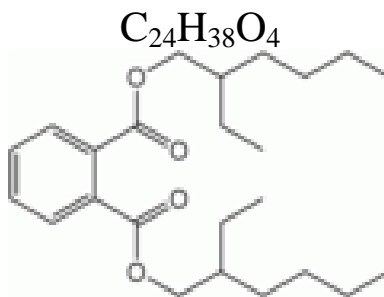


# The Discharge of Toxic Plastic Chemicals into California Central Valley Streams and Rivers



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Bis(2-ethylhexyl)phthalate is a plasticizer, keeping plastic products flexible. The United States Environmental Protection Agency recently issued an *Action Plan* expressing concern about phthalates because of their toxicity and the evidence of pervasive human and environmental exposure to them. This report is an assessment of the California Central Valley Regional Water Quality Control Board's regulation of bis(2-ethylhexyl)phthalate [also called di(2-ethylhexyl)phthalate (or DEHP)].

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Attachment 1: US EPA Action Plan

## Executive Summary:

This report is an assessment of the California Central Valley Regional Water Quality Control Board's regulation of bis(2-ethylhexyl)phthalate [also called di(2-ethylhexyl)phthalate (or DEHP)]. Phthalates were detected in greater than 75% of approximately 2,540 urinary samples collected from participants of the National Health and Nutrition Examination Survey (NHANES). Exposure in the United States to diethyl phthalate, dibutyl phthalate or diisobutylphthalate, benzyl butyl phthalate, and di-(2-ethylhexyl) phthalate is widespread.<sup>1</sup>

Bis(2-ethylhexyl)phthalate, commonly abbreviated DEHP, is an organic compound. The chemical formula for DEHP is C<sub>24</sub>H<sub>38</sub>O<sub>4</sub>. It possesses good plasticizing properties. Being produced on a massive scale by many companies, it has acquired many names and acronyms, including BEHP and di-2-ethylhexyl phthalate. Due to its suitable properties and the low cost, DEHP is widely used as a plasticizer in manufacturing of articles made of PVC. Plastics may contain 1% to 40% of DEHP. DEHP is also used as a hydraulic fluid and as a dielectric fluid in capacitors. DEHP is a colorless liquid with almost no odor.

Because of bis(2-ethylhexyl)phthalate's prevalence in the environment and the documented threats to human and aquatic life; on 30 December 2009 US Environmental Protection Agency (US EPA) issued an *Action Plan* to address the manufacturing, processing, distribution, and use of this phthalate.

Water quality standards for bis(2-ethylhexyl)phthalate were established in December 1992 in the National Toxics Rule (NTR), which was amended in 1999. On 18 May 2000, US EPA adopted the California Toxics Rule<sup>2</sup> (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The water quality standards for bis(2-ethylhexyl)phthalate are 1.8 ug/l for waters from which both water and aquatic organisms are consumed and 5.9 ug/l for non-drinking water sources as a thirty-day average. US EPA has revised their recommended Ambient Criteria<sup>3</sup> for bis(2-ethylhexyl)phthalate to 1.2 ug/l for waters from which both water and aquatic organisms are consumed and 2.2 ug/l for non-drinking water sources as a thirty day average.

US EPA has delegated authority to the State of California to issue National Pollutant Discharge Elimination System (NPDES) permits to regulate wastewater discharges to surface waters. Title 40 of the Code of Federal Regulations (40 CFR), Section 122.44(d), requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. US EPA has interpreted 40 CFR 122.44(d), in *Central Tenets of the National Pollutant Discharge*

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<sup>1</sup> Environmental Health Perspectives Volume 112, Number 3, March 2004, Urinary Levels of Seven Phthalate Metabolites in the U.S. Population from the National Health and Nutrition Examination Survey (NHANES) 1999-2000, Manori J. Silva, Dana B. Barr, John A. Reidy, Nicole A. Malek, Carolyn C. Hodge, Samuel P. Caudill, John W. Brock, Larry L. Needham, and Antonia M. Calafat, Division of Laboratory Sciences, National Center for Environmental Health, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

<sup>2</sup> <http://www.epa.gov/region09/water/ctr/index.html>

<sup>3</sup> <http://www.epa.gov/waterscience/criteria/wqctable/index.html>

*Elimination System (NPDES) Permitting Program*<sup>4</sup>, to mean that although States will likely have unique implementation policies, there are certain tenets that may not be waived by State procedures. These tenets include that “where valid, reliable, and representative effluent data or instream background data are available they MUST be used in applicable reasonable potential and limits derivation calculations. Data may not be arbitrarily discarded or ignored.” In short, Federal Regulations require that if a wastewater discharge presents a reasonable potential to exceed a water quality standard, a numeric Effluent Limitation must be established in the NPDES permit.

Sixty six NPDES permits, issued by California’s Central Valley Regional Water Quality Control Board (Regional Board) were reviewed with respect to the regulation of bis(2-ethylhexyl)phthalate [di(2-ethylhexyl) phthalate (DEHP)].

Of the 66 NPDES permits reviewed:

- Six properly had numeric Effluent Limitations for bis(2-ethylhexyl)phthalate. (9%)
- Twenty-one NPDES permits showed that levels of bis(2-ethylhexyl)phthalate in the discharge presented a reasonable potential to exceed the water quality standard, but contained no Effluent Limitation. (31%)
- Twenty-seven NPDES permits did not contain sufficient information to determine whether levels of bis(2-ethylhexyl)phthalate in the discharge presented a reasonable potential to exceed the water quality standard. (40%)
- The remaining permits contained levels of bis(2-ethylhexyl)phthalate below the current CTR water quality standard and Effluent Limitations were not required.

