 100 in one million. Only the Bay Area Air Quality Management District (Bay Area) changed their cancer risk reduction threshold, from the previous 100 in one million to the current 10 in one million in 2017, after OEHHA's 2015 updated risk calculation methodology.

Next, the District looked at the existing permitted facilities within its jurisdiction to determine which ones might be impacted at different cancer risk reduction thresholds. If a facility had performed an HRA using the 2015 changes in methodology, then that result was used. For those facilities that had not done an HRA since 2015, the District looked at their most recent emissions inventory and developed a prioritization score. For the facilities where the prioritization score is above the threshold to require an HRA, the District performed a screening level HRA and used its experience to forecast what a full HRA score would be.

This information was then used to determine potential options for risk reduction levels and the number of facilities that might be affected by each option. These facilities were notified of their status in June 2019.

The proposed 18-month delay in the adoption of an amended rule would also give the facilities additional time to conduct required Health Risk Assessments, providing them with a clearer picture of how an amended rule with different risk reduction thresholds will affect them.

Potential Amendments

- **Technology Review Option:** Under existing Rule 1210, a facility that is subject to a risk reduction requirement has five years to reduce their risk to below that threshold. A facility

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can request more time if there is a technological or economic reason why they cannot reduce their risk within those five years and, if the District agrees, it can grant up to an additional five years for risk reduction. To address the potential case of technology not advancing enough to make risk reduction feasible within ten years, a technology review option is proposed.

To use that option, a facility would need to demonstrate that the technology to reduce their risk below the threshold is not available and demonstrate they have installed Toxics Best Available Retrofit Control Technology on all emission units and processes that have an individual risk greater than one in one million. To remain in this option, this demonstration will need to be reanalyzed once every three years. The Bay Area district has a similar option in their rules, but they do not reevaluate the demonstrations once they have been done initially.

- **Voluntary Risk Reduction Program:** With the changes in risk assessment methodology that occurred in 2015, a facility that previously was found to be below the public notification threshold might be found to be above that threshold now, even if they have not increased their emissions. The Voluntary Risk Reduction Program is proposed in order to give these facilities an option to reduce their risk below the public notification threshold in a specified timeframe, which they otherwise would not be required to do, and in exchange they would not need to do the full, direct, mailout notification for the area surrounding their facility as is typically done. Instead, the District would do an abbreviated noticing. The options are as follows:
 - A facility would perform the full public notification, which includes directly notifying the addresses that are potentially affected by the facility’s emissions, or
 - Reduce their risk below the notification level within 2½ years while the district conducts an abbreviated notification, consisting of posting the notification on the district’s website and discussing it in the Annual Air Toxics “Hot Spots” Program Report.

This program would only be available for cancer risk reduction Options 2, 3 and 4, where the cancer risk reduction threshold (25, 50 and 100 in one million, respectively) is higher than the cancer risk public notification threshold of 10 in one million. The South Coast district has such a program and four facilities there successfully reduced their risks by using this program.

- **Economic Cost Threshold:** This threshold is used to determine if risk reduction measures can be implemented in less than the required five years or would take more than five years due to economic reasons. This proposal is to change the economic cost threshold to be 10% of the annual profits or, for a non-profit, government or military facility, it would be 1% of the annual operating budget.

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The current rule threshold is if the annualized costs of the risk reduction measure would be more than 10% of the facility's average return on equity. The return on equity is not well understood by nonfinancial people and does not apply to facilities such as governments, the military and other non-profit organizations.

The proposed threshold is the same threshold that the Bay Area district uses.

- **Frequency of review:** In order to better capture changing emissions and conditions at facilities that might pose a higher risk, these amendments would require the facilities with the highest potential of public risk to be analyzed on an annual basis and those with a medium potential to be analyzed on a biennial basis (once every 2 years). The facilities with a low potential for public risk would continue to be analyzed once every four years. This potential of public risk is based on the facility's prioritization score, which is used to determine if a facility must perform a HRA. Currently, this evaluation of risk occurs once every four years for all facilities.
- **Options for the cancer risk reduction threshold:** Four potential options for selecting the cancer risk reduction threshold are presented below:
 - **Option 1** - Lowers the threshold to 10 in one million. A total of eight facilities would potentially be subject to this threshold.
 - **Option 2** - Lowers the threshold to 25 in one million. One facility would be affected (it is currently at 53 in one million)
 - **Option 3** - would lower the threshold to 50 in one million. One facility would be affected (it is currently at 53 in one million)
 - **Option 4** - maintains the current threshold of 100 in one million (no facilities would be affected)

Of the eight facilities potentially subject to Option 1 (10 in one million threshold), seven of them are currently estimated to have cancer risks between 10 and 15 in one million. The potential risk reduction techniques these seven facilities could use include, but are not limited to, adding additional emission controls, replacing equipment and processes with lower-emitting ones, and having equipment be powered by electricity rather than internal combustion engines. These technologies are feasible and available, and it appears they would be able to reduce their risks below 10 in one million within the 5 to 10 years allowed by Rule 1210.

