

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 W 4<sup>th</sup> Street, Suite 200, Los Angeles

**FACT SHEET**  
**WASTE DISCHARGE REQUIREMENTS**  
**for**  
**MORTON INTERNATIONAL, INC.**  
**MORTON SALT DIVISION – LONG BEACH FACILITY**

NPDES Permit No.: CA0061476  
Public Notice No.: 04-062

FACILITY ADDRESS

Morton Salt Long Beach  
1050 Pier F Avenue  
Long Beach, CA 90802

FACILITY MAILING ADDRESS

Morton Salt Long Beach  
PO Box 2289  
Contact: Ken Dobson  
Telephone: (562) 437-0071

**I. Public Participation**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

**A. Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to:

Executive Officer  
California Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Written comments pertaining to this proposed Board action must be submitted to the Regional Board staff no later than 5 p.m. on November 17, 2004. The Regional Board chair may exclude from the record written materials received after this date. (See Cal. Code Regs., tit. 23, § 648.4.)

B. Public Hearing

The Regional Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: December 9, 2004  
Time: 9:00 a.m.  
Location: Metropolitan Water District of Southern California, Board Room  
700 North Alameda Street, Los Angeles, California.

Interested persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is <http://www.waterboards.ca.gov/losangeles/> where you can access the current agenda for changes in dates and locations.

C. Waste Discharge Requirements Appeals

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board, Office of Chief Counsel  
ATTN: Elizabeth Miller Jennings, Senior Staff Counsel  
1001 I Street, 22<sup>nd</sup> Floor  
Sacramento, CA 95814

D. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4<sup>th</sup> Street, Suite 200, Los Angeles, California, 90013, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Regional Board by calling (213) 576-6600.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Board, reference this facility, and provide a name, address, and phone number.

**II. Introduction**

Morton International, Inc. (hereinafter Morton Salt or Discharger), Morton Salt Division, discharges process water and storm water runoff from its Long Beach Facility (Facility) to Long Beach Harbor, a water of the United States, within the Estuary. Wastes discharged from the Facility are regulated by WDRs and a NPDES permit contained in Board Order No. 97-081 (NPDES Permit No. CA0061476). Order No. 97-081 expired on May 10, 2002.

Morton Salt filed a Report of Waste Discharge and applied for renewal of its WDRs and NPDES permit on April 11, 2002. The tentative Order is the reissuance of the WDRs and NPDES permit for discharges from Morton Salt.

A NPDES permit Compliance Evaluation Inspection (CEI) was conducted on January 7, 2004. The CEI served as a site visit to observe operations, verify conditions, and collect additional data to develop permit limitations and conditions.

**III. Description of Facility and Waste Discharge**

Morton Salt owns the Facility located at 1050 Pier F Avenue, Long Beach, California. At this Facility, Morton Salt operates a salt processing and packaging plant. The Facility produces salt for industrial and home water conditioning and treatment. The Facility occupies approximately five acres and continuously discharges up to 24,000 gallons per day (gpd) of process water which is comprised of 100% wet scrubber effluent. In addition, depending on wet weather conditions, the Facility may also intermittently discharge 163,000 gpd of storm water runoff comprised of salt storage pile seepage, storm water runoff from on-site operations, and storm water runoff from an off-site operation. While water is not a component of the final product, it is used at the Facility for supporting equipment and plant operations.

The Facility consists of five industrial buildings that house packaging operations and finished goods inventory. There are no floor drains in any of the buildings.

The Facility typically receives two, 60,000-ton shipments per year of wet solar salt from Mexico. Salt is stockpiled on-site and processed as follows: (1) materials are transferred directly to trucks; (2) materials are dried in a natural gas-fired kiln (dryer) and subsequently screened and stored in silos for packaging; (3) materials are dried in the kiln and transferred to trucks directly from screening; or (4) materials are screened and packaged without drying.

The existing Order (Order No. 97-081) regulates the discharge of up to 24,000 gpd of wet scrubber effluent and storm water runoff from salt stockpiles through Discharge Serial No. 001. According to the permit renewal application, the Facility proposes to discharge up to 13,000 gpd of wet scrubber effluent and 163,000 gpd of intermittently discharged storm water runoff through Discharge Serial No. 001 (Latitude 33°45'00" North, Longitude 118°12'30" West) to the Long Beach Harbor, within the Estuary. The rainfall runoff discharge rate was calculated based on 1.5 acres of Facility area that is impacted and four inches of rainfall over a 24-hour period.

