

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401**

**WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2002-0057
NPDES NO. CA0049344**

Waste Discharger Identification No. 3 405009001

for

**THE ABALONE FARM, INC.
SAN LUIS OBISPO COUNTY**

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds that:

PURPOSE OF ORDER

1. The Abalone Farm Inc. (hereafter Discharger) filed a Report of Waste Discharge on February 11, 2002, in accordance with Section 13376 of the California Water Code. The report was filed by the Discharger for authorization to continue discharge of untreated seawater to the Pacific Ocean.

FACILITY DESCRIPTION

2. The Discharger operates a land-based abalone farm near Cayucos, California, on land leased from John A. Alexander. Approximately 6.8 million gallons per day (MGD) of seawater is continuously pumped through abalone rearing tanks and discharged to the ocean via two outfall pipes. Solids are separated from the discharge with 3/8" slotted screens. The outfalls terminate over a 20 foot cliff in the intertidal zone and are located as follows: outfall 001 is 35°27'40" N. Latitude, 120°58'37" W. Longitude; outfall 002 is 35°27'40" N. Latitude, 120°58'36" W. Longitude. The Discharger's facilities are shown on Attachment A, included as part of this Order. Initial dilution for the shoreline discharge is assumed to be 1:1.
3. Sanitary wastewater from approximately 30 employees is discharged to an on-site septic tank leachfield system.
4. The federal Environmental Protection Agency and Board classify this discharge as a major discharge.

REGULATORY CONSIDERATIONS

5. **Ocean Plan** - The State Board most recently adopted the California Ocean Plan on December 3, 2001. The Ocean Plan contains water quality objectives and other requirements governing discharge to the Pacific Ocean.
6. **Basin Plan** - The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Board and approved on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters including the Pacific Ocean.
7. **Beneficial Uses** - Existing and anticipated beneficial uses in the vicinity of the discharge include:
 - a. Water contact recreation;
 - b. Non-contact water recreation, including aesthetic enjoyment;
 - c. Industrial water supply;
 - d. Navigation;
 - e. Marine habitat;
 - f. Shellfish harvesting;
 - g. Mariculture;
 - h. Ocean commercial and sport fishing;
 - i. Preservation of rare and endangered species; and
 - j. Wildlife habitat.

8. Shellfish harvesting uses exist wherever mussels, clams or oysters may be harvested for human consumption. To the knowledge of this Board, mussels are present at rocky shoreline locations near the discharge. Therefore, the shellfish harvesting bacterial limits specified in section C.2. of this Order apply at the shoreline.
9. **California Environmental Quality Act** - Waste discharge requirements for this discharge are exempt from the provisions of California Environmental Quality Act (Public Resources Code Section 21100 et seq.) in accordance with Section 13389 of the California Water Code.
10. **The Clean Water Enforcement and Pollution Prevention Act of 1999** - The Clean Water Enforcement and Pollution Prevention Act of 1999 (Senate Bill 709, also referred to as the "Migden Bill") became effective on January 1, 2000. This act requires the Regional Board to impose mandatory penalties for certain violations of NPDES permits.
11. **Anti-Backsliding** - 40 CFR Section 122.44(1) requires effluent limitations for reissued NPDES permits be at least as stringent as the previous permit, unless certain grounds for "backsliding" apply. All effluent limitations in the proposed Order are at least as stringent as the previous permit and comply with Anti-Backsliding provisions.
12. **Anti-Degradation** - The Regional Board has considered antidegradation pursuant to 40 CFR Section 131.12 and State Board Resolution No. 68-16, and finds that this discharge is consistent with those provisions.
13. Discharge of biota not indigenous to the ocean waters of the Central Coast Region may impair marine habitat.
14. **Monitoring Program** - Monitoring and Reporting Program No. R3-2002-0057 (MRP) is a part of this Order. The MRP requires regular monitoring of influent and effluent, reporting of results of exotic species inspections of the facility, and annual certification that chemicals for which regular sampling and analyses are not required are not present in the discharge.
15. **Annual Fee** - The Threat to Water Quality and Complexity rating for this discharge is III-c. The annual fee associated with this rating is currently \$400. This fee is subject to change.
16. A permit and the privilege to discharge waste into waters of the State is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations) and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the discharge
17. **Public Notification** - On March 6, 2002 the Board notified the Discharger and interested agencies and persons of its intent to reissue waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments, and scheduled a public hearing.
18. **Public Hearing** - In a public hearing on May 31, 2002, the Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.

