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FACT SHEET
for

NPDES PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR

MORTON INTERNATIONAL, INC.
MORTON SALT DIVISION, NEWARK FACILITY
ALAMEDA COUNTY

NPDES PERMIT NO. CA0005185
ORDER NO. R2-2005-XXXX

PUBLIC NOTICE:

Written Comments

- Interested persons are invited to submit written comments concerning this draft permit.
- Comments must be submitted to the Regional Board no later than 5:00 p.m. on **March 28, 2005**.
- Send comments to the Attention of Daniel Leva.

Public Hearing

- The draft permit will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; First floor Auditorium.
- This meeting will be held on: April 20, 2005, starting at 9:00 am.

Additional Information

- For additional information about this matter, interested persons should contact Water Board staff member: Mr. Daniel Leva, Phone: (510) 622-2415;
email: dleva@waterboards.ca.gov

This Fact Sheet contains information regarding a reissuance of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the Morton International, Inc., Morton Salt Division, Newark facility, for industrial wastewater discharges. The Fact Sheet describes the factual, legal, and methodological basis for the sections addressed in the proposed permit and provides supporting documentation to explain the rationale and assumptions used in deriving the effluent limitations.

I. INTRODUCTION

The Discharger applied for reissuance of waste discharge requirements and a permit to discharge wastewater to waters of the State and the United States under the NPDES program. The application and Report of Waste Discharge is dated October 29, 2001.

1. Facility Description

The Morton Salt Division of Morton International, Inc., owns and operates a facility located at 7350 Morton Avenue, Alameda County, Newark, for the manufacture of salt. Crude salt harvested from sea water is purchased and delivered to the site, where it is separated by centrifuge into large and small crystals. Larger crystals are washed and dried for non-food grade products. Smaller crystals are dissolved and re-crystallized in a multi-stage evaporator system for food grade products. Detailed process operations include: (1) dewatering and rebrining of crude salt, (2) chemical treatment to remove impurities from brine, (3) recrystallization of the brine using multiple-effect evaporators, (4) salt drying and cooling, (5) conveying, grinding, screening, and compacting, (6) addition of additives, and (7) bulk loading and packaging.

The facility has been in operation since 1927. Manufacturing operations are conducted indoors, typically 24 hours per day on a five day per week schedule (Monday evenings to 2 am Saturdays). Products and raw materials may be stored outdoors from time to time. Products may be shipped in bulk (rail cars, bulk trucks), or packaged into containers as small as those sized for purchase by the consuming public in supermarkets.

The facility is located on three parcels of land. Parcel No. 1 is approximately 12.6 acres and comprises the manufacturing and packaging plants, maintenance, warehouse, and loading and shipping areas. Parcel No. 2 is approximately 13.9 acres and is largely covered by the process water cooling pond and three process residual dewatering ponds. The third parcel is vacant land and is approximately 3.9 acres.

2. Discharge Description

The waste discharge through Outfall E-001 consists of intermittent overflow from a cooling water pond, residual water from a well water sand separator, and facility storm water runoff from approximately eleven acres. The facility operates two wells for process and cooling water supply. The pond water is circulated through contact condensers, where it condenses vapor from the multiple-effect evaporators through direct contact, and the combined stream is then returned to the pond for cooling. Prior to discharge, the pH of the pond wastewater is reduced by carbon dioxide addition and aeration. Algae growth in the cooling water pond can cause the pH to exceed the 9.0 pH unit effluent limit and lead to high level of suspended solids. Boiler blowdown water is discharged to a sanitary sewer.

The flow is intermittent during dry weather months and ranges up to approximately 0.4 mgd during wet season months when evaporation from the cooling ponds is limited and storm water flows contribute to hydraulic imbalances. The facility reports that as much as 144,000 gallons per day (gpd) may be evaporated from the cooling pond during dry weather conditions. The facility discharged an average discharge flow of 43,200 gpd of treated wastewater from the northwest portion of the site at Outfall 001 (located approximately at latitude 35' 30" 00° and longitude 122' 02" 00°) to a drainage channel that leads to the Alameda County Flood Control Ditch Line F-1, which is a tributary to Plummer Creek and ultimately to South San Francisco Bay.

