CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 70-87

PRESCRIBING REVISED REQUIREMENTS FOR TWENTY-TWO WASTE DISCHARGES BY SELBY SMELTER OF AMERICAN SMELTING AND REFINING COMPANY INTO CARQUINEZ STRAIT AT SELBY, CONTRA COSTA COUNTY, AND RESCINDING RESOLUTION NO. 296

WHEREAS THIS REGIONAL BOARD HAS CONSIDERED

INFORMATION ABOUT THIS DISCHARGE

1. This Regional Water Quality Control Board prescribed waste discharge requirements for American Smelting and Refining Company's Selby Smelter, called the discharger below, in Resolution No. 296, adopted November 20, 1958.

2. Information provided by the discharger identifies and describes twenty-two waste discharges. Table 1 summarizes the data for 9 discharges of industrial wastes, some of which contain sewage, and one of storm drainage into surface waters of Carquinez Strait; Table 2 summarizes the data for three industrial waste and two sewage discharges onto land; and Table 3 summarizes the data for seven subsurface sewage discharges.

3. The discharger has indicated he plans to discontinue production at Selby Smelter on or about December 31, 1970, and subsequently to dismantle the smelter process units and most of its structures. This work is to include collecting those portions of the process equipment that contain metals concentrate residuals, together with soil containing such residuals, and shipping them to another plant for processing. The dismantling and the removal of matter containing concentrate residuals is expected to be completed about June 1, 1971.

TABLE NO. 1

AMERICAN SMELTING AND REFINING COMPANY, SELBY SMELTER

WASTE DISCHARGES TO SURFACE WATERS

WASTE AND OUTFALL DESIGNATION	WASTE SOURCE	FLOW RATE GPM	TREATMENT	OUTFALL DESCRIPTION	DISCHARGE POINT		
					Feet from Northeast end of wharf	Above Surface	Feet Below mllw
"A"	Once-through closed cooling water, taken from Bay, from sulfur dioxide plant; other sulfur dioxide plant waste; and runoff from sulfuric acid plant area, paved concentrate storage areas, and other parts of plant.	150	Settling sump	18" x 14" concrete-lined ditch	At NE end of wharf at shore	X	
"B-1"	Surface drainage from sulfuric acid plant area.	Intermittent Maximum not reported	Settling sump	12-inch pipe	160 feet SW under wharf	X	
"B"	Sewage; stevedores' facilities; serving maximum of 40 when ship is at wharf; intermittent.	2	Septic tank #1	Six-inch pipe	200 feet SW under wharf	X	
"C"	Sewage from acid plant (8 employees). Sulfuric acid plant process wastes, once-through Bay cooling water, and surface runoff. Contains heavy metals.	700 (=1 mgd)	Septic tank #2 Settling tank	24-inch pipe	270 feet SW under wharf		Five
"E"	Once-through fresh cooling water serving boiler house machinery.	20	None	Six-inch pipe	400 feet SW under wharf	X	

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					Feet from Northeast end of wharf	Above Surface	Feet Below mllw
"F"	Sewage from machine and electric shops; 30 employees.	3	Septic tank #4	Six-inch pipe	420 feet SW under wharf	X	
"F-1"	Sinter plant gas scrubbing tower, runoff from manufacturing areas	60 Intermittent	Settling sump	12-inch pipe	430 feet SW under wharf	X	
"G"	Lead sintering process waste, recycled fresh cooling water from mechanical equipment, and runoff from concentrate storage and processing areas.	1	Settling sump	36-inch pipe	680 feet SW; at shore west of wharf	X	
"I"	Fresh cooling water blowdown from blast furnace, reverberatory furnaces, and silver and gold refining, and runoff from metals processing areas.	250 (=0.36) (mgd)	Five settling sumps	24-inch pipe	950 feet SW, 400 feet from SW end of wharf near shore		One
"K"	Runoff from streets of Tormey Village		None	Two 36-inch pipes	3050 feet SW at shore	X	

TABLE NO. 2

AMERICAN SMELTING AND REFINING COMPANY, SELBY SMELTER

LAND DISPOSAL SITES FOR SEWAGE AND INDUSTRIAL RESIDUES

WASTE AND OUTFALL DESIGNATION	WASTE SOURCE	FLOW RATE GPM	TREATMENT	OUTFALL DESCRIPTION	DISCHARGE POINT		
					Feet from Northeast end of wharf	Above Surface	Feet Below mllw
"J"	Sewage from zinc recovery plant (17 employees).	2	Sewage pond	Confined to pond in slag about 60 ft. from shore	No discharge to surface waters was found. Pond is about 2900 feet SW		
"L"	Sewage from Tormey Village population 225.	20	Sewage pond	No O/F, may seep about 50 ft. thru slag pile	About 3100 feet SW		