In failing to include Effluent Limitations for phthalates in NPDES permits, the Regional Board has not protected the aquatic life and drinking water beneficial uses of California’s and the nations streams and rivers. The water quality standard for bis(2-ethylhexyl)phthalate has been in effect in California for 17 years. The CTR mandates full compliance with water quality standards by 18 May 2010. It is obvious that noncompliant wastewater discharges to the waters in California cannot meet the bis(2-ethylhexyl)phthalate standard in the next 4 months. The State Water Resources Control Board (State Board) and US EPA have review authority of the Regional Board’s NPDES permitting activities. Neither the State Board or US EPA have taken any action to compel the Regional Board to properly regulate bis(2-ethylhexyl)phthalate.

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<sup>4</sup> Factsheets and Outreach Materials, 08/16/2002

## The US EPA Action Plan

On 30 December 2009, the US EPA issued the following press release for an *Action Plan* for phthalates.

Release date: 12/30/2009

WASHINGTON - As part of Administrator Lisa P. Jackson's commitment to strengthen and reform chemical management, the U.S. Environmental Protection Agency (EPA) today announced a series of actions on four chemicals raising serious health or environmental concerns, including phthalates. For the first time, EPA intends to establish a "Chemicals of Concern" list and is beginning a process that may lead to regulations requiring significant risk reduction measures to protect human health and the environment. The agency's actions represent its determination to use its authority under the existing Toxic Substances Control Act (TSCA) to the fullest extent possible, recognizing EPA's strong belief that the 1976 law is both outdated and in need of reform.

In addition to phthalates, the chemicals EPA is addressing today are short-chain chlorinated paraffins, polybrominated diphenyl ethers (PBDEs) and perfluorinated chemicals, including PFOA. These chemicals are used in the manufacture of a wide array of products and have raised a range of health and environmental concerns.

### Overview from US EPA's Phthalates Action Plan<sup>5</sup>

#### *I. Overview*

*U.S. Environmental Protection Agency's (EPA's) current management plan includes the following eight phthalates: dibutyl phthalate (DBP), diisobutyl phthalate (DIBP), butyl benzyl phthalate (BBP), di-n-pentyl phthalate (DnPP), di(2-ethylhexyl) phthalate (DEHP), di-n-octyl phthalate (DnOP), diisononyl phthalate (DINP), and diisodecyl phthalate (DIDP). In developing this plan, EPA considered the toxicity of phthalates, their prevalence in the environment and their widespread use and human exposure.*

*Phthalates are produced in high volume, over 470 million pounds per year (EPA 2006). Manufacturers use them in numerous industrial and consumer products, primarily as plasticizers in poly(vinyl chloride) (PVC) products. Many phthalates can potentially lead to high exposure, both individually and together with other phthalates. They can often substitute for each other in products. They are used in medical applications and have been detected in food. A number of phthalates appear in biomonitoring surveys of human tissues, evidencing widespread human exposure (CDC 2009). Although exposure to phthalates can produce a variety of effects in laboratory animals, for certain phthalates the adverse health effects on the development of the male reproductive system are the most serious. Several studies have shown associations between phthalate exposures and human health (although no causal link has been established). Recent scientific attention is focusing on evaluating the cumulative effects of mixtures of phthalates in*

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<sup>5</sup> The entire Action Plan is Attachment 1

*an exposed organism.*

*EPA is concerned about phthalates because of their toxicity and the evidence of pervasive human and environmental exposure to them. Thus, EPA intends to initiate action to address the manufacturing, processing, distribution in commerce, and/or use of these eight phthalates. EPA intends to take action as part of a coordinated approach with the Consumer Product Safety Commission (CPSC) and the Food and Drug Administration (FDA).*

### **Excerpts from US EPA's Phthalates Action Plan**

- *In response to a European ban on the use of some phthalates in toys and personal care products for children, plasticizers based on isosorbide esters were developed (Roquett, 2009). These plasticizers can cover a broad range of phthalate applications, such as adhesive, sealants, sinks, floor coverings, wall paper, and medical disposables. It is worth noting that isosorbide esters could be prepared under solvent-free conditions (Chalecki, 1997), providing an environmentally friendly approach to manufacturing.*
- *The reproductive developmental effects observed in humans include shortened anogenital distance observed in newborn boys; and shortened pregnancy, lower sex and thyroid hormones, and reduced sperm quality observed in adults.*
- *Of the 8 phthalates, BBP, DEHP, and DBP elicit the most toxicity to terrestrial organisms, fish, and aquatic invertebrates (EC, 2008a.; Staples et al. 1997). Ecotoxicity studies with these phthalates showed adverse effects to aquatic organisms with a broad range of endpoints and at concentrations that coincide with measured environmental concentrations. Toxic effects were observed at environmentally relevant exposures in the low ng/L to µg/L range (Oehlmann et al. 2008).*
- *Some phthalates studied have been shown to affect reproduction and impair development in all studied animal groups. Most phthalates appear to act by interfering with the functioning of various hormone systems, but some phthalates have wider pathways of effects (Jobling et al. 1995). Effect concentrations of phthalates in laboratory experiments are consistent with measured environmental concentrations (Oehlmann, et al., 2008).*
- *Phthalates are released to the environment from multiple sources including industrial releases, the disposal of manufacturing, processing and industrial wastes, municipal solid waste, land application of sewage sludge, and release from products containing phthalates. Only two (DBP and DEHP) of the 8 phthalates are listed on EPA's Toxics Release Inventory (TRI).list of toxic chemicals. The available release data for these two phthalates indicate that releases of phthalates can be expected to all primary environmental media.*

