Board Workshop (7/23/13) A-2209 (a)-(e) Deadline: 7/16/13 by 12 noon



BEST BEST & KRIEGER ATTORNEYS AT LAW

500 Capitol Mail, Suite 1700, Sacramento, CA 95814 Phone: (916) 325-4000 | Fax: (916) 325-4010 | www.bbklaw.com

William J. Thomas (916) 551-2858 William.Thomas@bbklaw.com

July 16, 2013

VIA ÉMAIL

Indian Wells

Irvine

(760) 568-2611

(949) 263-2600

(213) 617-8100

(909) 989-8584

Los Angeles

Ontario

Felicia Marcus, Chair Frances Spivy-Weber, Vice Chair Tam M. Doduc, Member Steven Moore, Member Dorene D'Adamo, Member Thomas Howard, Executive Director Jeanie Townsend, Clerk to the Board California State Water Resources Control Board 1001 I Street, 24th Floor Sacramento, CA. 95814

Comments to A-2209(a)-(e) - July 23 Board Workshop Re: **Ocean Mist and RC Farms Response**

Dear Board Chair, Board Members, Mr. Howard, and Clerk Townsend:

L Introduction

The following written comments are advanced by Ocean Mist Farms and RC Farms, leading artichoke and vegetable farmers in Monterey and neighboring counties within the Central Coast Region 3. Ocean Mist Farms and RC Farms and their related operations are major farm operations based in the Salinas/Watsonville areas and hereby submit the following comments to the State Water Resources Control Board ("State Board") concerning its proposed order for the Conditional Waiver of Waste Discharge Requirements Order No. R3-2012-0011, the accompanying Monitoring and Reporting Program Order Nos. R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, and the accompanying Resolution No. R3-2012-0012 (collectively, "Proposed Order") issued by Central Coast Regional Water Quality Control Board ("Regional Board") for discharges from irrigated agricultural lands. The farming operations identified above have actively participated in efforts to improve water quality in the region and have participated in group monitoring programs as well as on-the-farm management practices to improve water quality.

The following are the farming operations' initial comments to the Proposed Order issued by the State Water Resources Control Board on June 6, 2013. These comments are filed in compliance with the July 16, 2013 response deadline as to written comments. Ocean Mist Farms

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Riverside (951) 686-1450 San Diego

(619) 525-1300

Walnut Creek (925) 977-3300

Washington, DC (202) 785-0600

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	SWRCB Clerk	



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and RC Farms will fully participate in the workshop on July 23, 2013, and otherwise stand ready to work closely with the staff and members of the State and Regional Boards to further develop the Proposed Order.

II. <u>Primary Comments</u>

We initially concentrate on three major provisions of the waiver and the State Board's Proposed Order, which have the potential to considerably impact both our vegetable production and our operations' overall viability.

1. <u>Proposed Monitoring of Tile Drains is Inappropriate, Pg. 30, fn 80,</u> <u>Page 31</u>

Ocean Mist Farms is based in Castroville, with some 37 farms throughout several areas of the Central Coast. Ocean Mist has been thoroughly engaged in water quality management and has cooperated with the Elkhorn Slough Foundation on several of their environmental restoration projects. Beginning in the 1930's, sea water intrusion became an issue in the 180 foot aquifer next to the coast in the Salinas Valley. Various agencies began to document the movement of the intrusion front in 1944. The intrusion front is now approaching the boundaries of the City of Salinas. The second Salinas Valley aquifer, at 400 feet, has intruded up to Highway 1, and now threatens the water supply of Castroville.

The visionaries in the Salinas Valley began thinking of recycled water to irrigate cool season vegetable crops in the 1970's when sea water intrusion threatened the productivity of some of the most valuable farmland for cool season vegetable crops in the world. The Monterey Wastewater Reclamation Study for Agriculture ("MWRSA") was conducted from 1976 through 1987 and proved that wastewater could be cleaned up and used safely to irrigate crops. This water, however, comes with average levels of sodium in the 175 to 200 ppm range and chloride levels of 250 ppm or greater. The current levels of both of these elements in our recycled water for irrigation are considered high by agronomic standards.

