

**AIR POLLUTION CONTROL DISTRICT
SAN DIEGO COUNTY**

WORKSHOP REPORT

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

A workshop notice was mailed to the one company known to be involved in Kelp Processing and Bio-Polymer Manufacturing Operations in San Diego County. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

Workshops were held on November 24, 1992 and August 24, 1993, and were attended by five people. The comments and District responses are as follows:

1. WORKSHOP COMMENT:

The exemption for laboratory facilities in Subsection (b)(3) should not specify that these operations must be "used exclusively for research and development" since quality control laboratories are also part of these operations. The word "exclusively" should be deleted.

DISTRICT RESPONSE:

The District disagrees. The intent of the rule is to exempt laboratory facilities used solely for research and development. Quality control laboratories are already included in this exemption since "research and development" is defined in Subsection (c)(13) as "operations performed for purposes of testing and quality control".

2. WORKSHOP COMMENT:

The exemption for pilot plant facilities should not specify that these operations must be "used exclusively for research and development". The word "exclusively" should be deleted.

DISTRICT RESPONSE:

Pilot plant facilities are subject to the revised rule provisions. Therefore, the exemption for pilot plants in Subsection (b)(3) has been deleted.

3. WORKSHOP COMMENT:

Subsection (b)(4) should be modified to include engineering calculations as a method of determining a facility's yearly VOC emissions.

DISTRICT RESPONSE:

Subsection (b)(4) which specifically addressed pilot plant emissions has been deleted. Since the amended rule provisions apply to pilot plant facilities in a similar manner as to manufacturing lines, the subsection was considered unnecessary.

4. **WORKSHOP COMMENT:**

Subsection (b)(5) should read "...a normal boiling point of 185°C or greater."

DISTRICT RESPONSE:

Subsection (b)(5) [which is now (b)(4)] has been modified as suggested.

5. **WORKSHOP COMMENT:**

What is the origin of the "three drops per minute" criteria for the fugitive liquid leak definition in Subsection (c)(5)?

DISTRICT RESPONSE:

The liquid leak definition was originally used for refinery operations based on experience in that industry. The criteria was set at three drops per minute as a result of a mutual agreement that this level was adequate to detect a leak. Later it was applied to other industries such as pharmaceutical and synthetic organic chemical manufacturing, and is one of the RACT requirements for fugitive emission controls. The District has this same definition in other VOC source specific rules.

6. **WORKSHOP COMMENT:**

Is there any similarity between the equipment in the pharmaceutical industry or other industry where the three drops per minute criteria for liquid leaks are applicable and the presses in the kelp processing and bio-polymer manufacturing industries?

DISTRICT RESPONSE:

Yes. The fugitive liquid leak criteria is applied to other industries within the same Standard Industrial Classification (SIC) code (2833) as Kelco. Batch processes in industries such as pharmaceutical, include batch filtration equipment similar to presses in the kelp processing and bio-polymer manufacturing industries. These other industries have not experienced difficulties in complying with the fugitive liquid leak criteria for the equipment used for slurry filtration.

7. **WORKSHOP COMMENT:**

The existing rule excludes presses from fugitive liquid leak requirements. Will these requirements be extended to presses in the future?

DISTRICT RESPONSE:

The proposed rule imposes the fugitive liquid leak requirements on presses. As stated above, similar filtration equipment in other industries within the same SIC category are currently complying with these requirements.

8. **WORKSHOP COMMENT:**

Definition (c)(6) for "fugitive vapor leak" should exclude VOC emissions occurring during material transfer from the incorporators into the presses.

DISTRICT RESPONSE:

Definition (c)(6) for "fugitive vapor leak" has been deleted.

9. WORKSHOP COMMENT:

Subsection (f)(4) specifies that fugitive vapor leaks will be measured at a distance of 1 cm or less from the source using EPA Test Method 21. The distance criteria for measuring fugitive vapor leaks should be deleted since Test Method 21 does not specify a distance.

DISTRICT RESPONSE:

This test method is not needed anymore and has been deleted.

10. WORKSHOP COMMENT:

The provisions of Section (d) in the existing rule should be sufficient to address fugitive leaks in pilot plants since Subsection (d)(2) includes provisions for fugitive liquid leaks and timing on repairs.

DISTRICT RESPONSE:

The District disagrees. Subsection (d)(10) addresses fugitive leak control and emission reduction measures. These measures are necessary to reach the 81% emission reduction level necessary to comply with federal EPA RACT requirements. Without including these provisions in the rule, the District would have no authority to require that equipment be fitted as specified in proposed Subsection (d)(10). Therefore, the District would be unable to verify that 81% emission reduction is achieved.