- *Due to their pervasive use and release, as well as its propensity for global transport, phthalates are found in most environmental media, for example ambient air, surface water, soil, sediment, etc (EC, 2003a-b; 2008a-b; NTP-CERHR, 2003 a-e; 2006). Aquatic organisms, fish and terrestrial animals have evident exposure to DEHP (EC 2008a; Staples et al. 1997).*
- *Phthalate exposures can produce a variety of adverse effects in laboratory animals; especially on the development of the male reproductive system, and therefore there are implications for human health. Animal data on the cumulative effect of mixtures of several phthalates showed an increase in the reproductive effects in the organism exposed. Phthalates are produced in high volume and they are used in numerous industrial and consumer products. Phthalates appear in biomonitoring surveys, such as NHANES, that provide evidence of widespread human exposure. Phthalates are also found in the environment and wildlife species. EPA is concerned with phthalates based on toxicity, particularly to the development of the male reproductive system, prevalence in the environment, widespread use and human exposure and recent work focusing on the potential cumulative effect of mixtures of phthalates.*
- *EPA intends to initiate rulemaking to add the 8 phthalates to the list under TSCA section 5(b)(4). Section 5(b)(4) authorizes the EPA to compile and keep current a list of chemicals it finds present or may present an unreasonable risk of injury to health or the environment. EPA intends to publish a notice of proposed rulemaking in autumn, 2010.*

US EPA's concern for phthalates is not expressed in their participation in the development of the Regional Board's permits. A significant number of the Regional Board's NPDES permits are written by a consulting firm from Virginia, Tetra Tech, under contract to US EPA. US EPA has the authority to control their contractor. US EPA would appear to be responsible for assuring that NPDES permits written by their contractor comply with the applicable regulations. Nor has US EPA expressed any concern over the lack of phthalate limitations in NPDES permits adopted by the Regional Board.

### **Water Quality Standards for Bis(2-ethylhexyl)phthalate**

Water quality standards for bis(2-ethylhexyl)phthalate were established in December 1992 in the National Toxics Rule (NTR), which was amended in 1999. On 18 May 2000, US EPA adopted the California Toxics Rule (CTR)<sup>6</sup>. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The water quality standard for bis(2-ethylhexyl)phthalate are 1.8 ug/l for waters from which both water and aquatic organisms are consumed and 5.9 ug/l for non-drinking water sources as a

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<sup>6</sup> <http://www.epa.gov/region09/water/ctr/index.html>

thirty day average. US EPA has revised their recommended Ambient Criteria<sup>7</sup> for bis(2-ethylhexyl)phthalate to 1.2 ug/l for sources of drinking water and 2.2 ug/l for non-drinking water sources as a thirty day average.

California adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*<sup>8</sup> (State Implementation Policy or SIP) to implement the requirements of the CTR. Section 1.2 of the SIP requires that: *“It is the discharger’s responsibility to provide all data and other information requested by the RWQCB before the issuance, reissuance, or modification of a permit to the extent feasible. When implementing the provisions of this Policy, the RWQCB shall use all available, valid, relevant, representative data and information, as determined by the RWQCB. The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions. The lack of a site-specific objective for a priority pollutant shall not be considered insufficient data.”* The Regional Board’s discretion does not allow data to be discarded without cause.

Section 1.3 of the SIP requires that: *“The RWQCB shall conduct the analysis in this section for each priority pollutant with an applicable criterion or objective, excluding priority pollutants for which a Total Maximum Daily Load (TMDL) has been developed, to determine if a water quality-based effluent limitation is required in the discharger’s permit. It is the discharger’s responsibility to provide all information requested by the RWQCB for use in the analysis. The RWQCB shall use all available, valid, relevant, representative information, as described in section 1.2, to determine whether a discharge may: (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable priority pollutant criterion or objective. If the following analysis (which is depicted as a flowchart in Appendix 2) indicates that a limitation for a pollutant is required, the RWQCB shall establish the limitation in accordance with section 1.4.”*

It should be noted that the SIP procedure for determining if a wastewater discharge presents a reasonable potential to exceed a water quality standard is a simple process of comparing the effluent values with the water quality standard – if the effluent value exceeds the standard, there is reasonable potential. Federal regulations, 40 CFR § 122.44(d)(1)(ii), state *“when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, **the variability of the pollutant or pollutant parameter in the effluent**, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.”* Emphasis added. The reasonable potential analysis fails to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. While the SIP’s compliance with federal regulation is not at issue here, compliance with the statistical procedures required by

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<sup>7</sup> <http://www.epa.gov/waterscience/criteria/wqctable/index.html>

<sup>8</sup> [http://www.swrcb.ca.gov/water\\_issues/programs/state\\_implementation\\_policy/](http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/)



federal regulation would result in a greater number of discharges that present a reasonable potential to exceed the water quality standard.

