RULE 67.10. KELP PROCESSING AND BIO-POLYMER MANUFACTURING OPERATIONS (Effective 1/30/85: Rev. Effective 5/21/91)

(a) APPLICABILITY

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, dissolvers or extractants or used to separate or purify the products of kelp processing or bio-polymer manufacturing line operations.

(b) EXEMPTIONS

This rule shall not be applicable 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) 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) shall be retained on site for at least two years and shall be submitted to the District upon request.

(c) DEFINITIONS

(1) **"Approved Air Pollution Control Device"** means a single piece of equipment or combination of pieces of equipment which is approved by the Air Pollution Control Officer.

(2) **"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.

(3) **"Fugitive Liquid Leak"** means a visible leak of liquid, containing greater than 10 percent by weight VOC, at a rate 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.

(4) **"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) **"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.

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

(7) **"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.

(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.

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

(10) **"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) **"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), dichorotrifluoroethane (HCFC-123), dichlorofluoroethane (HCFC-141b), tetrafluoroethane (HFC-134a) and chlorodifluoroethane (HCFC-142b).

(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 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 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 part of 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).

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 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. 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 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) Equipment, devices and systems in use to transport and control VOC emissions pursuant to Subsections (d)(4) and (d)(5) 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) 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). 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

(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

(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 need not include inspection, maintenance or recordkeeping relevant to compliance with Subsection (d)(7).

(8) Compliance with Subsections (d)(4) and (d)(5) 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. Such a shorter test period shall not be the basis for determining non-compliance.

(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).

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

The VOC content of fluids subject to Subsection (c)(3) 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.

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.

Measurements of VOC emissions subject to Subsections (d)(4), (d)(5), (d)(6) and (d)(8) of this rule shall be conducted in accordance with EPA Test Methods 18 and 25 (40 CFR, Appendix A) and EPA Guidelines for Developing Capture Efficiency Protocols as they existed on May 21, 1991. 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.