



Air Pollution Control Board  
Brian P. Bilbray District 1  
Dianne Jacob District 2  
Pamela Slater District 3  
Leon L. Williams District 4  
John MacDonald District 5

Air Pollution Control Officer  
R. J. Sommerville

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**NOTICE OF WORKSHOP  
FOR DISCUSSION OF A PROPOSED AMENDMENT TO  
RULE 67.10 - KELP PROCESSING AND BIO-POLYMER  
MANUFACTURING OPERATIONS**

The San Diego County Air Pollution Control District will hold a public meeting to consider a proposed amendment to Rule 67.10 - Kelp Processing and Bio-Polymer Manufacturing Operations. Comments regarding the proposed amended rule may be submitted in writing before, or made at the workshop, which is scheduled as follows:

**DATE:** Tuesday, August 24, 1993  
**TIME:** 9:00 a.m.  
**PLACE:** San Diego Air Pollution Control District  
Conference Room 139  
9150 Chesapeake Drive  
San Diego, CA 92123

San Diego County is a severe nonattainment area for both the federal and state ambient air quality standards for ozone. Volatile organic compounds (VOCs) are ozone precursors. The 1990 Federal Clean Air Act Amendments (FCAA) require that all rules controlling ozone precursor emissions from major VOC sources (i.e., sources emitting more than 25 tons per year) in severe ozone non-attainment areas apply a degree of emission control which reflects reasonably available control technology (RACT).

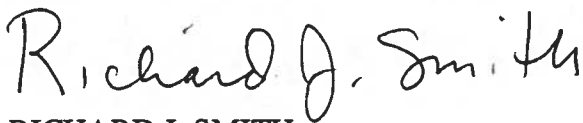
Rule 67.10 controls emissions of VOCs from kelp processing and bio-polymer manufacturing operations. A facility in San Diego County subject to this rule is a major source of VOC emissions. The proposed changes in Rule 67.10 will specify RACT requirements for fugitive emissions from kelp processing and bio-polymer manufacturing operations. In addition, the amended rule will address previously exempt pilot plant operations emitting more than 25 tons per year of VOC's. Specifically, amended Rule 67.10 will:

- Redefine "fugitive liquid leak" as a leak with a rate in excess of three drops per minute.
- Define a "fugitive vapor leak" as a leak of VOCs that results in a concentration in air in excess of 10,000 ppm as methane.
- Revise the VOC definition to be consistent with the latest EPA guidelines.
- Require emissions of VOCs from driers in pilot plants to be reduced by 95% by weight.
- Prohibit fugitive liquid leaks from pilot plant equipment, in addition to kelp processing and bio-polymer manufacturing lines (excluding presses).

**OVER**

- Prohibit fugitive vapor leaks from kelp processing and bio-polymer manufacturing operations and from pilot plant facilities.
- Specify operating parameters for certain equipment in pilot plants.
- Require monthly recordkeeping for pilot plant facilities exempt from the rule standards.
- Update test methods used to determine compliance with the rule and include a test method for fugitive vapor leaks.
- Add a compliance schedule for pilot plants which must meet the new VOC emission control requirements.
- Exempt from Rule 66 requirements any operations subject to, or exempt from, Rule 67.10.

If you would like a copy of the proposed amended Rule 67.10, please call Juanita Ogata at (619) 694-8851. If you have any questions concerning the proposal, please call Natalie Zlotin at (619) 694-3312 or me at (619) 694-3303.



RICHARD J. SMITH  
Deputy Director

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# AIR POLLUTION CONTROL DISTRICT

## PROPOSED AMENDMENTS TO RULE 67.10

### RULE 67.10. KELP PROCESSING AND BIO-POLYMER MANUFACTURING OPERATIONS

#### (a) APPLICABILITY

(1) Except as otherwise provided in Section (b), this rule is applicable to any kelp processing or bio-polymer manufacturing line, or associated pilot plant facility, where volatile organic compounds (VOCs) are used as reactants, solvents or extractants or used to separate or purify the products of kelp processing or bio-polymer manufacturing line operations.

(2) Kelp processing and bio-polymer manufacturing operations subject to, or exempt from, this rule shall not be subject to Rule 66.