Utilizing the newer and more restrictive ambient water quality criteria for bis(2-ethylhexyl)phthalate will likely result in additional discharges that present a reasonable potential to exceed the water quality standard.

### **The Public's Right to Know**

Each of the Regional Board's NPDES permits contains the following statement in the Fact Sheet: *"Emergency Planning and Community Right to Know Act. Section 13263.6(a), California Water Code, requires that "the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective". The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this facility. Therefore, a reasonable potential analysis based on information from Emergency Planning and Community Right to Know Act (EPCRA) cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC section 13263.6(a)."*

Bis(2-ethylhexyl)phthalate (DEHP) is reportable to the Toxic Release Inventory (TRI) under section 313 of the Emergency Planning and Community Right-to-know Act (EPCRA). A discussion in the Regional Board permits with regard to bis(2-ethylhexyl)phthalate and EPCRA could not be located.

### **Sampling Requirements**

The SIP requires Regional Board require wastewater Dischargers to conduct sampling sufficient to conduct a reasonable potential analysis to determine if Effluent Limitations are required for priority pollutants. In reviewing the Regional Board's permits it is clear in some cases that no priority pollutant sampling had been conducted. In other cases it was evident that the sampling was "insufficient" to conduct a reasonable potential analysis. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) and California Water Code, section 13377 (cited at the end of this report) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA and cannot ensure compliance with applicable water quality requirements. The Regional Board should not have issued new or renewed NPDES permit without adequate characterization of the wastewater discharge.

**Review of the Regional Board's Permits** (permits are available at [http://www.swrcb.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/](http://www.swrcb.ca.gov/centralvalley/board_decisions/adopted_orders/))

Table 1

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
1	CITY OF ALTURAS	The Discharger sampled the effluent twice (2 August 2001 and 4 November 2003). Analytical results were submitted for volatile substances, semi volatile substances, pesticides, metals, asbestos, 2378 TCDD, and sixteen other dioxin congeners. The permit does not discuss phthalate results. 2006	Unknown	No
2	AMERIPRIDE SERVICES INC. OPERABLE UNIT 3 SACRAMENTO COUNTY	Table F-2 of the Fact Sheet contains data but does not indicate whether all priority pollutants, including phthalates, were sampled. 2007	Unknown	No
3	CITY OF ANGELS WASTEWATER TREATMENT PLANT	Bis(2-ethylhexyl)phthalate sampled at less than 0.6 ug/l. Two samples were reported. 2009	NO	No
4	CITY OF ATWATER Wastewater Treatment Plant	The effluent was sampled on four occasions for phthalates. Each of the sampling events records a detection level of 10 ug/l - a level above the water quality standard. 2007	Unknown	No
5	BELL-CARTER OLIVE COMPANY, INC, PLANT 1, TEHAMA COUNTY 2007	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No
6	BERRY PETROLEUM COMPANY, POSO CREEK/MCVAN FACILITY, POSO CREEK OIL FIELD 2007	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
7	CITY OF BIGGS, WASTEWATER TREATMENT PLANT 2006	The Regional Water Board found that there was not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an in-stream excursions above applicable water quality standards, and therefore, water quality based effluent limitations for CTR parameters are not included in this Order for pollutants that were not already regulated by Order No. 5-00-255.	Unknown	No
8	BURNEY FOREST PRODUCTS, A JOINT VENTURE, NORTH AMERICAN ENERGY SERVICES COMPANY, SHASTA GREEN, INC., AND FRUITGROWERS SUPPLY COMPANY 2007	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No
9	CALIFORNIA DAIRIES, INC. LOS BANOS FOODS, INC. 2007	There is no indication that priority pollutant, including phthalates, were sampled prior to adoption of the permit.	Unknown	No
10	CLEAR CREEK COMMUNITY SERVICES DISTRICT WATER TREATMENT PLANT 2006	The wastewater effluent was sampled twice prior to permit adoption. Bis(2-ethylhexyl)phthalate was reported non-detect for both samples. The detection level is not specified in the permit. The receiving water was sampled showing results for bis(2-ethylhexyl)phthalate at 7 ug/l, well above the water quality standard of 1.8 ug/l.	Yes - receiving water	No <sup>1</sup>