3. Receiving Water Beneficial Uses

The beneficial uses of the receiving water are described in Finding 11 of this Order.

4. Receiving Water Salinity

The receiving waer salinity is described in Finding 19 of this Order.

5. Receiving Water Hardness

The receiving water hardness is described in Finding 21 of this Order.

II. DESCRIPTION OF EFFLUENT

The effluent quality is characterized in Findings 7 and 8 of this Order.

III. GENERAL RATIONALE AND REGULATORY BASES

- the Federal *Water Pollution Control Act*, Sections 301 through 305, and 307, and amendments thereto, as applicable (the Clean Water Act – the CWA);
- the Board’s June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan), and amendments thereto, as subsequently approved by the State Water Resources Control Board (the State Board), the Office of Administrative Law (OAL) and the U.S. EPA;
- the State Water Resource Control Board’s (the State Board’s) March 2, 2000 *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan - the SIP), as subsequently approved by the OAL and the U.S. EPA;
- the U.S. EPA’s May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule – the CTR);
- the U.S. EPA’s National Toxics Rule as promulgated [Federal Register Volume 57, 22 December 1992, page 60848] and subsequently amended (the NTR);
- the U.S. EPA’s *Quality Criteria for Water* [EPA 440/5-86-001, 1986], and subsequent amendments, (the U.S. EPA Gold Book);
- applicable Federal Regulations [40 CFR Parts 122 and 131];
- 40 CFR Part 131.36(b) and amended [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];
- the U.S. EPA’s December 10, 1998 *National Recommended Water Quality Criteria* compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364];
- the U.S. EPA’s December 27, 2002 *Revision of National Recommended Water Quality Criteria* compilation [Federal Register Vol. 67, No. 249, pp. 79091-79095]; and
- guidance provided with State Board actions remanding permits to the Board for further consideration.

IV. SPECIFIC RATIONALE

Several specific factors affecting the development of limitations and requirements in the proposed Order are discussed as follows:

1. Recent Facility Performance

Section 402(o) of Clean Water Act (CWA) and 40 CFR § 122.44(l) require that water quality-based effluent limitations (**WQBELs**) in re-issued permits be at least as stringent as in the previous permit. The SIP specifies that interim effluent limitations, if required, must be based on current facility performance or on previous permit limitations whichever is more stringent (unless anti-backsliding requirements are met). In determining what constitutes “recent plant performance,” best professional judgment (**BPJ**) was used. Effluent data collected from September 2001 through February 2004 for priority pollutants are considered representative of recent plant performance.

2. Impaired Water Bodies on 303(d) List

On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 2002 303(d) list), prepared pursuant to provisions of Section 303(d) of the federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The South San Francisco Bay is listed as impaired for chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, and selenium. Copper and nickel were delisted and placed on the new Monitoring List. Neither the Alameda County Flood Control Ditch Line F-1 nor Plummer Creek are included in the most recent 303(d) list.

The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations (WLAs). The SIP and U.S. EPA regulations also require that final concentration-based WQBELs be included for all pollutants having reasonable potential to cause or contribute to an exceedence of applicable water quality standards (having reasonable potential or RP). The SIP requires that where the discharger has demonstrated infeasibility to meet the final WQBELs, interim performance-based limitations (IPBLs) or previous permit limitations (whichever is more stringent) be established in the permit, together with a compliance schedule that shall remain in effect until final effluent limitations are adopted. The SIP also requires the inclusion of appropriate provisions for waste minimization and source control where interim limitations are established.

3. Basis for Prohibitions

- a). Prohibition A.1 (No discharges other than as described in the permit): This prohibition is based on BPJ and the previous Order.
- b). Prohibition A.2 (No discharge of biosolids): This prohibition is from Basin Plan and the previous Order.
- c). Prohibition A.3 (No discharges of floating oil or other floating materials in quantities sufficient to cause deleterious bottom deposits, turbidity or discoloration in surface waters): This prohibition is based on Basin Plan and the previous Order.

- d). Prohibition A.4 (No direct discharge of domestic sanitary waste to the cooling pond or to surface waters): This prohibition is based on Basin Plan and the previous Order.
- e). Prohibition A.5 (No discharges of concentrated brine to surface waters): This prohibition is based on BPJ and the previous Order.