#### (b) EXEMPTIONS

The provisions of Sections (d), (e), and (g) of this ~~This rule shall not be applicable~~  
apply to:

(1) Any kelp processing or bio-polymer manufacturing line where emissions of VOC's, at the maximum design capacity of the line, are no greater than 15 pounds in any one day, provided total emissions of VOC's from all kelp processing or bio-polymer manufacturing equipment located at a stationary source are no greater than 100 pounds in a day. It shall be the responsibility of a person claiming this exemption to maintain daily records necessary for the District to determine the applicability of such an exemption; and

(2) Fuel oil; and

(3) Laboratory ~~and pilot plant~~ facilities used exclusively for research and development provided that monthly records are kept of the usage of VOC containing materials ; and

(4) Pilot plant facilities used exclusively for research and development provided that monthly records are kept of the usage of VOC containing materials, and provided that total uncontrolled VOC emissions from all such pilot plant facilities at a stationary source are less than 25 tons per calendar year. It shall be the responsibility of a person claiming this exemption to determine the facility's yearly VOC emissions from monthly usage records of VOC-containing materials or by the use of other emissions inventory methods approved by the Air Pollution Control Officer; and

~~(4)~~(5) Any low volatility organic compound which has a normal boiling point of 185°C or more. Any person claiming this exemption shall maintain written records which substantiate the claim such as applicable manufacturer's specifications or, for pure compounds, standard reference texts.

All records pursuant to Subsections (b)(1), (b)(3), ~~and (b)(4)~~ and ~~(b)(5)~~ shall be retained on site for at least two years and shall be submitted to the District upon request.

(c) **DEFINITIONS**

For the purpose of this rule the following definitions shall apply:

(1) **"Approved Air Pollution Control Device"** means a single piece of equipment or combination of pieces of equipment which is designed to reduce the emissions of air contaminants and which is approved, in writing, by the Air Pollution Control Officer.

(2) **"Bio-polymer Manufacturing Line"** means one or more pieces of equipment linked by a process flow in which a bio-polymer or any of its precursors is dried, extracted, filtered, mixed or reacted with any VOC where the end product cannot be produced if any piece of equipment is removed or not functioning.

~~(2)~~(3) **"Drier"** means a device used to remove water and/or VOC's from a material by applying heat, by flowing unsaturated air, or by subjecting the material to vacuum, or any combination thereof.

(4) **"Exempt Compound"** means any of the following compounds or classes of compounds: 1,1,1-trichloroethane, methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trifluoromethane (HFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), chloropentafluoroethane (CFC-115), chlorodifluoromethane (HCFC-22), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), tetrafluoroethane (HFC-134a), and chlorodifluoroethane (HCFC-142b); 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); and the following four classes of perfluorocarbon (PFC) compounds:

(i) cyclic, branched, or linear, completely fluorinated alkanes;

(ii) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

(iii) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

(iv) sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

~~(3)(5)~~ **"Fugitive Liquid Leak"** means a visible leak of liquid, containing greater than 10 percent by weight VOC, at a rate in excess of three drops per minute, or a visible mist sufficient to cause a continuous stream or a pressurized spray of liquid droplets. An exposed process stream containing VOC moving from one piece of process equipment to another or within a piece of process equipment is not a fugitive liquid leak.

(6) "Fugitive Vapor Leak" means a concentration of total VOC, in air, greater than 10,000 ppm by volume, above background, measured as methane. Emissions of VOC occurring during manual transfer of materials from a press to a drier are not fugitive vapor leaks provided the containers used to transfer the materials are covered.

~~(4)(7)~~ **"Incorporator"** means a device in which a solid and a VOC introduced into the device are mixed, where it is not intended that the VOC chemically modify the solid.

~~(5)(8)~~ **"Kelp Processing Line"** means one or more pieces of equipment linked by a process flow in which kelp or any of its derivatives is dried, extracted, filtered, mixed, or reacted with any VOC where the end product cannot be produced if any piece of equipment is removed or not functioning.

(9) "Laboratory" means an operation which uses bench-scale equipment for the sole purpose of conducting studies or tests to develop a new or improved product.

(10) "Pilot Plant" means a small scale kelp processing or bio-polymer manufacturing line constructed to simulate as nearly as possible future manufacturing conditions for a new product being developed.

~~(6)(11)~~ **"Press"** means a mechanical device for separating liquids from solids.

~~(7)(12)~~ **"Reactor"** means a device in which a chemical reaction takes place between two or more materials introduced into the device, where a VOC chemically modifies one or more materials.

(13) "Research and Development" means kelp and/or bio-polymer processing operations, including operations performed for purposes of testing and quality control, which are not used for production purposes to produce a deliverable product or service, other than the first-article product or service.