In order to slow the rate of intrusion and protect the existing groundwater supplies, the Castroville Seawater Intrusion Project (CSIP) began delivering recycled water to approximately 12,000 acres of some of the most fertile farmland in the north Salinas Valley in 1998. Soils within CSIP are clay loam to heavy clay and tend to drain poorly. With the addition of irrigation water high in sodium and chloride, these highly productive lands would eventually be rendered unproductive for high value agricultural crops. Tile drains remove these excess harmful ions from the root profile, allowing for the long term sustainability and productivity of these soils. The greatest amount of tile drain discharge takes place during significant rainfall events. This occurs as rainwater moves through the soil profile, removing leachable ions with it.



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Presently, tile drains are widely used to remove excessive and problem water from the crop root zone. The drains have been relied on by California agriculture for decades and have been responsible for making otherwise unproductive areas productive. Tile drains are absolutely required for much of California agriculture. To restrict tile drains would not just eliminate agricultural productivity on an immediate basis, but could also render the farm land virtually unproductive and forever worthless. Without tile drains these farm lands would be lost to salt buildup in the soils and the high value crops grown here could no longer be farmed. Tens of thousands of jobs would be lost. A strategic food production area that supplies fresh vegetables during the summer months to the nation would no longer be productive.

The Regional Board's authority extends to issues of water quality, not the control of farm irrigation infrastructure improvements. Instead of trying to regulate tile drains, thereby taking this land out of production, the Regional Board should accept and encourage the use of tile drains for particular beneficial uses. Specifically, the Regional Board should recognize the importance of tile drainage, particularly in certain areas of this region with historically high water tables, salt build-up, or salt water intrusion, and most particularly the landmark efforts which have been employed around the mouth of the Salinas River where agriculture has effectively taken urban reclaimed water and, through irrigation, improved water quality from the point at which it is received to the point at which it is discharged (discussed further below).

The operation of tile drainage systems to lower the water table below irrigated lands occurs in the lower regions of many California valleys. These areas often have perched water tables. Farmers pump this subsurface water and discharge it directly to containment ponds and drainage channels to lower the water table and to assist water reuse. The use of tile drains typically does not discharge materials that were not present prior to the water being pumped from the ground, or applied from the reclaimed water systems. Rather water is pumped from the ground to the surface or applied from the reclaimed water and is collected by and subsequently discharged through tile drains. Often this is without adding any waste substances, and in the case of the reclaimed water, it is much improved by its exposure to sunlight, vegetative cleansing and soil assimilation. The use of tile drains to handle drainage from fields was intended to pick up water never intended to be pure, and therefore its unreasonable to hold tile drains up to basin plan standards. There is a serious concern that monitoring the quality of water in tile drains is a step toward requiring tile drain water to be in compliance with basin plans, which will ultimately render these lands unfarmable.

As a result of tile drains, Ocean Mist was able to receive recycled water from the neighboring cities, which otherwise would drain to the ocean and counter salt water intrusion. This program has received worldwide acclaim from municipal users, regulators, environmentalists, and all other parties interested in water conservation and reuse. Farmers in Monterey County have taken low quality municipal discharges, otherwise bound for the ocean, and used them for irrigation, dramatically improving the quality of the water as it returns to the environment. Through these efforts, we are able to (1) conserve water, (2) reuse water, (3) 82418.00001\8065442.7



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take problem discharges from municipalities, and (4) discharge water far cleaner than what was received.

The Regional staff proposal to commence monitoring these tile drains, further embraced by the State Board's Proposed Order, will give immediate rise to compare these waters to basin plan objectives, which will certainly impact these reclamation programs and the Salinas farm communities. California Water Code section 13241(F) expressly encourages the use of recycled water. This monitoring proposal will clearly put this highly acclaimed water re-use program in jeopardy in contravention of this legislative directive. Accordingly tile drains should not be included as a regulated type of discharge under the Proposed Order.

Further, monitoring these tile waters is unnecessary. The tile drains do not directly discharge to the ocean. Rather, tile drains terminate in the area's surface drains (i.e., Blanco Drain), which themselves are part of the waiver water monitoring program. Therefore, these tile waters <u>are monitored</u> once they become part of the waters of the state. Consequently, attempting to monitor these drain structures when they are a part of the field irrigation/drain structural network is both unnecessary and a stretch of the State Board's authority.