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
11	CITY OF COLFAX, WASTEWATER TREATMENT PLANT 2007	The maximum effluent concentration for bis (2-ethyl-hexyl) phthalate was 2 µg/L, based on five samples collected between 12 February 2002 and 12 December 2003, while the maximum observed upstream receiving water bis (2-ethyl-hexyl) phthalate concentration was 3 µg/L.	Yes	Yes
12	CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY WASTEWATER TREATMENT FACILITY 2006	The Discharger collected a single sample for priority pollutants on 26 April 2002. The Regional Board found the data to be incomplete and included no limitations for priority pollutants in the permit.	Unknown	No
13	CITY OF DAVIS, WASTEWATER TREATMENT PLANT 2008	The observed maximum concentration in Discharge 001 for bis (2-ethylhexyl) phthalate was 40 µg/L, based on 21 samples collected between January 2002 and May 2005, while the maximum observed upstream receiving water bis (2-ethyl-hexyl) phthalate concentration was 9 µg/L, based on five samples collected between January 2002 and December 2002. The observed maximum concentration in Discharge 002 for bis (2-ethyl-hexyl) phthalate was 59 µg/L, based on 20 samples collected between January 2002 and May 2005, while the maximum observed upstream receiving water bis (2-ethyl-hexyl) phthalate concentration was non-detect, based on four samples collected between April 2002 and July 2002. The Regional Board found the data to be in error without QA/QC review.	Yes	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
14	EL DORADO IRRIGATION DISTRICT, DEER CREEK WASTEWATER TREATMENT PLANT 2008	The maximum effluent concentration for bis (2-ethylhexyl) phthalate was 2.1 ug/L, based on four samples collected between 23 March 2006 and 21 August 2007.	Yes	No
15	GRIZZLY LAKE RESORT IMPROVEMENT DISTRICT, DELLEKER WASTEWATER TREATMENT PLANT 2006	The maximum effluent concentration for bis (2-ethylhexyl) phthalate was 4.0 ug/L. There is no explanation for the lack on an Effluent Limitation.	Yes	No
16	CALIFORNIA DEPARTMENT OF GENERAL SERVICES, CENTRAL PLANT, OPERATIONS HEATING AND COOLING FACILITY 2007/2009	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No
17	TOWN OF DISCOVERY BAY CSD, DISCOVERY BAY WASTEWATER TREATMENT FACILITY 2008	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No
18	DONNER SUMMIT PUBLIC UTILITIES DISTRICT WASTEWATER TREATMENT PLANT 2009	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
19	CITY OF DUNSMUIR, WASTEWATER TREATMENT PLANT 2006	The wastewater effluent was sampled 3 times (February 2001, March and October 2002) for bis(2-ethylhexyl)phthalate. The samples were below the detection level of 2 ug/l in the March and October 2002 samples? and below a detection level of 1 ug/l in the February 2001 sample. The detection level of 2.0 ug/l is above the water quality standard of 1.8 ug/l.	Questionable	No
20	EL DORADO IRRIGATION DISTRICT, EL DORADO HILLS WASTEWATER TREATMENT PLANT 2007	The maximum effluent concentration for bis (2-ethylhexyl) phthalate was 2.6 µg/L, based on 15 samples collected between 28 March 2001 and 1 May 2006, exceeding the water quality standard of 1.8 ug/l. The permit contains an interim limitation allowing 8.09 ug/l of bis(2-ethylhexyl)phthalate to be discharged until May 2010.	Yes	Yes
21	CITY OF GRASS VALLEY WASTEWATER TREATMENT PLANT 2008/2009	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No
22	GRIZZLY LAKE RESORT IMPROVEMENT DISTRICT, DELLEKER WASTEWATER TREATMENT PLANT 2007	The maximum observed effluent (MEC) concentration for bis(2-ethylhexyl)phthalate was 4.0 µg/l which exceeds the CTR water quality standard of 1.8 µg/l.	Yes	No
23	INDIAN SPRINGS ELEMENTARY SCHOOL, GEOTHERMAL HEATING SYSTEM 2006	There is no indication in the permit that priority pollutants, including phthalates, were sampled, or at what frequency, prior to adoption of the permit.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
24	I'SOT INC. GEOTHERMAL HEATING SYSTEM 2007	Bis(2-ethylhexyl)phthalate has been detected in the wastewater effluent at 1.8 µg/l, at the CTR Water Quality Standard of 1.8 µg/l.	Yes	No
25	CITY OF JACKSON, WASTEWATER TREATMENT PLANT 2007	The permit indicates that priority pollutants were sampled and bis(2-ethylhexyl)phthalate was not detected. The detection level was not specified.	No	No
26	JF SHEA CONSTRUCTION, FAWNDALE ROCK 2007	There is no information in the Order to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants.	Unknown	No
27	COUNTY OF SACRAMENTO, PUBLIC WORKS AGENCY, KIEFER LANDFILL GROUNDWATER EXTRACTION AND TREATMENT PLANT 2007	The permit appears to indicate that priority pollutants were sampled and bis(2-ethylhexyl)phthalate was not detected. The detection level was not specified.	Yes	No
28	NEVADA COUNTY SANITATION DISTRICT NO.1, LAKE OF THE PINES WASTEWATER TREATMENT PLANT 2009	The Discharger constructed a new wastewater treatment plant in 2008. Priority pollutant sampling, including bis(2-ethylhexyl)phthalate, was apparently not conducted at the new WWTP prior to issuance of the permit.	Unknown	No
29	NEVADA COUNTY SANITATION DISTRICT NO.1, LAKE WILDWOOD WASTEWATER TREATMENT PLANT 2009	There is no information in the Order to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
30	LINDA COUNTY WATER DISTRICT, WASTEWATER TREATMENT PLANT 2006	Bis (2-ethylhexyl) phthalate was detected in an effluent sample collected 11 August 2004 at a concentration of 22 µg/L. The permit contains an effluent limitation of 1.8 ug/l as a monthly average and 4.1 ug/l as a daily maximum. The permit contains interim limits, until 18 May 2010 of up to 190 ug/l as a daily maximum.	Yes	Yes
31	CITY OF LODI, WHITE SLOUGH WATER POLLUTION CONTROL FACILITY 2007	A sample collected on 7 September 2005 indicated a bis (2-ethylhexyl) phthalate concentration of 11 ug/L. Upon petition to the State Water Board (SWRCB) for the failure of the Regional Board to include an effluent limitation for bis(2-ethylhexyl)phthalate, the SWRCB found the issue of phthalate limitations had no merit.	Yes	No
32	MALAGA COUNTY WATER DISTRICT, WASTEWATER TREATMENT FACILITY 2008	Since the permit contains some effluent limits for priority pollutants, it is assumed that such sampling occurred. However, the permit contains no information indicating that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants.	Unknown	No
33	CITY OF MANTECA and DUTRA FARMS, INC., CITY OF MANTECA WASTEWATER QUALITY CONTROL FACILITY 2009	The old NPDES permit contained an effluent limitation for bis(2-ethylhexyl)phthalate. The Regional Board removed the limitation despite poor sampling and a "J-flagged" data point above the water quality standard. There were no modifications to the treatment system or the character of the influent justifying removal of the limitation. The permit has been petitioned to the SWRCB.	Yes	No