WASTE & DISP. SITE DESIG.	WASTE NATURE	DESCRIPTION OF SITE AND WASTE
"M"	Slag pile	The slag pile occupies an area approximately 1000 feet by 400 feet lying generally west of the smelter process areas, and the road leading from Tormey Village to the smelter gate, and lying generally north of the Southern Pacific Company tracks. The northern boundary of the slag pile area is essentially the shore of San Pablo Bay. The slag volume is estimated at 740,000 cubic yards.
"N"	Windage losses from concentrate storage and handling	Concentrates derived from ores are brought to the smelter by ship and unloaded by conveyor belts into concrete bins, from which they are carried by skip-loaders to stock piles. Skip-loaders are also used to carry the concentrates from the stock piles to the sinter plant, which agglomerates them for use as blast furnace feed. The concentrates are generally fine dusts which are lost by wind and spillage during handling and from the storage piles. The concentrate dust is found virtually throughout the smelter site.
"O"	Industrial trash	Broken or otherwise useless equipment is stored at several places in the smelter site.

TABLE NO. 3

AMERICAN SMELTING AND REFINING COMPANY, SELBY SMELTER

SUBSURFACE WASTE DISCHARGES

WASTE AND DISPOSAL SITE DESIGNATION	W A S T E S O U R C E	FLOW RATE GPM	TREATMENT	LOCATION OF SUBSURFACE DISPOSAL FIELD
"1"	Sewage from Boiler Shop (40 employees)	10	Septic tank #5	Near and west of Boiler Shop
"2"	Sewage from change room and lunch room (300 employees)	60	Septic tank #6	Near Gate Office and Change Room at employees entrance at south side of smelter.
"3"	Sewage from main office (35 employees)	10	Septic tank #7	In front (south side of) main office building
"4"	Sewage from laboratory (10 employees)	2	Septic tank #8	Behind (north of) west wing of laboratory building
"5"	Sewage from warehouse (3 employees)	1	Septic tank #9	Behind (north of) warehouse
"6"	Sewage from Southern Pacific Station, and from gold and silver refinery (29 employees)	10	Septic tanks #10 & #11	About 80 feet southwest of silver refinery
"7"	Sewage from lead refinery lunch room (20 employees)	3	Septic tank #15	About 100 feet south from lead refinery lunch room

CORRESPONDENCE

This Regional Board has considered recommendations about this matter from:

1. Memoranda from State Department of Fish and Game dated October 13, 1970 and October 16, 1970.

2. Memoranda from State Department of Public Health dated September 3, 1970, September 18, 1970, September 21, 1970, and October 29, 1970.

3. Memorandum from State Department of Water Resources dated October 21, 1970.

STAFF INVESTIGATION

1. These wastes can affect the following present beneficial water uses in Carquinez Strait and contiguous water bodies:

   Industrial cooling and process water supply year-round

   Swimming, water-skiing, pleasure boating, marinas, fishing, shellfishing and hunting

   Fish, shellfish, and wildlife propagation and sustenance, and waterfowl and migratory birds habitat and resting

   Navigation channels and port facilities

   Esthetic enjoyment.

2. Land within 1000 feet of the discharges is used for industry, residence, and transportation.

RESOLVED BY THIS REGIONAL BOARD

BOARD INTENT

1. Protect public health as it may be affected by these waste discharges.

2. Prevent nuisance, as defined in Section 13050(m) of the California Water Code.

3. Protect the beneficial water uses listed under "Staff Investigation" above, except shellfishing.

   In accordance with Section XVII of its Resolution No. 803, this Board has received a report from the Department of Fish and Game dated August 26, 1968, which describes beds suitable for shellfishing that are located between Pinole Point and Davis Point. This Board will consider the matter of protecting these beds for the taking of shellfish for human consumption after it has reviewed a report to be submitted by the State Department of Public Health in accordance with Resolution No. 803.

WASTE DISCHARGE REQUIREMENTS - RECEIVING WATERS

1. The treatment or disposal of these wastes shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. These discharges shall not:

   a. Unreasonably affect any of the protected beneficial water uses resulting from:

      Floating, suspended, or deposited macroscopic particulate matter or foam, in waters of the State at any place;

      Bottom deposits at any place;

      Aquatic growths at any place;

      Alteration of temperature, turbidity, or apparent color beyond present natural background levels in waters of the State at any place.

   b. Cause visible, floating, suspended or deposited oil or other products of petroleum origin in waters of the State at any place.