It is also important to recognize that the lands outside of the Castroville Seawater Intrusion Project that do not have tile drains still need to leach out many of these same harmful sodium and chloride ions or they too would become unproductive. These soils drain naturally even though they have added water as a result of irrigation and rainfall events during the winter months. However, with time, these soils would, without drainage, eventually accumulate harmful levels of ions that would render them unproductive if leaching events did not take place.

Because of the highly beneficial use of tile drains to the long term sustainability of the soils in the region, we strongly urge the State Board to remove any restriction on tile drain use in the Proposed Order. Currently, there is no science to support any alternatives to tile drains. Accordingly, it is unrealistic to expect tile drain discharges to achieve the compliance timelines set forth in the Proposed Order. Forcing landowners and growers to "turn off" their tile drains will lead to productive farm lands becoming unproductive, lost jobs, and a sharp decline in land values. We urge the State Board to reconsider.

2. <u>Nitrogen Identification, Calculation, and Reporting is Unworkable</u> and Premature, Pgs. 33 to 41

Growing a successful crop is not only grounded in sound science, but is very much an art developed over years of studying and understanding how crops grow under certain environmental conditions and in different soils. This experience garnered through decades of knowing what a crop may be lacking through observation and in light of past successes and failures. Ignoring the art of farming jeopardizes the competitive nature of the business by lumping all growers into the same category.



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The high value crops grown in the region are expensive to grow and cultivate profitably. Land values are high. Input and labor costs continue to increase. Crops have to be grown intensively, sometimes growing and harvesting 2 to 3 crops per acre over a 6 to 8 month period of time. The cultivation of cool season vegetable crops on the central coast is high risk business that can cost over \$4,000 an acre before any product is ever harvested.

Nitrogen is the most important nutrient that cool season vegetable crops require to be grown successfully. Over the past several years Ocean Mist and other growers have cut back nitrogen use significantly. For instance, Ocean Mist no longer uses heavy preplant applications in the winter months unless they expect to plant within a few weeks. However, if they believe that a crop is short of nitrogen, or any other nutrient, they apply what is needed to ensure a successful harvest. Investment dollars are too great not to do otherwise. To wait until lab results are processed or upon the advice of an expert (who may never have grown a field of lettuce, broccoli, cauliflower, etc.) jeopardizes our ability to take a crop into maturity. The "art" of a timed application of a nitrogen fertilizer is as important as the amount applied.

Finally, regulation is a double-edged sword. For example, the Regional Board has taken measures to stop the Salinas River Channel Maintenance Program until a new EIR is in place. Ironically, the Salinas River Channel is so clogged with vegetation that normal rainfall will likely cause flooding and extensive erosion and sediment loading to the Salinas River and the Monterey Bay National Marine Sanctuary. These sediments carry the very nutrient loads that the State Board and Regional Board are trying to restrict from leaving the farmed properties. Sadly, the next flooding event will likely cause more damage to the environment than all the farming activities in the Salinas Valley combined. Damage on this scale last occurred in the severe flood experienced in March of 1995. This is not just an example of misapplied regulatory action, but will directly counter the intended benefits of this waiver program.

Nitrates should not be classified as contaminants or waste unless they cause or contribute to an exceedance of a water quality objective. The Proposed Order should be balanced and recognize that (1) nitrates are the most essential nutrient for life and growth, and (2) nitrogen is the most prevalent element in our atmosphere.

Further, any effort to directly control a farmer's on-farm crop nutrient management is undisputedly beyond the State Board's authority. Doing so indirectly through regulation can also be problematic. This Proposed Order is a blunt instrument approach that fails to adequately consider soil types, soil composition, amount of organic material, depth to groundwater, or numerous other factors that greatly impact the farm operation and nutrient management. We urge the State Board to give full consideration to crop nutritional needs and the dramatic differences resulting from microclimates or differences due to growing seasons (i.e., differences in crop demands from summer to winter). We think it critical that the State Board strike the delicate balance between encouraging and enabling, rather than unartfully dictating specific management practices.