~~(8) "Bio-polymer Manufacturing Line" means one or more pieces of equipment linked by a process flow in which a bio-polymer or any of its precursors is dried, extracted, filtered, mixed or reacted with any VOC where the end product cannot be produced if any piece of equipment is removed or not functioning.~~

(14) "Spent Pot" means the container where the liquid discharged from a press is collected before distillation.

(9)(15) "Stationary Source" means the same as is defined in Rule 20.1.

(10)(16) "Stationary Storage Tank" means any tank, reservoir, or other container used to store, but not transport, VOC. Stationary storage tanks do not include tanks used to separate solids from process streams.

(11)(17) "Still" means a device designed to separate, in whole or in part, the constituents of a mixture of miscible liquids by heating the liquid mixture and preferentially condensing and collecting the vapors.

(12) ~~"Volatile Organic Compound" (VOC) means any compound containing at least one atom of carbon, except: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, methylene chloride, 1,1,1-trichloroethane, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), chlorodifluoromethane (CFC-22), trifluoromethane (CFC-23), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115), dichlorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), tetrafluoroethane (HFC-134a) and chlorodifluoroethane (HCFC-142b).~~

(18) "Uncontrolled VOC Emissions" means VOC emissions from pilot plant facilities before the application of an approved air pollution control device or process modifications.

(19) "Volatile Organic Compound (VOC)" means any volatile compound containing at least one atom of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds which may be emitted to the atmosphere during operations subject to any provision of this rule.

(d) **STANDARDS**

(1) A person shall not operate any kelp processing or bio-polymer manufacturing line unless all aboveground stationary storage tanks, having capacities greater than 20,000 gallons, containing VOC used in conjunction with the line are equipped with pressure-vacuum relief valves which have minimum relief settings of 5 oz/sq. in. (pressure) and 0.5 oz/sq. in. (vacuum). Tanks with capacities greater than 50,000 gallons shall have minimum relief settings of 0.5 oz/sq. in. (pressure) and 0.5 oz/sq. in. (vacuum).

(2) A person shall not operate any kelp processing or bio-polymer manufacturing line or pilot plant facility unless all piping, valves, fittings, tanks, stills, process equipment (excluding presses) and other devices used to transport, store, react or process VOC or materials containing VOC are free of fugitive liquid leaks. A fugitive liquid leak from incorporators shall only be considered a violation of this rule if the liquid contains more than 50 percent by weight of VOC.

Repair of a fugitive liquid leak may be delayed until the leaking equipment is next scheduled to be off-line or a production cycle is completed, whichever occurs first, provided:

- (i) The time, date and location of the leak are recorded promptly following detection;
- (ii) All practicable steps to minimize the magnitude of the leak are taken as soon as possible following detection;
- (iii) The repair is made within 72 hours of detection; and
- (iv) The record required by Subsection (d)(2)(i) is made available to the Air Pollution Control Officer upon request.

An unrecorded leak shall be considered a violation of this rule. ~~Effective May 21, 1992, any Any part of a kelp processing or bio-polymer operating line which becomes subject to this subsection due to change in the definition (e)(3) shall be in compliance with Subsection (d)(2).~~

This subsection shall not apply to liquid losses occurring during maintenance, repair or back flushing of process and storage equipment.

(3) A person shall not operate any kelp processing or bio-polymer manufacturing line or pilot plant facility unless each in-process tank for material containing VOC is equipped with an apparatus or cover which completely covers the tank but not necessarily provides a vapor tight seal, and which is closed or in place at all times except as necessary to meet operating requirements or for maintenance.

(4) A person shall not operate any bio-polymer manufacturing line unless the total emissions of VOC's to the atmosphere from all driers used in conjunction with all lines are reduced ~~by means of a control device~~ by at least 95 percent by weight by means of an approved air pollution control device. This requirement shall not apply to driers whose exhaust contains VOC at an average concentration of 200 ppmv or less over a complete batch or cycle. Emissions of VOC occurring during the transfer of materials containing VOC into or out of a drier shall be included when determining emissions from that drier.

(5) A person shall not operate a kelp processing line unless the total emissions of VOC to the atmosphere from all driers and reactors used in conjunction with all affected lines are reduced by means of a an approved air pollution control device as follows:

- (i) For kelp processing lines or portions of lines where the primary VOC being emitted is not a process reactant or byproduct of a process reaction, by at least 95 percent by weight.
- (ii) For kelp processing lines or portions of lines where the primary VOC being emitted is a process reactant or byproduct of a process reaction, by at least 80 percent by weight.

