

CRESTLINE-LAKE ARROWHEAD WATER AGENCY

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February 22, 2007

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Mr. Martin Kay
South Coast Air Quality Management District
21865 East Copley Drive
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Subject: Proposed Amendments to Rule 1110.2

Dear Mr. Kay:

Crestline-Lake Arrowhead Water Agency (CLAWA) appreciates the opportunity to submit comments regarding SCAQMD's proposed amendments to Rule 1110.2. CLAWA provides supplemental water to residents within a 50,000-acre portion of the San Bernardino Mountains and wholesale water to twenty-five independent purveyors in Southern California. CLAWA also provides water for fire protection within a 25,000-acre section of United States Forest Service Land. During 2003, CLAWA provided approximately nineteen million gallons of water to fight the massive Old Fire, limiting fire damage to neighboring communities and to surrounding forests.

CLAWA respectfully reminds SCAQMD that although we are regulated by SCAQMD, our most significant operations are actually located on the lower north face of the San Bernardino Mountains, near Lake Silverwood. CLAWA requests that SCAQMD keep this circumstance in mind as it considers amendments to Rule 1110.2. Any air quality impacts from CLAWA's operations are more likely to be felt in the Mojave Desert Air Basin than in the South Coast Air Basin. It is not likely that further reductions in emissions from CLAWA's operations will result in noteworthy air quality benefits for the South Coast Air Basin.

CLAWA is committed to providing a reliable and cost-effective water system for its customers. Meeting this commitment is dependent upon effective energy management practices. Because the region that CLAWA serves ranges in elevation from 3,300 feet to 7,500 feet, CLAWA must use special high-pressure water pumping equipment to transfer water at four booster stations, each with a lift of as much as 1,800 feet. To ensure system reliability, CLAWA has built an integrated energy system that includes utility power,

natural gas internal combustion engine-driven pumps, and a network of natural gas power generators. Each component of our system serves a critical function. Grid power is utilized to the extent it is feasible, but engine-driven pumps ensure that the high energy demands of CLAWA's booster stations can be met reliably, without interruption and in a fiscally prudent manner. CLAWA's natural gas generators are typically reserved for critical periods when grid power may not be available. Typically, the generator engines have operated for fewer than 100 hours per year, but history has shown that regional forest fires and windstorms can result in extended operating periods that exceed thresholds specified by SCAQMD for emergency engines. CLAWA's deliberate decision to utilize low-use natural gas engines in place of diesel emergency engines allows the agency to significantly reduce emissions and ensures access to steady fuel supplies even when liquid fuel cannot be transported and when operating stations cannot be accessed. The use of natural gas engines also accommodates operations that would exceed SCAQMD's allowances for emergency operations.

Even though CLAWA's energy management practices have resulted in reduced energy costs, those costs still contribute significantly to the overall price of CLAWA water. Currently, energy costs account for at least 30% and often up to 50% of the monthly cost paid for CLAWA water. If CLAWA relied more exclusively on purchased electricity to operate its pump stations, the cost of purchased energy alone would drive energy costs to a level of 40% to 60% of the total water purchase cost. Even if CLAWA relied more heavily upon utility power, it would still have to maintain its network of engines to ensure system reliability and would incur significant costs to comply with the proposed amendments to Rule 1110.2. The end result would be even greater energy-related costs to CLAWA's customers.

The economic implications of SCAQMD's proposed amendments to Rule 1110.2, combined with the limited air quality benefits to the South Coast Air Basin, lead CLAWA to suggest the following changes to proposed amended Rule 1110.2.

Continuous Emissions Monitoring Systems (CEMS)

The proposed amendments would require the installation of CEMS on any engines at a facility that have a combined rating of 1,000 hp, and combined annual fuel usage of 16×10^9 Btu by the year 2008. The annual fuel throughput threshold is roughly equivalent to what could be consumed by a 200 hp engine over the course of a year. The CEMS would be installed by July 2008 and be certified shortly thereafter.