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Accordingly, we believe it is unnecessary to require, at this time, any farm to attempt to calculate a nitrate load risk or report that result to the Board. However, should the State Board proceed, we urge the State Board to narrowly define the circumstances under which such information should be made available to either the Regional Board or the general public. Moreover, providing any farm "inputs" should be limited to situations where exceedances of nitrates in drinking water supplies have been documented over multiple years. Accordingly, we recommend that the Proposed Order be revised to modify the Nitrogen Source Identification and limit any other nitrogen reporting requirements, especially preceding the conclusion of the Expert Panel's evaluations.

3. <u>We Support Expert Panel Review</u>

In February of this year, the State Board committed to convening a panel of experts to assess existing agricultural nitrate control practices and to propose new practices to protect groundwater ("Expert Panel"). The Proposed Order identifies a number issues for the Expert Panel to review. We support the Expert Panel's pending examination of the underlying issues identified by the State Board and encourage thorough research to inform responsible, effective, and workable solutions. We are pleased to see the Expert Panel will consist of a broad spectrum of experts from relevant disciplines. However, to ensure the efficacy and workability of the long-term solutions the Expert Panel will be asked to propose, it is critical to include scientists with specialized knowledge of crop nutrition, farm management, waste water discharge management, and soil chemistry and its assimilative effects on nitrogen. Accordingly, we recommend the State Board give particular consideration to Expert Panel candidates possessing such expertise.

We realize the State Board is currently engaged in convening the Expert Panel. We are not aware, however, of the timeline the State Board has adopted for appointing the panel, and accordingly, we request the State Board provide appropriate notice such that nominations to the Expert Panel can be advanced and supported.

The State Board, recognizing the complexity of this emerging field of science, tasked the Expert Panel with considering appropriate methodologies for monitoring, managing, and evaluation of nitrate and soil science that will support reasonable long-term nitrate management controls. We think it is critical that the Expert Panel assess these complex issues and determine how to fairly allocate the farmers' burden of monitoring, reporting and implementation of management practices. Such long term control methods must reflect the reality which the State Board Proposed Order recognized: "that groundwater monitoring is an inexact measure of compliance. Nitrate measured in groundwater now often reflects historic, not current, practices. Further, trends must be measured over the course of a number of years, often decades." Therefore, equitably allocating the monitoring, reporting and management burden will ensure the imposed responsibility is reasonably related to the benefit of compliance determinations." [Pg. 25]



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There are several methods and formulas now under consideration to calculate nitrate risk, nitrate rate, nitrate ratio and comparatively estimating nitrogen plant uptake, soil assimilation capacity, atmospheric/photo/vegetative degradation, field runoff, and percolation to groundwater.

This emerging field of science and regulation was artfully acknowledged in several portions of the State Board's Proposed Order. Six examples are set forth below, and we agree with those general statements.

a. "We do not disagree with Agricultural Petitioners' position that groundwater monitoring is an inexact measure of compliance. Nitrate measured in the groundwater now may reflect historic practices, not current practices. Further, in some areas – but not all – trends must be measured over the course of a number of years, often decades, so that even annual data over the course of the five-year term of the Agricultural Order may reveal little about whether concurrently implemented management practices are leading to improvements. We will task the Expert Panel with considering appropriate structures and methodologies for monitoring that may support long-term nitrate control efforts." (Pg. 25)

b. "We will task the Expert Panel with developing or endorsing a methodology for determining when a particular farm poses a risk to loading nitrates to groundwater." (Pg. 34)

- "We agree with the Agricultural Petitioners that it is at best an estimate of c. the nutrient balance ratio at a given farm and of the nitrate load leaving the farm. Crop nitrogen uptake values are not widely available and will require crop substitution, making the accuracy of the balance ratio questionable. An accurate calculation of the load discharged to surface water and groundwater requires a much more nuanced calculation than simply comparing the nitrogen applied to the fields and the amount expected to be taken up by the crops. Without reliable data on annual nitrate loading to groundwater in the first place, estimates of annual reductions in that loading are also unreliable. For these reasons, while we will continue to require each discharger to engage in this exercise for selfevaluation purposes, we will strike the requirement in the Agricultural Order to report this information to the Central Coast Water Board. We do not see the required information as appropriate for wide-scale reporting." (Pg. 38)
 - "We will ask the Expert Panel to develop a template for nutrient balance determinations. We will also ask the Expert Panel to consider the best approaches to evaluating nitrate discharges to groundwater. For example,

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e.