Emissions of VOC occurring during the transfer of materials containing VOC into or out of a drier or reactor shall be included when determining emissions from the drier or reactor.

(6) A person shall not operate any pilot plant facility unless the total emissions of VOC's to the atmosphere from all driers and reactors used in conjunction with all lines are reduced by at least 95 percent by weight by means of an approved air pollution control device. This requirement shall not apply to driers whose exhaust contains VOC at an average concentration of 200 ppmv or less over a complete batch or cycle. Emissions of VOC occurring during the pneumatic transfer of materials containing VOC into or out of a drier shall be included when determining emissions from that drier. Emissions of VOC occurring during manual transfer of materials containing VOC into or out of a drier shall not be included when determining emissions from that drier, provided the containers used to transfer the materials are covered.

~~(6)~~(7) Equipment, devices and systems in use to transport and control VOC emissions pursuant to Subsections (d)(4), ~~and (d)(5) and (d)(6)~~ shall be maintained so as to be free of visible holes, breaks, openings or separations between adjoining components, that are not consistent with their design and intended operating function, from which fugitive VOC vapors would be emitted to the atmosphere.

~~(7)~~(8) An operation and maintenance program shall be submitted to the Air Pollution Control Officer for approval for new equipment required by Subsections (d)(4), ~~and (d)(5) and (d)(6)~~. An existing operation and maintenance program that has been approved by the Air Pollution Control Officer need not be resubmitted for approval as a result of amendments to this rule unless such approved operation and maintenance program is revised. Each program shall be implemented and maintained on approval of the Air Pollution Control Officer.

Each operation and maintenance program submitted for approval shall:

(i) Maintain the VOC emission reduction efficiency required under Subsections (d)(4), ~~and (d)(5) and (d)(6)~~; and

(ii) Identify and maintain all key system operating parameters. Key system operating parameters are those parameters necessary to maintain the VOC emission reduction efficiency required under Subsections (d)(4), ~~and (d)(5) and (d)(6)~~; and

(iii) Include proposed inspection schedules, anticipated ongoing maintenance steps and proposed daily recordkeeping practices regarding the key system operating parameters.



Each program will apply only to the equipment necessary to meet the requirements of Subsections (d)(4), ~~and (d)(5) and (d)(6)~~ and need not include inspection, maintenance or recordkeeping relevant to compliance with Subsection (d)(7).

~~(8)(9)~~ Compliance with Subsections (d)(4), ~~and (d)(5) and (d)(6)~~ shall be determined based upon tests or observations of the process equipment and air pollution control system during a period of at least 16 hours, but not more than 24 hours. Affirmative determination of compliance may be demonstrated through tests or observations for a shorter period of time provided such period of time has been determined appropriate by the Air Pollution Control Officer in writing. Such a shorter test period shall not be the basis for determining non-compliance.

(10) A person shall not operate a pilot plant facility unless:

(i) There are no fugitive vapor leaks from pumps, spent pots, and piping, nor from ducting associated with the emission control system or associated with material transfer to a press and drier; and

(ii) Pumps are equipped with dual mechanical seals; and

(iii) Spent pots are equipped with vent condensers which maintain a vapor exit temperature no greater than 80°F (27°C); and

(iv) Liquid process mixtures containing VOC's are maintained at a temperature not higher than 110°F (43°C) before entering a press.

(11) A person shall not operate any kelp processing or bio-polymer manufacturing line unless there are no fugitive vapor leaks from pumps, spent pots, and piping, nor from ducting associated with the emission control system or associated with material transfer to a press and drier.

**(e) RECORDKEEPING**

Any person subject to the requirements of Section (d) of this rule shall maintain the following records:

(1) A current list of VOC's, subject to this rule that are in use, and

(2) Daily records of process and key system operating parameters and maintenance performed pursuant to Subsections (d)(4), (d)(5), ~~and (d)(7)~~ (d)(6) and (d)(8).

All records shall be retained on site for at least two years, and shall be made available to the District upon request.

(f) **VOC TEST METHODS**

(1) The VOC content of fluids subject to Subsections ~~(c)(3)(5)~~ and ~~(d)(2)~~ of this rule shall be determined in accordance with ASTM Standard Recommended Practices for General Gas Chromatography Procedures, E 260-73, General Techniques of Infrared Quantitative Analysis, E 168-67, or General Techniques of Ultraviolet Quantitative Analysis, E 169-63.