During salt processing, water is employed in air scrubber equipment to control salt dust. No additives are used in the process. The Facility operates one wet scrubber for the dryer and one wet scrubber for other salt handling operations. Scrubber water is used on a once-through basis and is routed to a collection sump. From the collection sump, wet scrubber water is pumped to an in-ground sample box on the west side of the Facility. During wet weather conditions, the wet scrubber effluent may combine with salt storage pile seepage and storm water runoff from on-site facility operations. From the in-ground sample box, the wastewater is directed to the catch basin. During wet weather conditions, on-site storm water runoff and off-site storm water runoff from an adjacent property is also directed to the catch basin. From the catch basin, the wastewater flows by gravity through a pipe that discharges into Long Beach Harbor. The existing Order refers to the point of discharge as Discharge Serial No. 001. No treatment is provided to the wastewater prior to discharge.

As previously stated, a NPDES CEI was conducted on January 7, 2004. According to the CEI, the housekeeping at the Facility appeared to be generally good. However, a large pile of floor sweepings were located on the Facility's southwest side. Materials from this pile could contribute to polluting on-site storm water runoff. During the CEI, it was confirmed that the catch basin receives storm water runoff from a neighboring facility via an underground drainage pipe. In addition, the Facility representative stated that storm water tends to pool on-site, primarily on the east side of the salt stockpile and is generally not discharged into the catch basin. However, based upon visual observations during the CEI, it appears that some storm water discharge from the west side of the stock pile is directed to the catch basin and then to Long Beach Harbor. Further, it was also confirmed during the CEI that the in-ground sample box receives seepage from the salt storage pile even through the volume of seepage is minimal.

The Regional Board and the United States Environmental Protection Agency (U.S. EPA) have classified the Morton Salt facility as a minor discharge.

The Discharger characterized the effluent discharged through Discharge Serial No. 001 in the permit renewal application<sup>1</sup> as follows:

---

<sup>1</sup> The permit renewal application also contains data from an April 9, 2002 sampling event.

| <b>Pollutant (units)</b>            | <b>Reported Maximum Daily Value</b> | <b>Reported Long Term Average Value</b> |
|-------------------------------------|-------------------------------------|---|
| Total Suspended Solids (TSS) (mg/L) | 35                                  | <0.1                                    |
| Total Organic Carbon (mg/L)         | 4.3                                 | NR                                      |
| Oil and Grease (mg/L)               | 2.1                                 | 1.8                                     |
| Flow (gpd)                          | NR                                  | 13,000                                  |
| Temperature (winter/summer) (°F)    | 68°/81°                             | NR                                      |
| pH (min./max.) (s.u.)               | 7.52 – 7.81                         | NR                                      |
| Arsenic (µg/L)                      | 5.4                                 | NR                                      |
| Chromium <sup>1</sup> (µg/L)        | 64                                  | NR                                      |
| Copper (µg/L)                       | 14                                  | NR                                      |
| Nickel (µg/L)                       | 61                                  | NR                                      |
| Selenium (µg/L)                     | 5                                   | NR                                      |
| Zinc (µg/L)                         | 140                                 | NR                                      |
| Bromodichloromethane (µg/L)         | 3.2                                 | NR                                      |
| Bromoform (µg/L)                    | 1.9                                 | NR                                      |
| Chloroform (µg/L)                   | 2.2                                 | NR                                      |
| Dibromochloromethane (µg/L)         | 3.1                                 | NR                                      |

NR = Not reported.

<sup>1</sup> The data from April 9, 2002 does not identify which form of chromium is reported [e.g., total, (III), or (VI)].

The Discharger sampled for all but four California Toxics Rule (CTR) priority pollutants on April 9, 2002 [e.g., chromium (VI), asbestos, 2,3,7,8 – TCDD, and N-Nitrosodimethylamine]. It is not clear why these pollutants were not sampled for but when questioned, the Discharger stated that a former employee who was responsible for the required sampling is no longer employed at Morton Salt. The April 9, 2002 results indicate that arsenic, chromium, copper, nickel, selenium, zinc, bromodichloromethane, bromoform, chloroform, and dibromochloromethane were detected. All other pollutants were reported below detectable levels.

Monitoring results from the in-ground sample box that were submitted with quarterly monitoring reports for the period from January 1998 through January 2004, and existing effluent limitations, are summarized below.

| Pollutant (units)                   | Existing Maximum Daily Effluent Limitations (MDELS) | Range of Reported Values from Monitoring Reports |
|-------------------------------------|---|--|
| Total Suspended Solids (TSS) (mg/L) | 150   | <10 – 81   |
| TSS (lb/d) <sup>1</sup>             | 30  | NR   |
| Oil and Grease (mg/L)               | 15  | <1.0 – 3.0                                       |
| Oil and Grease (lb/d) <sup>1</sup>  | 3.0   | NR   |
| Settleable Solids (ml/L)            | 0.3   | <0.10 – 0.3                                      |

NR = Not reported.