4. Basis for Effluent Limitations

- a) Effluent Limitations B.1 (Outfall E-001): Effluent limits for conventional and non-conventional pollutants.

Pollutant	Units	30 Day Average	Weekly Average	Max Daily
B.1.a(1). TSS	mg/L	41	-	64
B.1.a(2). TSS	kg/day	38	-	66
B.1.b.BOD	mg/L	30	45	-
B.1.c. Settleable Solids	ml/L	0.1	0.2	-
B.1.d(1).Oil & Grease	mg/L	5	-	8
B.1.d(2).Oil & Grease	kg/day	4.5	-	7.7

- b) Effluent Limitation B.1.a (Total Suspended Solids): This effluent limitation is unchanged from the previous Order and is based on BPJ and Clean Water Act Section 402(o)(2). These limitations were calculated as the 90th percentile of all the TSS data collected during 1/90 through 6/96. Mass limitations are unchanged from the previous Order. Compliance has been achieved as demonstrated by the historical effluent data.
- c) Effluent Limitation B.1.b (BOD): This effluent limitation is unchanged from the previous Order and is based on Basin Plan and BPJ
- d) Effluent Limitation B.1.c (Settleable solids): This effluent limitation is unchanged from the previous permit and is based Basin Plan and BPJ.
- e) Effluent Limitation B.1.d (Oil and Grease): This effluent limitation is unchanged from the previous permit and is based Basin Plan and BPJ. Mass limitations are unchanged from the previous Order.
- f) Effluent Limitation B.2 (pH, minimum 6.5, maximum 9): This effluent limitation is unchanged from the previous Order and is based on Basin Plan and BPJ.
- g) Effluent Limitation B.3 (Temperature): This effluent limitation is unchanged from the previous permit and is based on BPJ. Compliance has been demonstrated by existing plant performance.
- h) Effluent Limitation B.4 (Whole Effluent Acute Toxicity): The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall be maintained free of toxic substances in

concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. These effluent toxicity limitations are necessary to ensure that this objective is protected. The whole effluent acute toxicity limitations for an 3-sample median and an single sample maximum are consistent with the previous permit and are based on the Basin Plan (Table 4-4, pg. 4–70).

The previous Order required testing using three-spine stickleback and rainbow trout. This Order requires the Discharger to switch to the U.S. EPA most recently promulgated testing method, currently the 5th edition by no later than September 15, 2005. The Discharger shall also test rainbow trout and fathead minnow concurrently to identify a more sensitive species, and use that single species for compliance monitoring if approved by the Executive Officer.

i) Effluent Limitation B.5 (Toxic Substances):

1) Reasonable Potential Analysis (RPA)

Code of Federal Regulations Title 40, Part 122.44(d)(1)(i) (40 CFR 122.44(d)(1)(i)) specifies that permits must include WQBELs for all pollutants “which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard” (have Reasonable Potential or RP). Thus, assessing whether a pollutant has RP is the fundamental step in determining whether or not a WQBEL is required. The following sections describe the RPA and the results of such an analysis for the pollutants identified in the Basin Plan and the CTR.

- i) *WQOs and WQC*: The RPA uses Basin Plan WQOs, including narrative toxicity objectives in the Basin Plan, and applicable WQC in the CTR/NTR, or site-specific objectives (SSOs) if available, after adjusting for site-specific hardness and translators, if applicable. The governing WQOs/WQC are shown in Attachment 1 of this Fact Sheet.
- ii) *Methodology*: The RPA uses the methods and procedures prescribed in Section 1.3 of the SIP. Board staff has analyzed the effluent and background data and the nature of facility operations to determine if the discharge shows reasonable potential with respect to the governing WQOs or WQC. Attachment 1 of this Fact Sheet shows the step-wise process described in Section 1.3 of the SIP.
- iii) *Effluent and background data*: The RPA is based on effluent data collected by the Discharger from September 2001 through February 2004 for most priority pollutants. And from March 1998 through February 2004 for lead and zinc. The Discharger also collected receiving water data in 2002 and 2003. These data were used in the RPA.
- iv) *RPA determination*: The RPA results are shown below in Table B and Attachment 1 of this Fact Sheet. The pollutants that exhibit reasonable potential are copper, lead, selenium, zinc, cyanide, and bis(2-ethylhexyl)phthalate, and dioxin TEQ.