	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
34	MARIPOSA PUBLIC UTILITY DISTRICT, MARIPOSA WASTEWATER TREATMENT FACILITY 2007	Bis(2-ethylhexyl)phthalate was detected in the effluent at 11.1 ug/l. The CTR quality objective for these bis(2-ethylhexyl)phthalate is 1.8 ug/l. The concentration of bis(2-ethylhexyl)phthalate detected in the effluent exceeded the water quality objective. The permit provides no discussion of why an effluent limitation was not established.	Yes	No
35	MAXWELL PUBLIC UTILITIES DISTRICT WASTEWATER TREATMENT PLANT 2009	The MEC for bis (2-ethylhexyl) phthalate was 7 µg/L, based on seven samples collected between March 2002 and October 2006 (three samples were non-detects, two samples resulted in estimated concentrations of 0.8 µg/L and 1 µg/L, and one sample with bis(2-ethylhexyl) phthalate found in method blank was 4 µg/L.	Yes	No
36	UNITED STATES DEPARTMENT OF THE AIR FORCE, AIR FORCE REAL PROPERTY AGENCY FORMER McCLELLAN AIR FORCE BASE, GROUNDWATER EXTRACTION AND TREATMENT SYSTEM 2008	Although not stated in the permit, it appears that the discharge was sampled for priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
37	MERCED WASTEWATER TREATMENT FACILITY 2008	Most sample detection levels for bis(2-ethylhexyl)phthalate were above the water quality standard.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
38	MERIDIAN BEARTRACK COMPANY, ROYAL MOUNTAIN KING MINE 2007	The MEC for bis (2-ethylhexyl) phthalate was 2.8 µg/L, based on one sample collected on 7 February 2006, while the maximum observed upstream receiving water bis (2-ethylhexyl) phthalate concentration was non-detect, based on one sample collected on 7 February 2006. However, the reporting limit for both the effluent and receiving water sample analyses was 4.8 µg/L, which is higher than both the reported value and the applicable criterion. The State's CTR implementation plan (SIP) is clear that such data should be used in determining reasonable potential.	Yes	No
39	CALIFORNIA DEPARTMENT OF FISH AND GAME, MOCCASIN CREEK HATCHERY 2007	There is no information in the Permit to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives.	Unknown	No
40	MOUNTAIN HOUSE COMMUNITY SERVICES DISTRICT, WASTEWATER TREATMENT FACILITY 2007	The maximum effluent concentration of bis(2-ethylhexyl)phthalate was 7.4 µg/L for one sample with the reported results ranging from <0.7 µg/L to <8.8 µg/L for the remaining 11 samples.	Yes	Yes
41	CALIFORNIA, DEPARTMENT OF FISH AND GAME, MT. SHASTA FISH HATCHERY 2008	There is no information in the Permit to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
42	CITY OF NEVADA CITY, WASTEWATER TREATMENT PLANT 2008	The maximum effluent concentration for bis (2-ethylhexyl) phthalate was 4 µg/L reported as detected, but not quantifiable or DNQ, based on 5 samples collected between April 2002 and April 2004, while the maximum observed upstream receiving water bis (2-ethylhexyl) phthalate concentration was 4 µg/L reported as DNQ, based on 5 samples collected between April 2002 and April 2004. The State's CTR implementation plan (SIP) is clear that such data should be used in determining reasonable potential.	Yes	No
43	NORTH YUBA WATER DISTRICT, FORBESTOWN WATER TREATMENT PLANT 2007	"At the Facility, the pollutant was detected one time in the effluent in a 2002 sampling; therefore the data is particularly suspect because of its age and potential use of plastic sampling containers. The most recent sample that was obtained by Regional Board staff on 19 January 2006, in a glass bottle, bis (2-ethylhexyl) phthalate was not detected."	Yes	No
44	PLACER COUNTY SEWER MAINTENANCE DISTRICT NO. 3 2007	Although not stated in the permit, it appears that the discharge was sampled for priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
45	CITY OF PORTOLA, PORTOLA WASTEWATER TREATMENT PLANT 2009	The effluent was sampled at 1.0 ug/l below the water quality standard of 1.8 ug/l.	No	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
46	SACRAMENTO MUNICIPAL UTILITY DISTRICT, RANCHO SECO NUCLEAR GENERATING STATION, UNIT 1 AND RANCHO SECO PARK 2007	There is no information in the Permit to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives.	Unknown	No
47	CITY OF RED BLUFF, WASTEWATER TREATMENT PLANT 2007	Bis(2-ethylhexyl)phthalate exceeds water quality standards in the effluent at 3.0 µg/l, above the CTR standard of 1.8 µg/l, and was detected in the receiving stream at 10 ug/l.	Yes	No
48	CITY OF REDDING, STILLWATER WASTEWATER TREATMENT FACILITY 2007	Although not stated in the permit, it appears that the discharge was sampled for priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
49	CITY OF RIO VISTA BEACH WASTEWATER TREATMENT FACILITY 2008	Although not stated in the permit, it appears that the discharge was sampled for priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
50	CITY OF SACRAMENTO, COMBINED WASTEWATER COLLECTION AND TREATMENT SYSTEM 2010	The State Implementation Policy (SIP) explicitly states that it is not applicable to CSOs. Therefore, a RPA was not performed for the CTR parameters.	Unknown	No
51	SAN ANDREAS SANITARY DISTRICT, WASTEWATER TREATMENT PLANT 2009	The permit establishes Effluent Limitations for bis(2-ethylhexyl)phthalate as 34 ug/l as a monthly average and 95 ug/l as a daily maximum. The water quality standard is 1.8 ug/l.	Yes	Yes*