3. The discharge of Wastes "A", "B-1", "B", "C", "E", "F", "F-1", "G", "I", and "K" shall not cause waters of the State to exceed the following limits of quality at any point:

a. Dissolved oxygen	5.0 mg/l minimum
b. Dissolved sulfide	0.1 mg/l maximum
c. Other substances	Any one or more substances in concentrations that impair any of the protected beneficial water uses or make aquatic life or wildlife unfit or unpalatable for consumption.

WASTE DISCHARGE REQUIREMENTS - WASTE STREAMS

1. Wastes "A", "B-1", "B", "C", "E", "F", "F-1", "G", "I", "K", and leachate or outflow from Waste "M" as discharged to waters of the State shall meet these quality limits at all times:

   a. In any grab sample:

pH	7.0 minimum 8.5 maximum

Settleable matter

The arithmetic average of any six or more samples collected on any day	0.5 ml/l/hr., maximum
80% of all individual samples collected during maximum daily flow over any 30-day period	0.4 ml/l/hr., maximum
Any sample	1.0 ml/l/hr., maximum
Nutrients	to be prescribed at the earliest practicable date
Ammonium hydroxide, undissociated	to be prescribed at the earliest practicable date

c. In any representative set of samples:

Toxicity: survival of test fishes in 96-hour bioassays of the waste as discharged

Any determination	70% minimum
Average of any three or more consecutive determinations made during any 21 or more days	90% minimum

2. Wastes "B", "C" and "F" as discharged to waters of the State shall be maintained within the following bacterial quality limits at all times:

Coliform Organisms	240 MPN/100 ml, median of five consecutive samples, maximum
	10,000 MPN/100 ml, maximum, any single sample, when verified by a repeat sample taken within 48 hours

3. Waste "C" as discharged to waters of the State shall meet these quality limits at all times:

a. In any grab sample:

Settleable matter in excess of that in the intake water drawn from Carquinez Strait

80% of all individual samples collected during maximum daily flow over any 30-day period	0.1 ml/l/hr. maximum
Any sample	0.5 ml/l/hr. maximum

4. Wastes "J" and "L" shall be effectively confined to their respective land disposal sites at all times.

5. Wastes "1", "2", "3", "4", "5", "6", and "7" shall be confined to their respective subsurface disposal sites at all times.

6. Waste "M", in the event that leachate and outflow from it fails to meet the waste discharge requirements prescribed for it above, shall be effectively confined to its land disposal site at all times, shall have facilities adequate to exclude flood and tidal waters, to divert surface runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site. Adequate protection is defined as protection from at least a 100-year storm.

COMPLIANCE TIME SCHEDULE

1. Pursuant to Section 13263(c) of the California Water Code, this Regional Board adopts the following time schedule for compliance with the requirements prescribed in this Resolution:

Requirements pertaining to Wastes "A", "B-1", "B", "C", "F-1", "G", and "J" shall be met by	December 31, 1970
Requirements pertaining to Wastes "E", "F", "I" and "M" shall be met by	February 28, 1971
All requirements shall be met by	June 30, 1971.

REPORTING REQUIREMENTS

1. This Resolution includes items numbered 1, 3, 6, and 7 of the attached "Reporting Requirements" dated August 28, 1970.

2. The discharger is required to file written progress reports with this Regional Board pursuant to Section 13267 of the California Water Code within 15 days after each of the dates specified in the compliance time schedule.

NOTIFICATIONS

1. This Board's Resolution No. 296 is rescinded.

2. This Resolution includes items numbered 1, 2, 3, 4, 5, and 6 of the attached "Notifications", dated January 6, 1970.

3. The compliance time schedule is subject to revision in the discretion of this Regional Board.

4. If the discharger fails to comply with the compliance time schedule, the Executive Officer is instructed to bring a recommendation on the initiation of formal enforcement proceedings to the Regional Board for its consideration.

5. Maximum allowable concentrations of heavy metals will be considered for adoption at the regular meeting of this Regional Board in February of 1971 to provide protection to the environment.

WILLIAM C. WEBER
Chairman

November 4, 1970

I, Fred H. Dierker, hereby certify that the foregoing is a true and correct copy of Resolution No. 70-87 adopted by the California Regional Water Quality Control Board - San Francisco Bay Region, at its special meeting on November 4, 1970.

FRED H. DIERKER
Executive Officer
CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD - SAN FRANCISCO BAY REGION