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a more promising approach may be to require dischargers to do a soil profile analysis designed to determine the extent to which nitrogen applied to the fields moves below the root zone, a measure of excessive application. In the interim, while we see a benefit to the dischargers calculating nitrogen balance ratios and estimating loading to groundwater for purposes of self-evaluation, we see little benefit to the Central Coast Water Board in collecting data upon which it cannot draw any reliable conclusions." (Pgs. 38-39)

"Similarly, the target ratios advocated by the Central Coast Water Board and the Keepers are approximations of a complex relationship between nitrogen application and crop uptake. We are keenly aware of the benefit and necessity of providing targets to encourage and measure progress in reducing pollutant discharges in agricultural regulatory programs. However, because of the speculative and overly simplistic nature of both the calculated ratios relevant to each farm and of the target ratios, we see little to be gained from asking the dischargers to even "make progress toward" these particular targets. As such, we disagree with the Keepers that the nitrogen balance ratio targets are in fact firm and measurable requirements. We will ask the Expert Panel to determine whether the targets can be reformulated to support some firm and measurable requirement or if an alternative approach, such as soil profile monitoring or monitoring of a regional network of monitoring wells would be preferable." (Pgs. 41-42)

"We will make some revisions to the nutrient management requirements of the Agricultural Order. These revisions reflect our best judgment as to temporary measures required to keep work on this important public health and environmental issue moving forward, while we await the results of the more extensive analysis from the Expert Panel. We expect the Expert Panel to propose a comprehensive, consistent approach that will inform agricultural regulatory programs statewide. However, the work on nitrates in groundwater is too critical to await those results, and we support the Central Coast Water Board's efforts to address the issue in the interim, with the revisions directed below." (Pg. 33)

We certainly agree with the above stated "cautions" that the State Board appropriately expressed and, based thereon, we suggest each of these nitrate topics be temporarily set aside from this Order pending their review by the Expert Panel.



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4. Other Issues

We support several additional provisions addressed by the State Board in the tentative decision.

a. Containment ponds. (Provision 33) – Pg. 22

We support the staying of Provision 33 on the grounds that the plain language of the provision is inconsistent with the Regional Board's stated intentions; we support the Proposed Order's modifications that make Provision 33 consistent with its intended purpose.

"Dischargers who utilize containment structures (such as retention ponds or reservoirs) to achieve treatment or control of the discharge of wastes must manage, construct, or maintain such containment structures to avoid <u>minimize</u> percolation of waste to groundwater that causes or contributes to exceedances of water quality standards, and to minimize surface water overflows that have the potential to impair water quality. <u>Dischargers</u> <u>may choose the method of compliance appropriate for the individual</u> <u>farm, which may include, but are not limited to:</u>

- implementing chemical treatment (e.g., enzymes);
- implementing biological treatment (e.g., wood chips);
- recycling or reusing contained water to minimize infiltration or discharge of waste;
- minimizing volume of water in the containment structure to minimize percolation of waste;
- minimizing percolation of waste via a synthetic, concrete, clay, or low permeability soil liner." (Pg. 22)

b. Practice Effectiveness. (Provisions 44g and d, Pgs 22/23)

We support the State Board's two clarifications to Provision 44 that "practice effectiveness verification may rely on standard farming practices, visual inspections and recordkeeping," and to report only "the typical volume of discharges and when the discharge is typically present."

c. Annual groundwater monitoring. (Provision 51) – Pg. 26

We concur with the State Board's assessment that the benefits of annual groundwater monitoring for Tier 3 dischargers is unconvincing. As the State Board notes, once dischargers have conducted first-year monitoring of drinking water wells and irrigation wells, the primary purpose of detecting unhealthy levels of nitrates or evaluating the nitrogen content of irrigation water is accomplished. Accordingly, we support eliminating the annual groundwater



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monitoring requirement for Tier 3 dischargers after the first year of monitoring is complete. Nevertheless, we recognize the possibility that water quality may change over time, such that monitoring, albeit non-annual monitoring, may be appropriate for some Tier 3 dischargers. In these cases, we believe non-annual monitoring strikes a more appropriate balance between ensuring water quality among Tier 3 dischargers and the burden of monitoring. Accordingly, we urge the State Board to reconsider amending Provision 51 of the Agricultural Order and Sections A. 1-5 and B of Part of MRP Orders 1, 2, and 3.