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
52	SANGER SAND AND GRAVEL PLANT 2007	The Order, Special Studies, Technical Reports and Additional Monitoring Requirements, No. 3, states that: "On 27 February 2001 the Discharger was directed to conduct a receiving water and effluent monitoring study in accordance with the SIP. The Discharger has sampled the effluent and receiving water for most priority pollutants.	Unknown	No
53	CITY OF SHASTA LAKE WATER TREATMENT PLANT 2006	No bis (2-ethylhexyl) phthalate has been detected in the effluent. However, bis (2-ethylhexyl) phthalate was detected in the upstream receiving water at a concentration of 3 µg/L. The measured receiving water concentration value for bis (2-ethylhexyl) phthalate exceeds the applicable CTR human health criteria of 1.8 µg/L	Yes	No
54	SOPER COMPANY, SPANISH MINE 2008	There is no information in the Permit to indicate that the wastewater discharge has been characterized for CTR, NTR, drinking water MCLs, and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives.	Unknown	No
55	SPX CORPORATION, SPX MARLEY COOLING TOWER TECHNOLOGIES 2008	The Regional Board admits, in its Response to Comments, that CTR, NTR, drinking water MCLs, and other pollutant monitoring results were not available to develop the Permit: The Regional Water Board staff did request effluent and receiving water monitoring data from the Discharger through a 13267 letter in 2001.	Unknown	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
56	STERLING CAVIAR LLC 2007	The discharge has not been characterized for CTR, NTR, and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives.	Unknown	No
57	CITY OF STOCKTON, REGIONAL WASTEWATER CONTROL FACILITY 2008	The discharge was sampled to contain 5.5 ug/l of bis(2-ethylhexyl)phthalate above the water quality standard of 1.8 ug/l.	Yes	Yes
58	TEHAMA CSD No. 1, MINERAL WWTP 2007	"Based on previous CTR sampling, the Regional Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an instream excursion above applicable water quality standards, and therefore, water quality based effluent limitations are not included in this Order for pollutants that were not regulated by Order No. R5-2002-0115."	Unknown	No
59	UNITED AUBURN INDIAN COMMUNITY AND HYDROSCIENCE OPERATIONS, INC., THUNDER VALLEY CASINO WASTEWATER TREATMENT PLANT 2010	Although not stated in the permit, it appears that the discharge was sampled for all priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
60	CITY OF TRACY, TRACY WASTEWATER TREATMENT PLANT 2007	Based on 4 monitoring samples performed by the Discharger from January 2002 through December 2002, bis(2-ethylhexyl)phthalate was detected, but not quantified in all four samples. The concentration was estimated in each case, with a maximum estimated concentration of 2 µg/L. The State's CTR implementation plan (SIP) is clear that such data should be used in determining reasonable potential.	Yes	No
61	TUOLUMNE UTILITIES DISTRICT SONORA REGIONAL WASTEWATER TREATMENT PLANT AND JAMESTOWN SANITARY DISTRICT JAMESTOWN WASTEWATER TREATMENT PLANT 2008	The maximum effluent concentration for bis(2-ethylhexyl)phthalate was 11 µg/L based on 4 samples collected between January 2002 and December 2002. Bis(2-ethylhexyl) phthalate was also detected in upstream receiving water at 9 µg/L in one of the 4 samples taken during the same period. The water quality standard is 1.8 ug/l.	Yes	No
62	CITY OF TURLOCK, WATER QUALITY CONTROL FACILITY 2009	Bis (2-ethylhexyl) phthalate was detected in the effluent five times with an MEC of 17.5 µg/L, based on seven samples collected between October 2006 and April 2008. The maximum observed bis (2-ethylhexyl) phthalate concentration in Harding Drain was 19 µg/L, based on six samples collected between May 2005 and April 2008. The maximum observed bis (2-ethylhexyl) phthalate concentration in the San Joaquin River was 12.3 µg/L, based on six samples collected between May 2005 and April 2008.	Yes	No