GENERAL FINDINGS

13. Discharge of biota not indigenous to the ocean waters of the Central Coast Region may impair marine habitat.
14. **Monitoring Program** - Monitoring and Reporting Program No. R3-2002-0057 (MRP) is a part of this Order. The MRP requires regular monitoring of influent and effluent, reporting of results of exotic species

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 and 13377 of the California Water Code, that The Abalone Farm Inc., its agents, successors, and assigns, may discharge waste to the Pacific Ocean providing compliance is maintained with the following:
(Note: General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for National Pollutant

Discharge Elimination System Permits," dated January 1985.)

All technical and monitoring reports submitted pursuant to this Order are required pursuant to Sections 13267 and 13383 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the Discharger to enforcement action pursuant to Sections 13268 and 13385 of the California Water Code. The Regional Board will base all enforcement actions on the date of Order adoption.

Any person affected by this action of the Regional Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

Throughout these requirements, footnotes are listed to indicate their source. Footnotes are as follows:

A = Ocean Plan

B = Basin Plan

a.

Constituents	Units of Measurement	Monthly (30-day) Average	Weekly (7-day) Average	Daily Maximum
Grease and Oil	mg/L	25	40	75
	lbs/day ¹	1751	2802	5254
	kg/day	794	1271	2383
Settleable Solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	standard units	within limits of 6.0 to 9.0 at all times		
Suspended Solids	mg/L	60	--	--

¹ For flows less than 8.4 MGD, mass emission rates shall not exceed the "Maximum Allowable Mass Emission Rate."

C = Thermal Plan

Requirements not referenced are based on staff's best professional judgment.

A. DISCHARGE PROHIBITIONS

1. Discharge of wastewater at locations other than 35°27'40" N. Latitude, 120°58'36" W. Longitude or 35°27'40" N. Latitude, 120°58'37" W. Longitude, is prohibited.
2. Discharge of active malachite green fungicide is prohibited.
3. Discharge of any biota listed in California Code of Regulations Title 14, Section 245 (Aquaculture Disease Control Regulations), or referenced in Part a.8 of the same section, which is not indigenous to the Central Coast Region is prohibited. In accordance with Section 15500 et seq. of the California Fish and Game Code, enforcement of this prohibition must be requested by the California Department of Fish and Game.

B. EFFLUENT LIMITATIONS

1. Effluent shall not exceed the following limits:^A

b.

Constituent	Units of Measurement	Concentrations ²		
		6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	ug/l	13	61	157
Cadmium	ug/l	2	8	20
Chromium(Hex) ³	ug/l	4	16	40
Copper	ug/l	4	22	58
Lead	ug/l	4	16	40
Mercury	ug/l	0.08	0.32	0.7995
Nickel	ug/l	10	40	100
Selenium	ug/l	30	120	300
Silver	ug/l	1.4	5.44	13.84
Zinc	ug/l	32	152	392
Cyanide ⁴	ug/l	2	8	20
Total Chlorine Residual	ug/l	4	16	120
Ammonia (as N)	ug/l	1200	4800	12000
Acute Toxicity	TUa	--	0.33	--
Chronic Toxicity	TUc	--	2	--
Phenolic Compounds (non-chlorinated)	ug/l	60	240	600
Chlorinated Phenolics	ug/l	2	8	20
Endosulfan ⁵	ug/l	0.018	0.036	0.054
Endrin	ug/l	0.004	0.008	0.012
HCH ⁶	ug/l	0.008	0.016	0.024
Radioactivity ⁷	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.			