<sup>1</sup> No mass-based emissions calculations were provided to determine compliance with mass-based permit limits contained in Order No. 97-081.

All available data submitted to the Regional Board were compiled and evaluated to determine if the process water and storm water discharges exceeded effluent limitations, as shown in the table above. The available effluent data indicate that the Discharger has complied with all existing effluent limitations.

A review of available monitoring reports for the period from January 1998 through January 2004 indicate that the Discharger also sampled for biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), ammonia, and cyanide. These pollutants were not detected, with the exception of TOC, which was detected at 4.3 mg/L on April 9, 2002 [these data from April 9, 2002 were submitted as part of the permit renewal application, not as part of the Monitoring and Reporting Program (MRP), No. CI-6949, requirements]. Values for pH and temperature were also reported during this period and ranged from 7.1 – 8.1 s.u. and 67 – 84 °F, respectively.

During the CEI, it was further noted that monitoring data from storm water discharge events, as required by Attachment 1<sup>2</sup> of the Storm Water Monitoring and Reporting Program, were not available. Attachment 1 of the Storm Water Monitoring and Reporting Program includes requirements such as annual site inspections, dry and wet season observations, sampling protocols, and record-keeping requirements. The program also calls for the submission of an Annual Report (March 1). Upon request, the Discharger provided samples of self-monitoring logs that are prepared as required by Attachment 1. The Discharger provided the following sample logs: Form 1: Facility Annual Compliance Evaluation (March 19, 2003); and Form 3: Monthly Storm Water Discharge Visual Observations (April 22, 2004).

Analytical reports submitted with the Discharge Monitoring Reports (DMRs) indicate that samples were collected from the in-ground sample box. However, the Facility representative stated that he has observed samples collected directly from the wet scrubber effluent

<sup>2</sup>Attachment 1 of page T-3 of the MRP requires the Discharger to conduct storm water sampling. Documentation was provided which indicated that visual observations were conducted and that a significant storm event did not occur. Therefore, sampling data from a significant storm event, as required by Attachment 1, were not provided.

discharge pipe entering into the in-ground sample box. The Facility is required to collect samples “where representative samples of the effluent can be obtained.” Samples collected from the wet scrubber effluent discharge pipe are representative of process water at the Facility, but are not representative of the Facility’s salt storage pile seepage or on-site storm water runoff. Representative samples of all effluent from the Facility’s operations can be obtained from the in-ground sample box. The in-ground sample box, depending on weather conditions, consists of process water, salt storage pile seepage and on-site storm water runoff.

As noted previously, wastewater flows from the in-ground sample box to the catch basin. The catch basin, depending on rainfall, may collect on-site storm water as well as storm water runoff from an adjacent property. Therefore, the wastewaters that collect in the catch basin are representative of Morton Salt’s effluent that is discharged to the Long Beach Harbor, but are not representative of Morton Salt’s operations or their on-site storm water runoff because the contents of the catch basin are contaminated by an adjacent property’s storm water runoff.

Morton Salt is pursuing the option of discharging the wastewater to the municipal sanitary sewer of the County Sanitation Districts of Los Angeles County (CSDLAC). Because of high salinity, CSDLAC might not allow the wastewater to be discharged to sewer.

The high salinity of wastewater prevents it from being used for irrigation or other beneficial uses.

#### **IV. Applicable Plans, Policies, and Regulations**

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

1. The Federal Clean Water Act (CWA). The Federal Clean Water Act requires that any point source discharges of pollutants to a water of the United States must be done in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.
2. Title 40, Code of Federal Regulations (CFR) – Protection of Environment, Chapter I, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These CWA regulations provide effluent limitations for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limitations for certain pollutants discharged by Morton Salt.
3. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The

Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The storm drain directs discharge to the Long Beach Harbor. The beneficial uses listed in the Basin Plan for the Long Beach Harbor, within the Estuary (HU 405.12), are as follows:

Existing Uses: Industrial service supply, navigation, contact and non-contact water recreation, commercial and sport fishing, marine habitat, and rare, threatened or endangered species.

Potential Uses: Shellfish harvesting.

4. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. The Ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and U.S. EPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with U.S. EPA's 1999 ammonia criteria update.
5. The State Water Resources Control Board (State Board) adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.
6. On May 18, 2000, the U.S. Environmental Protection Agency (U.S. EPA) promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR section 131.38]. In the CTR, U.S. EPA promulgated criteria that protect the general population at an incremental cancer risk level of one in a million ( $10^{-6}$ ) for all priority toxic pollutants regulated as carcinogens. The CTR also allows for a schedule of compliance not to exceed 5 years from the date of permit renewal for an existing discharger if the Discharger demonstrates that it is infeasible to promptly comply with effluent limitations derived from the CTR criteria.
7. On March 2, 2000, State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA

through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The SIP requires the Dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limitations (WQBELs) and to calculate the effluent limitations. The discharge is to the Long Beach Harbor, within the Estuary; therefore, the CTR criteria for freshwater, saltwater, or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of Long Beach Harbor.

8. 40 CFR section 122.44(d)(1)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial uses. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that water quality-based effluent limitations (WQBELs) may be set based on U.S. EPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.
9. State and Federal anti-backsliding and anti-degradation policies require that Regional Board actions protect the water quality of a water body and ensure that the water body will not be further degraded. The anti-backsliding provisions are specified in section 402(o) and 303(d)(4) of the CWA and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed.
10. Effluent limitations are established in accordance with Parts 301, 304, 306, and 307 of the Federal CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Long Beach Harbor.
11. Existing waste discharge requirements are contained in Order No. 97-081, adopted by the Regional Board on June 16, 1997. Permit conditions (effluent limitations and other special conditions) established in the existing waste discharge requirements have been carried over to the proposed Order.

## **V. Regulatory Basis for Effluent Limitations**

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of the discharge of pollutants is established through NPDES permits that contain effluent limitations and standards. The CWA establishes two principal bases for

effluent limitations. First, dischargers are required to meet technology-based effluent limitations that reflect the best controls available considering costs and economic impact. Second, they are required to meet WQBELs that are developed to protect applicable designated uses of the receiving water.

The CWA requires that technology-based effluent limitations be established based on several levels of control:

- Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BCT, BAT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 of the NPDES regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis in which ELGs are not available for certain industrial categories and/or pollutants of concern. Under 40 CFR Part 426, ELGS do not exist for the salt manufacturing industry. Therefore, ELG-based limits will not be established in the proposed Order.

If a reasonable potential exists for pollutants in a discharge to exceed water quality standards, WQBELs are also required under 40 CFR section 122.44(d)(1)(i). WQBELs are established after determining that technology-based limitations are not stringent enough to ensure that state water quality standards are met for the receiving water. WQBELs are based on the designated use of the receiving water, water quality criteria necessary to support the designated uses, and the state’s anti-degradation policy. For discharges to inland surface waters, enclosed bays, and estuaries, the SIP establishes specific implementation procedures for determining reasonable potential and establishing WQBELs

for priority pollutant criteria promulgated by U.S. EPA through the CTR and the National Toxics Rule (NTR), as well as the Basin Plan.

There are several other specific factors affecting the development of limitations and requirements in the proposed Order. These are discussed as follows:

1. Pollutants of Concern

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through a NPDES permit. Further, the NPDES regulations and SIP require regulation of any pollutant that (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality criteria or objective. The SIP includes provisions for priority pollutant criteria promulgated by U.S. EPA in the CTR and NTR, and for those priority pollutants outlined in the Basin Plan.

Morton Salt operates a salt processing operation. The Facility receives, stores, and distributes solar evaporated salt to retailers and industrial customers. The Facility is comprised of warehouse buildings, parking lots, salt storage pile areas, and material loading and unloading areas. The effluent from the facility operations include process water (e.g., wet scrubber effluent), salt storage pile seepage and storm water runoff. An adjacent property also contributes storm water to Morton Salt's effluent and is discharged to Long Beach Harbor.

Effluent limitations for Discharge Serial No. 001 in the existing Order were established for oil and grease, TSS, and settleable solids because they are pollutants typically used to characterize wastewater. These contaminants may be present in the discharge of the storm water runoff because storm water contacts the paved surface surrounding the facility and may contact equipment, and as a result, become contaminated by solids and oil and grease. Further, storm water runoff from product storage and loading areas may contribute oil and grease to the discharge. Therefore, these constituents are pollutants of concern and effluent limitations for these parameters will remain in the permit. Also, other conventional pollutants (BOD, turbidity) may be present in the storm water, and therefore, limits are given.

The previous *MRP* No. CI-6949 required monitoring for regulated pollutants, temperature and pH. Storm water runoff from the facility may contain pollutants that affect the pH of the discharge. Therefore, pH is considered a pollutant of concern. In addition, discharges of certain wastewaters may cause changes in the temperature of the receiving water. Consistent with Basin Plan requirements, the proposed Order establishes an effluent limitation for temperature.