11. WORKSHOP COMMENT:

Definition (c)(9) for "laboratory" should be revised to specify the scale of equipment used in laboratory facilities.

DISTRICT RESPONSE:

The District agrees. Definition (c)(9) has been revised as suggested.

12. WORKSHOP COMMENT:

Definition (c)(10) for "pilot plant" should be revised to specify that pilot plant facilities use small-scale or intermediate-scale process equipment for research and development.

DISTRICT RESPONSE:

Definition (c)(10) has been revised. However, it does not limit pilot plant operations to research and development only since District experience shows that pilot plants are sometimes used for manufacturing of salable products.

13. WORKSHOP COMMENT:

Definition (c)(13) for "Research and Development" should be revised. A suggested definition is "basic research, new product development, process improvement and optimization, production of market evaluation samples (regardless of whether or not a consideration is received therefor), confirming the feasibility of a proposed process, and process scale-up."

DISTRICT RESPONSE:

The District disagrees. This proposed definition would be contrary to the rule intent to control operations emitting more than 10 lb per day of VOC's. The District believes that the term "production of market evaluation samples" is very general and subject to future misinterpretation because such production may result in significant VOC emissions.

14. WORKSHOP COMMENT:

Definition (c)(14) for "Spent Pot" should be modified to specify that VOC-containing liquid is collected in spent pots immediately after being discharged.

DISTRICT RESPONSE:

The definition for spent pot has been revised to reflect this.

15. WORKSHOP COMMENT:

Definition (c)(15) for "Stationary Source" refers to the definition in Rule 20.1 which in turn has a reference to offshore operations. This reference should be deleted.

DISTRICT RESPONSE:

Offshore operations in Rule 20.1 refer to offshore oil platforms. However, any VOC-emitting operations within the California Coastal Waters would be subject to regulation. This should have no effect on operations subject to Rule 67.10.

16. WORKSHOP COMMENT:

There are no reactors at the pilot plants. Therefore, reactors should not be included in the language of Subsection (d)(6).

DISTRICT RESPONSE:

The District originally included reactors in this provision to allow for the possibility of future pilot plants that may include reactors. It was stated during the workshop that pilot plants are expected to be used exclusively for research and development of bio-polymer operations which do not use reactors. Therefore, Subsection (d)(6) has been modified to exclude reactors.

17. WORKSHOP COMMENT:

The words "after filling and prior to discharge" should be added at the end of the paragraph in Subsection (d)(6).

DISTRICT RESPONSE:

Subsection (d)(6) has been revised accordingly.

18. WORKSHOP COMMENT:

The vapor exit temperature from the vent condensers specified in Subsection (d)(10)(iii) should be 110°F instead of 80°F.

DISTRICT RESPONSE:

The requirement for spent pot vent condensers in Subsection (d)(10)(iii) has been deleted.

19. WORKSHOP COMMENT:

Subsection (d)(10)(ii) should read "...immediately before entering a press."

DISTRICT RESPONSE:

The District disagrees. Subsection (d)(10)(ii) requires that the liquid process mixtures (slurry) be maintained at a temperature less than 115°F so as to reduce evaporative losses. The slurry is cooled and then travels to the press. Since there is no further cooling before the press, the same temperature requirement can be applied throughout the lines transferring slurry to the press.

20. ARB COMMENT:

The definition for "Research and Development" in Subsection (c)(13) should specify that the products from such operations are not to be delivered and/or sold.

DISTRICT RESPONSE:

The District agrees and has revised the definition to address this concern.

21. EPA COMMENT:

The source subject to Rule 67.10 is a major source of VOC emissions and must meet RACT requirements. RACT for a non-CTG source is defined as a level of control which achieves an overall reduction in uncontrolled VOC emissions of at least 81% by weight.

DISTRICT RESPONSE:

The proposed Rule 67.10 meets RACT requirements. The District believes that the level of control reflected in the proposed rule achieves an overall reduction in uncontrolled VOC emissions of at least 81% by weight. See supporting documentation in the Socioeconomic Impact Analysis.

COUNTY OF SAN DIEGO
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 (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, 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) Any low volatility organic compound which has a normal boiling point of 185°C or ~~more~~ greater. 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.