Constituent	30-Day Average (ug/L)
acrolein	440
antimony	2400
bis(2-chloroethoxy) methane	8.8
bis(2-chloroisopropyl) ether	2400
chlorobenzene	1140
chromium (III)	380000

² Based on Ocean Plan criteria using a minimum initial dilution of 1:1 (seawater:effluent). If actual dilution is found to be less than this value, it will be recalculated and the Order revised.

³ The chromium limit may be met as Total Chromium as the Discharger chooses.

⁴ The cyanide limit may be met by the combined measurements of free cyanide, simple alkali metal cyanides and weakly complexed organometallic complexes upon approval of the Regional Board and the U.S. Environmental Protection Agency.

⁵ Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

⁶ HCH shall mean the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

⁷ Effluent limitation on radioactivity shall apply to the undiluted combined effluent.

Constituent	30-Day Average (ug/L)
di-n-butyl phthalate	7000
dichlorobenzenes ⁸	10200
diethyl phthalate	66000
dimethyl phthalate	1640000
4,6-dinitro-2-methylphenol	440
2,4-dinitrophenol	8
ethylbenzene	8200
fluoranthene	30
hexachlorocyclopentadiene	116
nitrobenzene	9.8
thallium	4
toluene	170000
tributyltin	0.0028
1,1,1-trichloroethane	1080000
acrylonitrile	0.20
aldrin	0.00004
benzene	11.80
benzidine	0.0001
beryllium	0.07
bis(2-chloroethyl) ether	0.09
bis(2-ethylhexyl) phthalate	7.00
carbon tetrachloride	1.80
chlordane ⁹	0.00004
chlorodibromomethane	17.20
chloroform	260.00
DDT ¹⁰	0.0003
1,4-dichlorobenzene	36.00
3,3'-dichlorobenzidine	0.02
1,2-dichloroethane	56.00
1,1-dichloroethylene	1.80
dichlorobromomethane	12.40
dichloromethane	900.00
1,3-dichloropropene	17.80
dieldrin	0.00008
2,4-dinitrotoluene	5.20
1,2-diphenylhydrazine	0.32
halomethanes ¹¹	260.00
heptachlor	0.0001
heptachlor epoxide	0.00004

⁸ Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

⁹ Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

¹⁰ DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

¹¹ Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

Constituent	30-Day Average (ug/L)
hexachlorobenzene	0.0004
hexachlorobutadiene	28.00
hexachloroethane	5.00
isophorone	1460
N-nitrosodimethylamine	14.60
N-nitrosodi-N-propylamine	0.76
N-nitrosodiphenylamine	5.00
PAHs ¹²	0.02
PCBs ¹³	0.000038
TCDD equivalents ¹⁴	0.0000000078
1,1,2,2-tetrachloroethane	4.6
tetrachloroethylene	4.00
toxaphene	0.00042
trichloroethylene	54.00
1,1,2-trichloroethane	18.8
2,4,6-trichlorophenol	0.58
vinyl chloride	72.00

¹² PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo(a)pyrene, chrysene, dibenzo(ah)anthracene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

¹³ PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

¹⁴ TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans(2,3,7,8-CDFs) multiplied by their respective toxicity factors, as listed in Appendix I of the Ocean Plan.

2. During any 24-hour period, the effluent mass emission rate shall not exceed the "Maximum Allowable Daily Mass Emission Rate."
3. Violation of the "Instantaneous Maximum" or "Maximum Allowable Daily Emission Rate" must be reported to the Board within 24 hours.
4. During any six-month period, the effluent mass emission rate shall not exceed the "Maximum Allowable Six-Month-Median Mass Emission Rate."
5. Effluent daily dry weather flow shall not exceed a monthly average of 8.4 MGD (31,797 m³/day).
6. Effluent shall be essentially free of materials and substances that:
 - a) float or become floatable upon discharge.
 - b) may form sediments which degrade benthic communities or other aquatic life.
 - c) accumulate to toxic levels in marine waters, sediments or biota.
 - d) decrease the natural light to benthic communities and other marine life.
 - e) materials that result in aesthetically undesirable discoloration of the ocean surface.