Continuous discharges of process water (e.g., wet scrubber effluent) and intermittent discharges of salt storage pile seepage and on-site storm water runoff (e.g., weather

dependent) may carry pollutants that may contribute to toxicity in the receiving water. Therefore, toxicity is an indicator of the combined effect of pollutants contained in the discharge and will be evaluated for possible regulation in the proposed Order.

Data submitted from an April 9, 2002 sampling event, as part of the permit renewal application, indicate that certain metals were detected (i.e., arsenic, chromium, copper, nickel, selenium, and zinc). Further, bromodichloromethane, bromoform, chloroform, and dibromochloromethane were detected in the samples. These constituents are not considered pollutants of concern in this discharge, because they are detected at low concentrations and are normally present in potable water. However, the Regional Board has determined that monitoring for these potential pollutants of concern is required to further characterize the waste stream and to evaluate reasonable potential to exceed applicable water quality criteria.

Effluent limitations and/or monitoring requirements are established in the proposed Order to address these pollutants of concern, where appropriate.

## 2. Technology-Based Effluent Limitations

The existing Order required the Discharger to develop and implement a *Storm Water Pollution Prevention Plan* (SWPPP). A SWPPP outlines site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into surface waters. Storm water discharges occur at the Facility; during the CEI, best management practices were identified as one method to reduce contamination of storm water runoff. Morton Salt prepared a SWPPP on February 17, 2003. As a result, the proposed Order requires Morton Salt to update and continue to implement their SWPPP, and control storm water runoff to the Long Beach Harbor.

Based on the CEI that was conducted on January 7, 2004, housekeeping at Morton Salt was generally good. However, a large pile of floor sweepings were located on the facility's southwest side. Materials stored in this manner may contribute to storm water contamination. In addition, it was noted during the CEI that storm water pools on the east side of the salt stockpile and may flow to the catch basin. Further, it was confirmed that the in-ground sample box receives seepage from the salt stockpile.

According to the SWPPP dated February 17, 2003, BMPs were established and implemented in January 1989. BMPs were specific to outdoor material storage areas and included the following objectives: 1) maintain orderly storage area; 2) pick up debris regularly; and 3) sweep storage areas weekly using a portable vacuum sweeper or by hand and dispose of the material properly. Based on the observations during the CEI, it appears that Morton Salt may be meeting these objectives. However, the Discharger is required to remove debris and other materials that may pollute storm water, daily.

National ELGs have not been developed for wet scrubber effluent, salt storage seepage or storm water runoff from salt processing and packaging operations. Also, data is not available to apply Best Professional Judgment (BPJ) to derive numeric effluent limitations. Therefore, pursuant to 40 CFR section 122.44(k), the Regional Board will require the Discharger to develop and implement *Best Management Practices* (BMPs). These BMPs will be included in the updated SWPPP. The Discharger shall address non-storm water discharges (i.e., process water/wet scrubber effluent) and specific areas that are considered sources of pollutants, including but not limited to, outside storage piles in which accumulation of floor sweepings are present, areas of storm water pooling that may be contaminated by nearby salt piles or off-site storm water contamination. The BMPP shall include measures to minimize the amount of pollutants entering the discharge. The Discharger shall also address employee education and training to ensure that record keeping and data reporting procedures maintain accuracy and preserve the integrity of the data. In the absence of established ELGs, and with the combination of the SWPPP and BMPs, the existing permit limitations based on past performance and BPJ will serve as the equivalent of technology-based effluent limitations to carry out the purposes and intent of the CWA.

### 3. Water Quality-Based Effluent Limitations

As specified in 40 CFR section 122.44(d)(1)(i), Orders must include WQBELs for toxic pollutants (including toxicity) that are or may be discharged at levels which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or U.S. EPA water quality criteria contained in the CTR and NTR. The procedures for determining reasonable potential, and if necessary for calculating WQBELs, are contained in the SIP.

The CTR contains both saltwater and freshwater criteria. According to 40 CFR section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95% or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95% or more of the time; and at salinities between 1 and 10 ppt, the more stringent of the two apply. Because the discharge to Long Beach Harbor is within the Estuary, the CTR criteria for fresh water, saltwater, or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in the proposed Order to protect the beneficial uses of the Long Beach Harbor, in the vicinity of the discharge.