Table B. Summary of Reasonable Potential Results

# in CTR	PRIORITY POLLUTANTS	Governing WQO/WQC (ug/L)	MEC or Minimum DL ^[1] (µg/L)	Maximum Background or Minimum DL ^[1] (µg/L)	RPA Results ^[2]
1	Antimony	4,300	71.1	3.9	No
2	Arsenic	36	13.3	34.8	No
3	Beryllium	No Criteria	0.1	0.1	Uo
4	Cadmium	7.3	0.02	0.02	No
5a	Chromium (III)	644	NA	NA	Ud
5b	Chromium (VI)	11	2	2	No
6	Copper	13	46.1	57.7	Yes
7	Lead	8.5	110	4.6	Yes
8	Mercury	0.051	0.0051	0.0136	No
9	Nickel	27	20	16	No
10	Selenium	5.00	41	144	Yes
11	Silver	2.2	1.55	0.08	No
12	Thallium	6.3	0.3	0.17	No
13	Zinc	113	91	117	Yes
14	Cyanide	1	2	30	Yes
15	Asbestos	No Criteria	NA		Uo
	TCDD TEQ	0.000000014	0.0000059	0.0000601	Yes
17	Acrolein	780	2.5	2.5	No
18	Acrylonitrile	0.66	1	1	No
19	Benzene	71	0.5	0.5	No
20	Bromoform	360	0.5	0.5	No
21	Carbon Tetrachloride	4.4	0.5	0.5	No
22	Chlorobenzene	21,000	0.5	0.5	No
23	Chlorodibromomethane	34	0.5	0.5	No
24	Chloroethane	No Criteria	0.5	0.5	Uo
25	2-Chloroethylvinyl ether	No Criteria	0.5	0.5	Uo
26	Chloroform	No Criteria	0.5	0.5	Uo
27	Dichlorobromomethane	46	0.5	0.5	No
28	1,1-Dichloroethane	No Criteria	0.5	0.5	Uo
29	1,2-Dichloroethane	99	0.5	0.5	No
30	1,1-Dichloroethylene	3.2	0.5	0.5	No
31	1,2-Dichloropropane	39	0.5	0.5	No
32	1,3-Dichloropropylene	1,700	0.5	0.5	No
33	Ethylbenzene	29,000	0.5	0.5	No
34	Methyl Bromide	4,000	0.5	0.5	No
35	Methyl Chloride	No Criteria	0.5	0.5	Uo
36	Methylene Chloride	1,600	1	1	No
37	1,1,2,2-Tetrachloroethane	11	0.5	0.5	No
38	Tetrachloroethylene	8.85	0.5	0.5	No
39	Toluene	200,000	0.5	0.5	No
40	1,2-Trans-Dichloroethylene	140,000	0.5	0.5	No
41	1,1,1-Trichloroethane	No Criteria	0.5	0.5	Uo
42	1,1,2-Trichloroethane	42	0.5	0.5	No
43	Trichloroethylene	81	0.5	0.5	No