C. RECEIVING WATER LIMITATIONS

(Receiving water quality is a result of many factors, some unrelated to the discharge. This permit considers these factors and is designed to minimize the influence of the discharge to the receiving water.)

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, but including all kelpbeds, the following bacterial objectives shall be maintained throughout the water column:
 - a. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at

any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

- b. The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.^A
2. At all areas where shellfish may be harvested for human consumption, the median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.^A
3. The discharge shall not cause floating particulates and grease and oil to be visible on the ocean surface.^A
4. The discharge shall not cause aesthetically undesirable discoloration of the ocean surface.^A
5. The discharge shall not cause natural light to be significantly¹⁵ reduced at any point outside the initial dilution zone.^A
6. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.^A
7. The discharge shall not cause the dissolved oxygen concentration outside the "zone of initial dilution" to fall below 5.0 mg/L^B or to be depressed more than 10 percent from that which occurs naturally.^A
8. The discharge shall not cause the pH outside the "zone of initial dilution" to be depressed below 7.0, raised above 8.5^B, or changed more

¹⁵ Significant difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

than 0.2 units from that which occurs naturally.^A

9. The discharge shall not cause the dissolved sulfide concentrations of waters in and near sediments to significantly increase above that present under natural conditions.^A
10. The discharge shall not cause the concentrations of the same substances listed in Effluent Limitations to increase in marine sediments to levels which would degrade indigenous biota.^A
11. The discharge shall not cause objectionable aquatic growth or degradation of indigenous biota.^A
12. The discharge shall not cause concentrations of organic materials in marine sediments to increase to a level which would degrade marine life.^A
13. The discharge shall not cause degradation of marine communities, including vertebrate, invertebrate, and plant species.^A
14. The discharge shall not cause alteration in natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption.^A
15. The discharge shall not cause concentrations of organic materials in fish, shellfish or other marine resources used for human consumption to bioaccumulate to levels that are harmful to human health.^A
16. The discharge shall not cause degradation of marine life due to radioactive waste.^A
17. The discharge shall not cause the temperature of the receiving water to adversely affect beneficial uses.^C

D. PROVISIONS

1. The Discharger shall relocate the fuel storage tank next to the abandoned pond at least 50 feet from any steep slope or cliff, install external protection around the tank to prevent damage from moving vehicles, and install impervious secondary containment around the tank capable of capturing the entire volume of the tank. These improvements shall be completed by **October 1, 2002**. A written report of completion shall be submitted with the regularly scheduled monitoring report due **October 30, 2002**.
2. This Order replaces Order No. 94-02. Order No. 94-02, Waste Discharge Requirements for Abalone Farm Inc., Cayucos Facility is hereby rescinded.
3. Discharger shall implement a toxicity reduction evaluation and take appropriate remedial action to control source(s), if the effluent Chronic Toxicity limit is consistently exceeded.^A
4. Discharger shall comply with "Monitoring and Reporting Program No. R3-2002-0057" as ordered by the Executive Officer.
5. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January 1985.
6. This Order expires **May 31, 2007**, and the Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Code of Regulations, no later than **November 30, 2006**, if it wishes to continue the discharge.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 31, 2002.

Executive Officer

to Cambria

Cayucos

Facility Location

Pacific Ocean

Seawater
Intake

Discharge
001

Pacific Ocean

Discharge
002

Attachment A

Order No. R3-2002-0057, NPDES Permit No. CA 0049344
The Abalone Farm Inc.