Certain CTR fresh water quality criteria for metals are hardness dependent. The Discharger has not provided hardness data for the receiving water (e.g., Long Beach

Harbor). Therefore, additional receiving water data must be collected to evaluate reasonable potential and to calculate WQBELs for priority pollutants. As previously stated, receiving water data were not provided.

a. *Reasonable Potential Analysis (RPA)*

In accordance with Section 1.3 of the SIP, the Regional Board conducts a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board analyzes effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all pollutants that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

- i. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.
- ii. Trigger 2 – If  $MEC < C$  and background water quality (B)  $> C$ , a limit is needed.
- ii. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Regional Board to conduct the RPA. Upon review of the data, and if the Regional Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The Discharger provided sampling results for one sampling event taken on April 9, 2002. All CTR priority pollutants were sampled for, with the exception of chromium (VI), asbestos, 2,3,7,8-TCDD, and N-nitrosodimethylamine. In addition, as previously stated, receiving water data were not available.

There are insufficient monitoring data available to evaluate reasonable potential for the priority pollutants in Morton Salt's process water or storm water runoff. In accordance with section 13267 of the California Water Code, the Regional

Board is requiring the Discharger to conduct CTR priority pollutant sampling for the effluent and receiving water annually for the life of the permit. The monitoring requirements are discussed in greater detail in the associated *MRP* No. CI-6949. As stated previously, certain priority pollutants were detected in the effluent in a sample collected April 9, 2002. (i.e., arsenic, chromium (III), copper, nickel, selenium, zinc, bromoform, bromodichloromethane, chloroform, and dibromochloromethane).

*b. Calculating WQBELs*

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

- i. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
- ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
- iii. Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Board.

*c. Impaired Water Bodies on the 303 (d) List*

Section 303(d) of the CWA requires states to identify specific water bodies in which water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The U.S. EPA approved California's 303(d) list of impaired water bodies on July 25, 2003. Certain receiving waters in Los Angeles County watersheds do not fully support beneficial uses and therefore, are classified as impaired on the 2002 303(d) list and are scheduled for TMDL development.

The 2002 303(d) list classifies the Long Beach Harbor as impaired. The facility discharges to the Long Beach Harbor, at the breakwater. The pollutants of concern, detected in the water column in Long Beach Harbor include: DDT, PAHs, and PCBs. In addition, benthic community effects were noted as well as sediment toxicity. TMDLs have not been developed and approved but will be developed in the future; therefore, no conditions in the Order are based on TMDLs.

d. *Whole Effluent Toxicity*

Whole Effluent Toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. An acute toxicity test is conducted over the short term and measures mortality.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response from aquatic organisms. Detrimental response includes but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing permit does not contain acute toxicity limitations or monitoring requirements; therefore, no toxicity data are available for review.

In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Consistent with Basin Plan requirements, the proposed Order will establish acute toxicity limitations and monitoring requirements.

4. Specific Rationale for Each Numerical Effluent Limitation

Discharge Serial Nos. 02D (e.g., “D” signifying dry weather conditions) and 02W (e.g., “W” signifying wet weather conditions) at the catch basin have been established to determine compliance with final effluent limitations. Samples will be taken from Discharge Serial No. 02W to also further characterize the waste stream. Discharge Serial Nos. 02D and 02W refer only to the catch basin.

During dry conditions, a continuous flow of process water enters the in-ground sample box, then flows to the catch basin and is then discharged to the Long Beach Harbor. During dry conditions, the process water is not commingled with other, on-site wastewaters, and is comprised of 100% wet scrubber effluent. During dry weather conditions, the effluent observed in the in-ground sample box is the same as that observed in the catch basin. Therefore, sampling at Discharge Serial No. 02D will be required during dry weather conditions and will be representative of the effluent in both locations (e.g., in-ground sample box and catch basin).

During intermittent and infrequent wet weather conditions, the components of the effluent in the in-ground sample box differ from that found in the catch basin. During

wet weather conditions, the in-ground sample box consists of process water, salt storage pile seepage, and on-site, storm water runoff. The in-ground sample box water then flows to the catch basin. The catch basin receives water from the in-ground sample box (e.g., process water, salt storage pile seepage, and on-site storm water) and during wet weather conditions, receives additional on-site storm water runoff and off-site storm water runoff from an adjacent property. During wet weather conditions, the effluent observed in the in-ground sample box differs from that observed in the catch basin

Final effluent limitations will be applied to Discharge Serial Nos. 02D (e.g., “D” signifying dry weather conditions) and 02W (e.g., “W” signifying wet weather conditions) at the catch basin. From the catch basin, wastewaters from Discharge Serial Nos. 02D and 02W flow to the final point of discharge into Long Beach Harbor. Monitoring will be required at Discharge Serial Nos. 02D and 02W to determine compliance with the effluent limitations during dry and wet weather conditions. As previously stated, the effluent observed in the catch basin during dry weather conditions differs from that observed during wet weather conditions (e.g., 02D • 02W). Therefore, sampling at both locations will be required during both dry and wet weather conditions to characterize the effluent and to determine compliance with effluent limitations.