(2) The determination of the normal boiling point of an organic compound pursuant to Subsection ~~(b)(4)(5)~~ shall be conducted in accordance with ASTM Standard Test Method for Distillation Range of Volatile Organic Liquids, D 1078-86 or, for pure compounds, may be made from technical data contained in standard reference texts.

(3) Measurements of VOC emissions subject to Subsections ~~(d)(4)~~, ~~(d)(5)~~, and ~~(d)(6)~~ and ~~(d)(8)~~ of this rule shall be conducted in accordance with EPA Test Methods 18 and 25 or 25A (40 CFR, Appendix A) and ~~EPA Guidelines for Developing Capture Efficiency Protocols as they existed on May 21, 1991~~ exist on (date of adoption) and in accordance with a protocol approved by the Air Pollution Control Officer. An alternative method to EPA Test Method 18 and to EPA Guidelines for Developing Capture Efficiency Protocols may be used provided such method has been approved, in advance, by the Air Pollution Control Officer and U. S. Environmental Protection Agency for the specific processes being tested. Subsequent to the initial compliance demonstration period, appropriate parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(4) Measurements of fugitive vapor leaks pursuant to Subsections ~~(c)(6)~~, and ~~(d)(10)(i)~~, and ~~(d)(11)~~ of this rule shall be conducted in accordance with EPA Test Method 21 using an appropriate analyzer calibrated with methane at a distance of 1 cm or less from the source.

(g) **COMPLIANCE SCHEDULE**

(1) Any person operating an existing pilot plant facility which is subject to the provisions of Section (d) shall meet the following increments of progress:

(i) By (three months after date of adoption), submit to the Air Pollution Control Officer an application for Authority to Construct and Permit to Operate the equipment specified in Subsections ~~(d)(6)~~ and ~~(d)(10)~~.

(ii) By (six months after date of adoption), demonstrate compliance with Subsection ~~(d)(10)~~.

(iii) By April 1, 1994, demonstrate compliance with Subsection (d)(6).

(2) Any person installing a new pilot plant facility which is subject to the provisions of Section (d) shall have equipment necessary to comply with the provisions of Section (d) installed and operating upon issuance of a startup authorization and shall demonstrate compliance within 180 days of startup.

(3) Any person operating a kelp processing or bio-polymer manufacturing line which is subject to the provisions of Section (d)(11) shall demonstrate compliance with that subsection by *(six months after date of adoption)*.



Air Pollution Control Board  
Brian P. Bilbray District 1  
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Air Pollution Control Officer  
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**NOTICE OF WORKSHOP  
FOR DISCUSSION OF A PROPOSED AMENDMENT TO  
RULE 67.10 - KELP PROCESSING AND BIO-POLYMER  
MANUFACTURING OPERATIONS**

The San Diego County Air Pollution Control District will hold a public meeting to consider a proposed amendment to Rule 67.10 - Kelp Processing and Bio-Polymer Manufacturing Operations. Comments regarding the proposed amended rule may be submitted in writing before, or made at the workshop, which is scheduled as follows:

**DATE:** November 24, 1992  
**TIME:** 9:00 a.m.  
**PLACE:** San Diego Air Pollution Control District  
Administrative Conference Room  
9150 Chesapeake Drive  
San Diego, CA 92123

The proposed change will exempt operations subject to Rule 67.10 from Rule 66 requirements. Rule 66 - Organic Solvents, is intended to regulate sources emitting organic materials for which there is no source-specific rule. Operations subject to Rule 67.10 are regulated by a specific set of rules and, therefore, Rule 66 requirements are not intended to be applicable.

If you would like a copy of the proposed amended Rule 67.10, please call Juanita Ogata at (619)495-8851. If you have any questions concerning the proposal, please call Natalie Zlotin at (619)694-3312 or me at (619)694-3303.

**RICHARD J. SMITH**  
Deputy Director

RJSm:jl

## AIR POLLUTION CONTROL DISTRICT

Rule 67.10, Section (a) is amended to read as follows:

### **RULE 67.10. KELP PROCESSING AND BIO-POLYMER MANUFACTURING OPERATIONS**

#### **(a) APPLICABILITY**

(1) Except as otherwise provided in Section (b), this rule is applicable to any kelp processing or bio-polymer manufacturing line where volatile organic compounds (VOC's) are used as reactants, solvers or extractants or used to separate or purify the products of kelp processing or bio-polymer manufacturing line operations.

(2) Kelp processing and bio-polymer manufacturing operations subject to this rule shall not be subject to Rule 66.