CEMS Applicability Threshold

CLAWA's primary engines are used to drive pumping operations. Permitted engine ratings greatly overstate the engine output for CLAWA's operations because it is the pump, and not the engine rating that drives actual power output. The proposed rule amendments would require CLAWA to install up to five new CEMS and hire staff to manage the systems. CEMS would be installed on engines with as low as 370 hp that

operate at levels below 250 hp, due to pump ratings. CEMS would also be required for nearby generator engines that to date have operated only a minimum number of hours per year.

The cost and benefits of continuous monitoring cannot possibly justify CEMS installation on CLAWA's low-use generators. CLAWA requests that the existing CEMS threshold of 1,000 hp and two million hp-hours per year for a single engine be retained. If SCAQMD intends to pursue a combined-engine applicability threshold, a combined rating of 1500 hp would be more reasonable. Because CLAWA engine operations are driven by pump size, rather than engine rating, provisions to consider actual engine output for the purpose of determining CEMS applicability are not only equitable, but also critical to CLAWA. Additionally, the secondary criterion of 16×10^9 Btu per year should be applied on a per engine basis, rather than a combined engine basis to exclude low use engines from the proposed CEMS requirements. Finally, because annual operations may fluctuate, CEMS should be triggered for existing engines only if actual fuel consumption exceeds the threshold on a repeated basis.

CEMS Installation Schedule

The proposed amendment allows only one year to determine CEMS applicability, develop a monitoring plan, obtain funding, solicit proposals, submit CEMS installation applications to SCAQMD, submit permit modification applications, install the system, obtain SCAQMD certification, train personnel and implement a QA/QC program. This schedule is unrealistically aggressive.

The proposed amendment also would require that CEMS be installed prior to the dates in 2010 – 2012 when engines must meet new emission standards. While CLAWA cannot predict at this time what its Rule 1110.2 compliance strategy will be, AQMD has indicated that compliance with the proposed emission limits may require retrofit or engine removal. Conceivably, the installation of a CEMS in 2008 will be followed by equipment removal or significant modifications that would limit the useful life of a very expensive monitoring system. CLAWA recommends that for existing engines, new CEMS should not be required prior to the implementation of the 2010 – 2012 emission limits. This ensures that the purchased CEMS is designed to monitor the lower emissions limits and that the costly systems have reasonably useful lives. It also allows for an adequate time to plan, purchase and install the system; and to implement a suitable QA/QC program.

Source Test Provisions

The proposed amendments would require a source test every two years or every 8760 operating hours, whichever ever occurs first. Tests would be conducted at three operating loads, and tests could not be discontinued due to detected noncompliance. CLAWA feels that these provisions are unnecessarily onerous and requests the following modifications to the proposed amendments.

Test Schedule

CLAWA operates several of its engines on a very limited basis, but with more discretion than SCAQMD allows for emergency engines. By specifying that tests be conducted at “every two years or every 8760 operating hours, which ever occurs first,” SCAQMD would require that CLAWA’s low-use engines be subjected to source tests as frequently as every few hundred hours of operation. It is unreasonable to subject these low-use engines to such frequent testing requirements. CLAWA recommends that the test schedule be changed to “every two years or every 8760 hours, which ever is greater.” To ensure that some level of ongoing monitoring of low-use engines occurs, CLAWA suggests that the monthly hand-held monitoring requirements that specify “monthly or every 750 operating hours” be supplemented with a provision calling for at least one monitoring event per year.

Test Conditions

CLAWA’s pump engines are designed to operate at relatively low loads. Tests at high, medium and low engine ratings cannot possibly be achieved and would not reflect actual operations. CLAWA assumes that more reasonable operating loads can be agreed upon as the proposed monitoring plans are drafted, but also recognizes that actual operating loads during the test are dependent upon water pumping needs and cannot be manipulated for the sake of conducting the emissions test. Controlling CLAWA’s generator engine loads for the sake of conducting multi-load source tests would also be problematic. It would require CLAWA to rent and mobilize load banks capable of stepping from 100 kW to 1200 kW to at least five sites.