The designation, Discharge Serial No. 001, has been eliminated and renamed, as previously described.

The final effluent limitations are based on the existing Order until additional data can be collected to more accurately characterize the process water and storm water runoff. Section 402(o) of the Clean Water Act and 40 section CFR 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders based on the submitted sampling data. The Discharger provided insufficient priority pollutant monitoring data. Therefore, the Regional Board was unable to determine if reasonable potential to exceed water quality criteria exists for CTR priority pollutants. Therefore, the proposed Order does not establish WQBELs for CTR priority pollutants, but requires monitoring.

The requirements in the proposed Order for oil and grease and settleable solids for discharges of wet scrubber effluent, salt storage pile seepage, and on-site storm water runoff (shown in the table below) are based on effluent limitations specified in Morton Salt’s existing Order (No. 97-081). The effluent limitation for TSS has been revised to be consistent with those based on similar Orders authorizing storm water discharges in the Los Angeles region that have been recently adopted by the Regional Board. The effluent limitations for pH and toxicity have been added and are based on the Regional Board Basin Plan objectives; the effluent limitation for temperature is based on the Thermal Plan.

The existing Order contained effluent limitations expressed only as maximum daily effluent limitations (MDELs). In compliance with 40 CFR section 122.45(d), permit limitations shall be expressed, unless impracticable, as both average monthly effluent limitations (AMELs) and maximum daily effluent limitations (MDELs). AMELs for oil and grease, TSS, and settleable solids are based on similar orders recently adopted by the Regional Board.

a. Final Effluent Limitations for Discharge Serial Nos. 02D and 02W (Catch Basin)

The final effluent limitations established in the proposed Order are applicable to discharges during both dry and wet weather conditions through NPDES Discharge Serial Nos. 02D and 02W (Latitude 33°45' 00" North and Longitude 118°12' 30" West), at the catch basin and are as follows:

| Constituent                    | Maximum Daily Effluent Concentration Limitations , | Average Monthly Effluent Concentration Limitations | Rationale <sup>1</sup> |
|--------------------------------|--|--|------------------------|
| pH (standard units)            | Between 6.5 – 8.5                                  |  | BP                     |
| Temperature (°F)               | 86   |  | BP                     |
| Oil and Grease (mg/L)          | 15   | 10   | E, BPJ                 |
| Total Suspended Solids (mg/L)  | 75   | 50   | E, BPJ                 |
| Settleable Solids (ml/L)       | 0.3  | 0.1  | E, BPJ                 |
| BOD <sub>5</sub> @ 20°C (mg/L) | 30   | 20   | BPJ                    |
| Turbidity (NTU)                | 75   | 50   | BPJ                    |
| Toxicity – Acute (% survival)  | 2  |  | BP                     |

1. BP = Basin Plan; BPJ = Best Professional Judgment;

2. Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

5. Monitoring Requirements

The existing *MRP* (No. CI-6949) requires quarterly monitoring of wet scrubber effluent and storm water for temperature, total waste flow, oil and grease, TSS, settleable solids, and pH for Discharge Serial No. 001. The existing *MRP* states that during periods of storm water discharge, samples shall be taken during the first 30 minutes of

discharge. Further, the *MRP* states that each separate period of storm water discharge shall be sampled but not more than one set of samples per week is required.

As previously stated, the Discharger provided one data set from April 9, 2002. All CTR priority pollutants were sampled for, with the exception of chromium (VI), asbestos, 2,3,7,8-TCDD, and N-nitrosodimethylamine. In addition, receiving water data were not available.

There are insufficient monitoring data available to evaluate reasonable potential for the priority pollutants in the process water or storm water runoff.

Monitoring will occur at Discharge Serial Nos. 02D and 02W, as previously defined, to determine compliance with effluent limitations.

Monitoring during dry weather conditions shall occur at Discharge Serial No. 02D (catch basin) to characterize the process water (e.g., wet scrubber effluent), collect additional information to conduct the RPA in the future, and to determine compliance with final effluent limitations:

- Samples shall be collected from the catch basin, prior to discharging through the piping from the catch basin to the final point of discharge into Long Beach Harbor.

Monitoring during wet weather conditions shall occur at Discharge Serial No. 02W (catch basin) to characterize the process water and storm water runoff (e.g., wet scrubber effluent, salt storage pile seepage, and on-site storm water runoff and off-site storm water runoff), collect additional information to conduct the RPA in the future, and determine compliance with final effluent limitations:

- Samples shall be collected from the catch basin, prior to discharging through piping from the catch basin to the final point of discharge into Long Beach Harbor.