(5) Any temporary equipment installed in a pilot plant facility and resulting in an emissions increase not exceeding 10 pounds of VOC's per 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.

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), 1,1,1,2-tetrafluoroethane (HFC-134a), 1,1,2,2-tetrafluoroethane (HFC-134), chlorodifluoroethane (HCFC-142b), 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124), pentafluoroethane (HFC-125), 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. For the purposes of this rule, a liquid leak dropping into a capture system which is connected to an air pollution control device shall not be considered 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)~~(6) **"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.

(7) "In-Process Tank" means a tank, which is part of a kelp processing or bio-polymer manufacturing line or pilot plant facility and which is used to handle or transfer VOC-containing material. In-process tanks include spent pots, but exclude stationary storage tanks.

~~(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 Facility" means a facility an operation which uses bench-scale or small-scale equipment for the sole purpose of conducting studies or tests for the research, development or evaluation of a product, process, or service. to develop a new or improved product.

(10) "Pilot Plant Facility" means a facility which uses small-scale or intermediate-scale process equipment. 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 bench-scale or small-scale 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 salable 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 VOC-containing liquid is collected immediately after being discharged from a press. 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 or spent pots.

(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.

(18) **"Temporary Equipment"**, for the purposes of the exemption in Subsection (b)(5), means equipment located at a pilot plant facility for a period not exceeding 90 days in any consecutive twelve-month period.

(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, or within 72 hours of detection, 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; and

~~(iii) The repair is made within 72 hours of detection; and~~

~~(iv)~~(iii) 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 ~~(c)(3)~~ shall be in compliance with Subsection ~~(d)(2)~~. The provisions of this subsection shall become effective (thirty-six months after date of adoption) for presses in a kelp processing manufacturing line.

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 after filling and prior to discharge.

~~(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) and (d)(11). 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 (d)(11); and

(ii) Identify and maintain all key system operating parameters. Key system operating parameters are those parameters, such as temperature, pressure, and/or flow rate, necessary to maintain the VOC emission reduction efficiency required under Subsections (d)(4), ~~and (d)(5)~~, and (d)(6) and (d)(11); 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 (d)(11)~~ 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), and (d)(11)~~ 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 in writing by the Air Pollution Control Officer. Such a shorter test period shall not be the basis for determining non-compliance.

(10) A person shall not operate any kelp processing or bio-polymer manufacturing line or 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)(i) Pumps processing VOC-containing material are equipped with dual mechanical seals, or equipped with other leak-free technology that has been approved in writing by the Air Pollution Control Officer and provided that the equipment complies with Subsection (d)(2); and~~

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

~~(iv)(ii) Liquid process mixtures containing VOC's are maintained at a temperature not higher than 110°F (43°C) 115°F (46°C) before entering a press; and~~

(iii) Presses are equipped with sealing door covers.

(11) A person shall not operate any kelp processing or bio-polymer manufacturing line or pilot plant facility 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.~~

(i) The total uncontrolled emissions of VOC to the atmosphere from presses and spent pots are captured by an emission collection system and the captured emissions are transported to an air pollution control device; and

(ii) The combined emissions capture and control device efficiency is at least 75% by weight.

(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) For air pollution control equipment, maintain records sufficient to document compliance, such as daily 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), and (d)(11) which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.

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) 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), (d)(6), and ~~(d)(8)~~ (d)(11) 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 Test procedures shall be performed 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 bio-polymer manufacturing line or pilot plant facility which is subject to the provisions of Section (d) Subsections (d)(6), (d)(10) and/or (d)(11) shall meet the following increments of progress:

(i) By ~~(three six 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) and/or (d)(11)~~.

(ii) By ~~(six twelve months after date of adoption)~~, demonstrate compliance with Subsections (d)(6), (d)(10), and/or (d)(11).

~~(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.~~

(2) Any person operating an existing kelp processing line which is subject to the provisions of Subsections (d)(10) and/or (d)(11) shall meet the following increments of progress:

(i) By ~~(twelve 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)(10) and/or (d)(11).

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

(iii) By ~~(thirty-six months after date of adoption)~~, demonstrate compliance with Subsection (d)(11).

(3) Any person installing ~~operating~~ a new kelp processing or bio-polymer manufacturing line or pilot plant facility which is subject to the provisions of Section (d)(11) shall have equipment necessary to comply with the provisions of Section (d) installed and operating upon startup of the line or facility and shall demonstrate compliance with that subsection by ~~(six months after date of adoption)~~ within 180 days of startup.