More generally, however, we believe the groundwater program should be a tailored program directed to those areas with actual specific groundwater problems. There are many different groundwater problems each with different causes, lead agencies, statutory direction, jurisdictional limitations, problematic sources and management strategies. Groundwater is many times more complex, evasive, costly, difficult to determine problem sources, and harder to regulate and administer than surface water.

d. Photo Monitoring. (Provision 69)

We support the State Board's directive to Regional Board's Executive Officer to further revise its photo monitoring protocol by specifically allowing aerial photography and elevated vantage photography, and to establish an appropriate methodology for monitoring, documenting, and reporting these alternatives. Consistent with this directive, we believe the forthcoming methodologies would promote cost-effective monitoring, documentation, and reporting procedures.

> "By October June 1, 2012, 2014, and by June 1, 2017, and every four years thereafter, Tier 2 and Tier 3 Dischargers with farms/ranches adjacent to or containing a waterbody identified on the 2010 List of Impaired Waterbodies as impaired for temperature, turbidity, or sediment (identified in Table 1) must conduct photo monitoring per MRP Order No. R3-2012-0011-02 and MRP Order No. R3-2012-0011-03, respectively. Photo monitoring must document the condition of perennial, intermittent, or ephemeral streams and riparian and wetland area habitat, and demonstrate compliance with Basin Plan erosion and sedimentation requirements (see Part F. 80 of this Order), including the presence of bare soil vulnerable to erosion and relevant management practices and/or treatment and control measures implemented to address impairments. Aerial photography and photography from an elevated vantage point are permitted methodologies for photo monitoring. Photo documentation must be submitted electronically, in a format specified by the Executive Officer." (Pg. 28)



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e. Modified Growers Obligation. (Provision 82)

The amendment to Provision 82 of the Proposed Order seeks to find a balance between the State Board's efforts to control discharge and guarantee the effectiveness of such efforts. We support the proposed amendment to Provision 82 and commend the State Board for taking a balanced approach. The amendment to Provision 82 provides that if initial implemented management practices have not been effective in reducing pollutant discharges, the discharger is nevertheless in compliance with Provisions 84-87 of the Proposed Order if the discharger has engaged in good faith to implement more stringent discharge practices. We further support this amendment because it is consistent with the previous position and testimony of the Regional Board to not take enforcement action against a discharger that is implementing and improving management practices to address discharges impacting water quality.

f. **Annual Compliance Form.** (Provision 67)

Under the 2012 Conditional Waiver, certain farms owned by Ocean Mist Farms and RC Farms were classified as Tier 2 farms because Ocean Mist Farms and RC Farms grow certain vegetables, which require the use of nitrate fertilization. Therefore, Provision 67 and other similar provisions would require these farms to "determine nitrate loading" and report "risk" per such calculations. These provisions and others were a major point of controversy and caused confusion as to how such calculations would be made. Further, there was considerable confusion in the field regarding the Stay Order and the requirements under the Annual Compliance Form. Some of this confusion was the result of the inter-relationship between the various paragraphs of the previous orders. This confusion was further compounded by the "Annual Compliance Form Instruction" distributed to growers.

However, the Proposed Order sufficiently addresses these concerns and we support the amendments as described in the Proposed Order. Implementing these amendments will provide needed clarity for growers as to the requirements of the Annual Compliance Form.

Dale Huss/lg Dale Huss OCEAN MIST FARMS

WJT:lmg

Ocean Mist cc: **RC** Farms

Sincerely,

Wmf Thomas/G William J. Thomas

for BEST BEST & KRIEGER LLP

Dennis Sites / lg

RC FARMS