Monitoring shall also occur in the receiving water:

- The receiving water monitoring location shall be outside the influence of the discharge into the receiving water (e.g., Long Beach Harbor).

*a. Effluent Monitoring: General Overview*

The proposed Order requires the Discharger to collect samples of effluent during dry weather conditions and samples of effluent and storm water runoff during wet weather conditions, prior to discharging to Long Beach Harbor, annually. Sampling locations have been identified at the catch basin (i.e., 02D and 02W).

This monitoring schedule is effective upon adoption of the Order by the Regional Board.

To demonstrate compliance with the final effluent limitations, the proposed Order requires the Discharger to sample annually for temperature, total waste flow, oil and grease, TSS, settleable solids, and pH. Annual sampling shall occur once during dry conditions and once during wet conditions. Analysis for salinity has been added to assess the relative salinity of the discharge to receiving waters.

The previous Order required the Discharger to measure and report total waste flow. During the CEI, it was noted that reported discharge flow is measured by meters on the inlet lines to each scrubber (one meter for each scrubber). Total flow is recorded each day from each meter; daily discharge flow is calculated by summing the differences of daily totalizer readings from both meters. The CEI report states that the flow measurements are judged to be reasonable estimates of total discharge flow during dry weather. Wet weather flows were not evaluated during the CEI. The proposed Order will carry over the requirement for flow measurement and reporting.

The existing Order does not require monitoring for acute toxicity. However, given the nature of the discharge of wet scrubber effluent, the proposed Order requires annual monitoring for acute toxicity. In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. In addition, annual chronic toxicity monitoring will also be established in the proposed Order.

The Discharger is required to conduct annual monitoring during both dry and wet weather conditions for CTR priority pollutants to determine the presence of these pollutants in the discharge and evaluate reasonable potential. The SIP states that the Regional Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Board is requiring, as part of the *MRP* No. CI-6949, that the Discharger conduct effluent monitoring annually for the priority pollutants referenced below, and listed on page T13 -T16 of the *MRP*.

As previously stated, existing effluent monitoring data indicated that arsenic, chromium (III), copper, nickel, selenium, zinc, bromoform, bromodichloromethane, chlorodibromomethane, chloroform, and dichlorobromomethane were detected in the effluent on April 9, 2002. Further, the Discharger has not provided sampling data for chromium (VI), asbestos, 2,3,7,8-TCDD and N-nitrosodimethylamine. In the proposed Order, sampling for these pollutants [e.g., chromium (VI), asbestos, 2,3,7,8-TCDD, and N-nitrosodimethylamine] will be conducted during the CTR priority pollutant sampling mentioned above. Monitoring requirements have also

been established for 2,3,7,8-TCDD and congeners twice during the permit term.

*b. Receiving Water Monitoring*

The Discharger is required to monitor the receiving water for the CTR priority pollutants to determine reasonable potential. Pursuant to the California Water Code, section 13267, the Discharger is required to submit data sufficient for: (1) determining if WQBELs for priority pollutants are required, and (2) to calculate effluent limitations, if required. The SIP (March 2, 2000) requires the Discharger to provide the data. Therefore, the Discharger shall conduct annual monitoring of the receiving water for all CTR priority pollutants, pH, hardness, and salinity. The results of monitoring for reasonable potential determination shall be submitted in accordance with Section I.A of the *MRP*. Receiving water sampling shall be conducted at the same time as effluent sampling. The receiving water monitoring location shall be outside the influence of the discharge into the receiving water (e.g., Long Beach Harbor), where possible, at least 50 feet from the discharge point into Long Beach Harbor.

The Discharger may elect to enter into a collaborative sampling program with other Dischargers if the point of discharge into the receiving water is shared by the Dischargers. By entering into a collaborative sampling program, the Discharger is still required to submit receiving water data for pH, hardness, and all CTR priority pollutants to the Regional Board.

*c. Interim Effluent and Receiving Water Monitoring for TCDD Equivalents*

In accordance with Section 3 of the SIP, the Discharger is also required to conduct effluent and receiving water monitoring for the presence of the 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD or Dioxin) congeners. The monitoring shall be a grab sample conducted once during the first year. The Discharger is required to monitor for 2,3,7,8-TCDD and the 16 congeners listed in the *MRP*. The Discharger is required to calculate Toxic Equivalence (TEQ) for each congener by multiplying its analytical concentration by the appropriate Toxicity Equivalence Factors (TEF). A list of 2,3,7,8-TCDD and congeners is presented in Section VI of the *MRP*.