# in CTR	PRIORITY POLLUTANTS	Governing WQO/WQC (ug/L)	MEC or Minimum DL ^[1] (µg/L)	Maximum Background or Minimum DL ^[1] (µg/L)	RPA Results ^[2]
44	Vinyl Chloride	525	0.5	0.5	No
45	2-Chlorophenol	400	1	1	No
46	2,4-Dichlorophenol	790	1	1	No
47	2,4-Dimethylphenol	2,300	1	1	No
48	2-Methyl- 4,6-Dinitrophenol	765	1	1	No
49	2,4-Dinitrophenol	14,000	2	2	No
50	2-Nitrophenol	No Criteria	1	1	Uo
51	4-Nitrophenol	No Criteria	2	2	Uo
52	3-Methyl 4-Chlorophenol	No Criteria	0.5	0.5	Uo
53	Pentachlorophenol	7.90	1	1	No
54	Phenol	4,600,000	0.061	0.5	No
55	2,4,6-Trichlorophenol	6.50	1	1	No
56	Acenaphthene	2,700	0.5	0.5	No
57	Acenaphthylene	No Criteria	0.5	1	Uo
58	Anthracene	110,000	1	1	No
59	Benzidine	0.00054	1	1	No
60	Benzo(a)Anthracene	0.049	1	1	No
61	Benzo(a)Pyrene	0.049	1	1	No
62	Benzo(b)Fluoranthene	0.049	1	1	No
63	Benzo(ghi)Perylene	No Criteria	1	1	Uo
64	Benzo(k)Fluoranthene	0.049	2	2	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	1	1	Uo
66	Bis(2-Chloroethyl)Ether	1.40	0.5	0.5	No
67	Bis(2-Chloroisopropyl)Ether	170,000	0.5	0.5	No
68	Bis(2-Ethylhexyl)Phthalate	5.90	2	7	Yes
69	4-Bromophenyl Phenyl Ether	No Criteria	1	1	Uo
70	Butylbenzyl Phthalate	5,200	1	5	No
71	2-Chloronaphthalene	4,300	NA	1	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	1	1	Uo
73	Chrysene	0.049	1	1	No
74	Dibenzo(a,h)Anthracene	0.049	1	1	No
75	1,2-Dichlorobenzene	17,000	0.5	0.5	No
76	1,3-Dichlorobenzene	2,600	0.5	0.5	No
77	1,4-Dichlorobenzene	2,600	0.5	0.5	No
78	3,3-Dichlorobenzidine	0.077	1	1	No
79	Diethyl Phthalate	120,000	1	1	No
80	Dimethyl Phthalate	2,900,000	1	1	No
81	Di-n-Butyl Phthalate	12,000	1	5	No
82	2,4-Dinitrotoluene	9.10	1	1	No
83	2,6-Dinitrotoluene	No Criteria	1	1	Uo
84	Di-n-Octyl Phthalate	No Criteria	1	47	Uo

# in CTR	PRIORITY POLLUTANTS	Governing WQO/WQC (ug/L)	MEC or Minimum DL ^[1] (µg/L)	Maximum Background or Minimum DL ^[1] (µg/L)	RPA Results ^[2]
85	1,2-Diphenylhydrazine	0.54	0.5	0.5	No
86	Fluoranthene	370	0.5	0.5	No
87	Fluorene	14,000	2	2	No
88	Hexachlorobenzene	0.00077	0.5	0.5	No
89	Hexachlorobutadiene	50	0.5	0.5	No
90	Hexachlorocyclopentadiene	17,000	1	1	No
91	Hexachloroethane	8.90	0.5	0.5	No
92	Indeno(1,2,3-cd)Pyrene	0.049	1	1	No
93	Isophorone	600	0.5	0.5	No
94	Naphthalene	No Criteria	0.5	0.5	Uo
95	Nitrobenzene	1,900	0.5	0.5	No
96	N-Nitrosodimethylamine	8.10	0.5	0.5	No
97	N-Nitrosodi-n-Propylamine	1.40	1	1	No
98	N-Nitrosodiphenylamine	16	0.5	0.5	No
99	Phenanthrene	No Criteria	1	1	Uo
100	Pyrene	11,000	1	1	No
101	1,2,4-Trichlorobenzene	No Criteria	1	1	Uo
102	Aldrin	0.00014	0.002	0.002	No
103	alpha-BHC	0.013	0.005	0.005	No
104	beta-BHC	0.046	0.002	0.002	No
105	gamma-BHC	0.063	0.005	0.005	No
106	delta-BHC	No Criteria	0.002	0.002	Uo
107	Chlordane	0.00059	0.01	0.01	No
108	4,4'-DDT	0.00059	0.005	0.005	No
109	4,4'-DDE (linked to DDT)	0.00059	0.005	0.005	No
110	4,4'-DDD	0.00084	0.01	0.01	No
111	Dieldrin	0.00014	0.005	0.005	No
112	alpha-Endosulfan	0.0087	0.005	0.005	No
113	beta-Endosulfan	0.0087	0.005	0.005	No
114	Endosulfan Sulfate	240	0.01	0.01	No
115	Endrin	0.0023	0.005	0.005	No
116	Endrin Aldehyde	0.81	0.005	0.005	No
117	Heptachlor	0.00021	0.005	0.005	No
118	Heptachlor Epoxide	0.00011	0.005	0.005	No
119-125	PCBs sum	0.00017	0.1	0.1	No
126	Toxaphene	0.00020	0.1	0.1	No
	Tributyltin	15	NA	NA	Ud

[1] Values for MEC or maximum background in bold are the actual detected concentrations, otherwise the values shown are the minimum detection levels.