CLAWA recommends that SCAQMD’s current policy of requiring tests at “as found” conditions more accurately and more reasonably demonstrates compliance for CLAWA’s engines. CLAWA requests that proposed amendments to Rule 1110.2 calling for multi-load tests be supplemented with provisions allowing for exclusions when multiple loads cannot be achieved during the test or when conducting multiple loads would result in unwarranted costs to the engine operator.

Discontinuation of Tests

Source test companies typically assess hourly rates of \$200 to \$250 per hour to conduct an emissions test. VOC sample processing costs are an additional \$600 - \$900 per sample. Given these costs, it is unreasonable to require a facility operator to complete a failing test. CLAWA requests that provisions prohibiting the discontinuation of a test be deleted from the proposed rule amendments. An alternative to requiring that the test be completed is simply to require that the attempted test and its discontinuation be documented.

Periodic Monitoring

CLAWA appreciates SCAQMD's willingness to require periodic emissions monitoring no more frequently than every 750 hours of operation. This provision accommodates CLAWA's low-use engines. The proposed amendments also include a 72-hour hands-off period and daily process monitoring that may not be practical, given CLAWA's remote location and low-use engines.

Hands-off Period

CLAWA is a relatively small organization that relies extensively upon outside consultants and mechanics. Because of our remote location in the San Bernardino Mountains, CLAWA's contractors charge premium mobilization charges. The most practical way for CLAWA to manage an emissions monitoring program is to allow CLAWA's contracted mechanics to conduct monitoring at the same time they are performing scheduled maintenance on the engines. The proposed amendments would prohibit CLAWA's mechanics from conducting monthly monitoring while at the site to perform maintenance operations. Additional mobilizations of mechanics and contractors to CLAWA's sites would be required at significant costs to CLAWA.

The greatest environmental benefit of a periodic monitoring program is achieved simply because monitoring is being conducted. The 72-hour hands-off period does nothing to further compliance or to increase the benefits that will already be achieved simply by having a monitoring program in the first place. Periodic monitoring, with or without a hands-off period, will promote responsible engine and emission control system maintenance. CLAWA requests that the 72-hour hands-off requirement be deleted from the proposed amendment.

Daily Process Monitoring

The proposed amendments require that daily monitoring be done in person by the operator, or by remote monitoring. It is important that the complexity and degree of daily monitoring activities reflect the degree to which an engine is operated. Transmission of operating data to CLAWA's offices would be impractical and unjustified for engines that are used only intermittently. Daily trips to remote engine locations may also be impractical, especially if an engine is being operated primarily in test mode. CLAWA urges SCAQMD not to be overly prescriptive in its rule language. SCAQMD should instead ensure that permit holders and AQMD engineering staff have adequate flexibility to define operating parameters and a monitoring program that complement the way in which an engine is operated.

Exemptions

Unlike SCAQMD, many other air districts in California provide exemptions for low-use engines in their RACT / BARCT rules. Although CLAWA's generator engines are


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designed and permitted for full-time operation, CLAWA consistently attempts to limit its operation of engines to the extent feasible. To date at least, operation of CLAWA's generator engines has been minimal. Because CLAWA made a conscientious decision to install natural gas engines with 3-way catalysts in place of diesel emergency engines, we can ensure significant emission reductions even with operations well in excess of those allowed for emergency engines. CLAWA requests that SCAQMD grant exemptions from the emission standards and most monitoring requirements of Rule 1110.2 for low-use non-emergency natural gas fired engines when operated for less than 500 hours per year.

Again, CLAWA appreciates the opportunity to express our comments regarding proposed amendments to Rule 1110.2. CLAWA also welcomes the opportunity to discuss further the implications of SCAQMD's proposed rule language. You can reach Tom Newell, CLAWA Assistant General Manager, or me at (909) 338-1779.

Yours very truly,


Roxanne M. Holmes
General Manager

cc:

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