The eighth facility is a large manufacturer with diesel engines and welding operations and is currently at a risk level of 53 in one million. It would be subject to Options 1, 2 or 3 (thresholds of 10, 25 or 50 in one million, respectively). Currently, existing technology would not allow the facility to reduce the risk to below 10 in one million or 25 in one million. This being the case, they would be eligible to work to meet the requirements for

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the technology review option discussed above. Furthermore, this facility should be able to comply with a 50 in one million risk threshold based on the emissions reductions they have accomplished since their most recent HRA that was done after the 2015 changes to OEHHA guidelines.

As Option 4 would maintain the existing cancer risk reduction threshold of 100 in one million, and since no facility is currently above that threshold, this option would not impose new requirements on any facility.

Public Input

The District held two workshops, one on August 15, 2019, and another on January 30, 2020, where the proposed rule amendments were presented and input was solicited from all interested parties. For each workshop, a meeting notice was mailed to each air quality permit holder and other interested parties in the region. The first workshop had 30 attendees and the second one had 43 participants. Included were representatives from businesses, government agencies, the Navy and a local environmental organization. All public comments that were received, along with the District's responses, are included in the workshop reports provided as Attachments F and G. In general, the comments were about how the proposed amendments would be implemented. Some commenters suggested keeping the cancer risk reduction threshold at 100 in one million, while others supported the cancer risk reduction threshold at 10 in one million.

The Industrial Environmental Association (IEA) sent a comment letter to the District on March 17, 2020. In this letter, the IEA recommended adopting Option 3, thereby cutting the current threshold of 100 in a million in half, to 50 in one million, and having a 5-year assessment period to evaluate the health impacts, environmental benefits, costs, and business impacts from this reduction, and then considering further reductions as necessary.

Socioeconomic Impact Assessment

State law requires the District to perform an assessment of the socioeconomic impacts when adopting, amending or repealing a rule that will significantly affect air quality or emission limitations. At this time, no amendments to Rule 1210 are proposed. Accordingly, a socioeconomic impact assessment is not required.

ENVIRONMENTAL STATEMENT

The California Environmental Quality Act (CEQA) applies to certain actions which have the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect change in the environment. Because no change to the District rules is proposed at this time, CEQA does not apply to this action.

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LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN

Today’s proposed actions support the Sustainable Environments/Thriving Initiative in the County of San Diego’s 2020-2025 Strategic Plan by focusing on sustainability, pollution prevention, and strategic planning. Continued study and proposed amendments to Rule 1210 will protect air quality by ensuring toxic air contaminant emissions from facilities will not cause a significant public health risk.



SARAH E. AGHASSI
Deputy Chief Administrative Officer

Respectfully submitted,



ROBERT REIDER
Interim Director/Air Pollution Control Officer

ATTACHMENT(S)

Attachment A – First Workshop Report
Attachment B – Second Workshop Report

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AGENDA ITEM INFORMATION SHEET

REQUIRES FOUR VOTES: Yes No

WRITTEN DISCLOSURE PER COUNTY CHARTER SECTION 1000.1 REQUIRED

 Yes No

PREVIOUS RELEVANT BOARD ACTIONS:

June 16, 1996 (1), adopted Rule 1210 – Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction; May 22, 2019 (2), directed the District to evaluate through a public process if the cancer risk reduction threshold of Rule 1210 should be changed.

BOARD POLICIES APPLICABLE:

N/A

BOARD POLICY STATEMENTS:

N/A

MANDATORY COMPLIANCE:

N/A

**ORACLE AWARD NUMBER(S) AND CONTRACT AND/OR REQUISITION
NUMBER(S):**

N/A

ORIGINATING DEPARTMENT: AIR POLLUTION CONTROL DISTRICT

OTHER CONCURRENCE(S): None

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