NA = Not Available (there is no monitoring data or WQO/WQC for this constituent).

[2] RP = Yes, if either MEC or background > WQO/WQC.

RP = No, if both MEC or background < WQO/WQC or all effluent concentrations non-detect and background < WQO/WQC or no background available.

RP = Uo (undetermined if no objective promulgated); Ud (undetermined if no effluent data or receiving water data available).

- v) *Pollutants with no reasonable potential:* WQBELs are not included in the Order for constituents that do not have reasonable potential to cause or contribute to exceedance of applicable WQOs or WQC. However, monitoring for those pollutants is still required, under the provisions of the Board's August 6, 2001 Letter. If concentrations of these constituents are found to increase significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water. If the Discharger has fulfilled the sampling requirements according to its approved sampling plan submitted per the August 6, 2001 Letter, the Discharger shall perform a minimum of one sampling event of all 126 priority pollutants during the life of the permit, and submit the results at least 180 days prior to permit expiration (with the permit renewal application).
- vi) *Permit reopener:* The permit includes a reopener provision to allow numeric effluent limitations to be added for any constituent that in the future exhibits reasonable potential to cause or contribute to exceedance of a WQO or WQC. This determination, based on monitoring results, will be made by the Board.

2) Final Water Quality-Based Effluent Limitations

Toxic substances are regulated by WQBELs derived from the Basin Plan for copper and nickel site-specific objectives for South San Francisco Bay, the CTR, the NTR, and/or best professional judgment (BPJ). WQBELs in this Order are based on the evaluation of the Discharger's data as described above under the Reasonable Potential Analysis. Numeric WQBELs are required for all constituents that have a reasonable potential to cause or contribute to an excursion above any State water quality standard. Reasonable potential is determined and final WQBELs are developed using the methodology outlined in the SIP. If the Discharger demonstrates that the final limits will be infeasible to meet and provides justification for a compliance schedule, then interim limits are established, with a compliance schedule to achieve the final limits. The WQOs or WQC used for each pollutant with reasonable potential is indicated in Table C below as well as in Attachment 2.

Table C. Water Quality Objectives/Criteria for Pollutants with RP

Pollutant	Chronic WQO/WQC (µg/L)	Acute WQO/WQC (µg/L)	Human Health WQC (µg/L)	Basis of Lowest WQO /WQC Used in RP
Copper	13	20.4	--	BP, SSO
Lead	8.5	221	--	CTR
Selenium	5	20	--	NTR
Zinc	91	100	--	CTR
Cyanide	1	1	220,000	NTR
TCDD TEQ	--	--	1.4×10^{-8}	CTR
Bis(2-ethylhexyl)phthalate	--	--	5.9	CTR

3) Interim Limitations

Interim effluent limitations were derived for those constituents (copper, lead, selenium, zinc, cyanide, and bis(2-ethylhexyl)phthalate, for which the Discharger has shown infeasibility of complying with the respective final limitations and has demonstrated that compliance schedules are justified based on the Discharger's source control and pollution minimization efforts in the past and continued efforts in the present and future. The interim effluent concentration limitations for copper, lead, selenium, and zinc are based on statistical analyses of data submitted by the Discharger. The interim limitation for cyanide and bis(2-ethylhexyl)phthalate are the SIP-specified minimum levels (MLs). The interim limitations are discussed more fully in Attachment 4 of this Fact Sheet.

4) Feasibility Evaluation and final WQBELs

The Discharger submitted an infeasibility to comply report on February 14, 2005, for copper, lead, selenium, zinc, cyanide, and dioxin TEQ. For constituents that Board staff could perform a meaningful statistical analysis (i.e., copper, lead, selenium, and zinc), it used self-monitoring data from 2001-2004 to compare the mean, 95th percentile, and 99th percentile with the long-term average (LTA), AMEL, and MDEL to confirm if it is feasible for the Discharger to comply with WQBELs. If any of the LTA, AMEL, and MDEL exceeds the mean, 95th percentile, and 99th percentile, the infeasibility for the Discharger to comply with WQBELs is confirmed statistically. Compliance feasibility Table D below shows these comparisons in µg/L.

Table D: Summary of Feasibility Analysis

<u>Constituent</u>	<u>Mean / LTA</u>	<u>95th / AMEL</u>	<u>99th / MDEL</u>	<u>Feasible to Comply</u>
Copper	24.1 > 6.6	46.2 > 10.2	58 > 20.4	No
Lead	12 > 4.5	28 > 4.5	113 > 14.2	No
Selenium	29.5 > 2.6	48.6 > 4.1	58.1 > 8.2	No
Zinc	21.5 < 32	104 > 36	315 > 100	No

Attachment 4 documents the infeasibility analysis and interim performance based limits (IPBLs) calculations in greater detail.

Table E below summarizes the calculated WQBELs, and the feasibility to comply analysis for all pollutants with effluent limitations. The WQBELs calculation is attached as Attachment 2 of this Fact Sheet.

Table E. Final WQBELs and Feasibility to Comply

Pollutant	MDEL µg/L	AMEL µg/L	Feasible to Comply?
Copper	20.4	10.3	No
Lead	14.2	4.5	No
Selenium	8.2	4.1	No
Zinc	100	36	No
Cyanide	1.0	0.5	No
TCDD TEQ	1.4×10^{-8}	2.8×10^{-8}	No
Bis(2-Ethylhexyl)Phthalate	11.8	5.9	Yes

5) Interim Concentration Limitations and Compliance Schedules

This permit establishes compliance schedules until May 22, 2012, for copper, May 18, 2010, for lead, selenium, zinc, and cyanide, and July 1, 2015, for dioxin TEQ.

During the compliance schedules, interim limitations are included based on current treatment facility performance or on previous permit limitations, whichever is more stringent, to maintain existing water quality. Findings 44 to 49 discuss the basis for the compliance schedules and final compliance dates. The Board may take appropriate enforcement actions if interim limitations and requirements are not met. **Attachment 4** details the calculation of the interim limits.

6) Attainability of Interim Performance-Based Limitations

i. Copper

During the period of September 2001 through February 2004, the Discharger's effluent concentrations for copper ranged from 1.9 µg/L to 46.1 µg/L (9 samples). All samples are below the interim limitation of 72.6 µg/L. It is, therefore, expected that the facility can comply with the interim limitation for copper.

ii. Lead

During the period of March 1998 through February 2004, the Discharger's effluent concentrations for lead ranged from <0.01 µg/L to 110 µg/L (16 samples). All samples are below the interim limitation of 113 µg/L. It is, therefore, expected that the facility can comply with the interim limitation for lead.

iii. Selenium

During the period of September 2001 through February 2004, the Discharger's effluent concentrations for selenium ranged from <2.2 µg/L to 41 µg/L (7 samples). All samples are below the interim limitation of 70 µg/L, it is, therefore, expected that the Discharger can comply with the IPBL for selenium.

iv. Zinc

During the period of March 1998 through February 2004, the Discharger's effluent concentrations for zinc ranged from <0.3 µg/L to 113 µg/L (17 samples). All samples are below the interim limitation of 944 µg/L, it is, therefore, expected that the Discharger can comply with the IPBL for zinc.

v. Cyanide

During the period of September 2001 through February 2004, the Discharger's effluent concentrations for cyanide ranged from <2 µg/L to <10 µg/L (8 samples). With the exception of one sample (<10 µg/L, on September 4, 2001), all samples are below the interim limitation of 5 µg/L. It is, therefore, expected that the facility can comply with the interim limitation for copper.

7) Comparison to Previous Permit Limitations

The effluent limitations for TSS, oil and grease, BOD, settable matter, pH, and temperature, and acute toxicity have been retained from the previous Order. The previous permit does not include effluent limitations for copper, lead, selenium, zinc, cyanide, or bis(2-ethylhexyl)phthalate.

7. Basis for Receiving Water Limitations

- a). Receiving water limitations C.1 and C.2 (conditions to be avoided): These limitations are based on the previous permit and the narrative/numerical objectives contained in Chapter 3 of the Basin Plan, pages 3-2 – 3-5.
- b). Receiving water limitation C.3 (compliance with State Law): This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

8. Basis for Self-Monitoring Requirements

The basis for the Self-Monitoring Requirements is described in Finding 59.

9. Basis for Provisions

- a) Provision D.1. (Permit Compliance and Rescission of Previous Permit): Time of compliance is based on 40 CFR 122. The basis of this Order superceding and rescinding the previous permit is based on 40 CFR 122.46.
- b) Provision D.2 (Effluent Characterization Study): This provision is based on the Basin Plan and the SIP.
- c) Provision D.3 (Receiving Water Study): This provision is based on the Basin Plan and the SIP.
- d) Provision D.4 (Compliance Schedule Requirements): This provision is based on Section 2.1 of the SIP.

- e) Provision D.5 (Pollutant Minimization Program): This provision is based on the SIP, Section 2.4.5.
- f) Provision D.6 (Storm Water Pollution Prevention Plan and Annual Report). This is based on the Basin Plan, 40 CFR part 122, and Regional Board Resolution No. 74-10.
- g) Provision D.7 (Best Management Practices Program): This provision is based on the Clean Water Act, Section 304(e), and 40 CFR part 122.44(k).
- h) Provision D.8 (Optional Mass Offset): This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to San Francisco Bay.
- i) Provision D.9 (Optional 303(d)-listed Pollutants Site-Specific Objective and TMDL Status Review): Consistent with the SIP, the Discharger may participate in the development of region-wide TMDL or SSO studies.
- j) Provision D.10 (Optional Site-Specific Translator Study): This provision allows the Discharger to conduct an optional copper, lead, nickel, and zinc translator study, based on BPJ and the SIP. This provision is based on the need to gather site-specific information in order to apply a different translator from the default translator specified in the CTR and SIP. Without site-specific data, the default translators from CTR have been used to translate the dissolved WQC/WQOs for copper, lead, nickel, and zinc to total standards in recoverable metals.
- k) Provision D.11 (Operations and Maintenance Manual, Review and Status Reports) and D.12 (Contingency Plan, Review and Status Report): These provisions are based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.
- l) Provision D.13 (New Water Quality Objectives): This provision allows future modification of the permit and permit effluent limitations as necessary in response to updated WQOs that may be established in the future. This provision is based on 40 CFR 123.
- m) Provision D.14 (Self-Monitoring Program): The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the Self Monitoring Program (SMP) of the Permit. This provision requires compliance with the SMP, and is based on 40 CFR 122.63. The SMP is a standard requirement in almost all NPDES permits issued by the Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Board's policies. The SMP also contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.
- n) Provision D.15 (Standard Provisions and Reporting Requirements): The purpose of this provision is to require compliance with the standard provisions and reporting requirements

given in this Board's document titled *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions), or any amendments thereafter. That document is incorporated in the permit as an attachment to it. Where provisions or reporting requirements specified in the permit are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the permit specifications shall apply. The standard provisions and reporting requirements given in the above document are based on various state and federal regulations with specific references cited therein.

- o) Provisions D.16 (Change in Control or Ownership): This provision is based on 40 CFR 122.61.
- p) Provision D.17 (Permit Reopener): This provision is based on 40 CFR 123.
- q) Provision D.18 (NPDES Permit): This provision is based on 40 CFR 123.
- r) Provisions D.19 (Order Expiration and Reapplication): This provision is based on 40 CFR 122.46(a).

V. WASTE DISCHARGE REQUIREMENT APPEALS

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.

VI. ATTACHMENTS

Attachment 1: Reasonable Potential Analysis Results

Attachment 2: Calculation of Final WQBELs

Attachment 3: Effluent Data

Attachment 4: Infeasibility Evaluation and Calculation of Performance Based Effluent Limits

Attachment 1

Reasonable Potential Analysis Results

Attachment 2

Calculation of Final WQBELs

Attachment 3

Effluent Data

Attachment 4

Infeasibility Evaluation and Calculation of Performance Based Effluent Limits