	Facility Name	Detected Concentration (ug/l)	Water Quality Standard Exceeded?	Permit Limits for bis(2-ethylhexyl)phthalate?
63	UNIVERSITY OF CALIFORNIA, DAVIS MAIN WASTEWATER TREATMENT PLANT 2008	Although not stated in the permit, it appears that the discharge was sampled for all priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
64	CITY OF VISALIA, WASTEWATER TREATMENT FACILITY 2006	One effluent sample contained a bis(2-ethylhexyl)phthalate concentration of 53 µg/L and the detection limit for two of the 15 samples were higher than the WQC.	Yes	No
65	CITY OF WOODLAND WATER POLLUTION CONTROL FACILITY 2009	Although not stated in the permit, it appears that the discharge was sampled for all priority pollutants. It is therefore assumed that bis(2-ethylhexyl)phthalate was not detected.	No	No
66	CITY OF YUBA CITY, WASTEWATER TREATMENT FACILITY 2007	The effluent has been sampled to contain bis(2-ethylhexyl)phthalate as high as 36 ug/l. Despite clear reasonable potential to exceed water quality standards, the effluent limitations which were present in the previous permit were removed in 2007.	Yes	No

1 Many of the Regional Board's NPDES permits that were reviewed did not contain any discussion of bis(2-ethylhexyl)phthalate. If the permit contained Effluent Limitations for other priority pollutants it was assumed that bis(2-ethylhexyl)phthalate was not detected and there was no reasonable potential to exceed the applicable water quality standard. Where a permit did not contain limitations for other priority pollutants it is unknown whether sampling for bis(2-ethylhexyl)phthalate was conducted and is so noted in the spreadsheet. In some instances it was clear that priority pollutant sampling was not conducted. In other instances the Regional Board's permit contained a reasonable potential analysis spreadsheet that clearly stated what pollutants were sampled.

2 Where there is reasonable potential for bis(2-ethylhexyl)phthalate to exceed the water quality standard and an Effluent Limitation was not established; the Regional Board includes the following, or very similar explanation: *"Bis (2-ethylhexyl) phthalate. Bis (2-ethylhexyl) phthalate is used primarily as one of several plasticizers in polyvinyl chloride (PVC) resins for fabricating flexible vinyl products. According to the Consumer Product Safety Commission, USEPA, and the Food and Drug Administration, these PVC resins*



*are used to manufacture many products, including soft squeeze toys, balls, raincoats, adhesives, polymeric coatings, components of paper and paperboard, defoaming agents, animal glue, surface lubricants, and other products that must stay flexible and non-injurious for the lifetime of their use. The State MCL for bis (2-ethylhexyl) phthalate is 4 µg/L and the USEPA MCL is 6 µg/L. The NTR criterion for human health protection for consumption of water and aquatic organisms is 1.8 µg/L and for consumption of aquatic organisms only is 5.9 µg/L. Because bis (2-ethylhexyl) phthalate is a common contaminant of sample containers, sampling apparatus, and analytical equipment, and sources of the detected bis(2-ethylhexyl) phthalate may be from plastics used for sampling or analytical equipment, the Regional Water Board is not establishing effluent limitations for bis (2-ethylhexyl) phthalate at this time. Instead of limitations, additional monitoring has been established for bis (2-ethylhexyl) phthalate; should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality standard then this Order may be reopened and modified by adding an appropriate effluent limitation.”*

## Laboratory Quality Assurance and Quality Control (QA/QC) Measures

After 17 years with a water quality standard for bis(2-ethylhexyl)phthalate, the agency charged with protecting California's water quality claims it cannot get the sampling right. As stated above, water quality standards for bis(2-ethylhexyl)phthalate were developed in 1992. Shortly thereafter numerous sampling errors were noted by commercial laboratories for bis(2-ethylhexyl)phthalate. These errors were typically documented through analysis of travel and/or sampling blank analysis or laboratory QA/QC procedures. Most commercial laboratories informed their clients of the common errors associated with bis(2-ethylhexyl)phthalate and recommended proper sample collection, preservation and transport. Seventeen years have passed since the water quality standards for bis(2-ethylhexyl)phthalate were promulgated and sampling and analysis was initiated. In review of the Regional Board's permits, when bis(2-ethylhexyl)phthalate results have been rejected, there is typically no discussion or presentation of a laboratory QA/QC analysis. The Regional Board has not typically provided any valid explanation for failing to utilize all "valid, reliable, and representative effluent data" as required by regulation.

## Regulatory Citations

Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. US EPA has interpreted 40 CFR 122.44(d) in *Central Tenets of the National Pollutant Discharge Elimination System (NPDES) Permitting Program* (Factsheets and Outreach Materials, 08/16/2002) that; although States will likely have unique implementation policies there are certain tenets that may not be waived by State procedures. These tenets include that:

- "where valid, reliable, and representative effluent data or instream background data are available they *MUST* be used in applicable reasonable potential and limits derivation calculations. Data may not be arbitrarily discarded or ignored."
- "where the preponderance of evidence clearly indicates the potential to cause or contribute to an exceedance of State water quality standards (even though the data may be sparse or absent) a limit *MUST* be included in the permit."
- "where calculations indicate reasonable potential, a specific numeric limit *MUST* be included in the permit. Additional "studies" or data collection efforts may not be substituted for enforceable permit limits where "reasonable potential" has been determined."

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries Of California* (SIP), Section 1.2 requires that: "When implementing the provisions of this Policy, the RWQCB shall use all available, valid, relevant, representative data and information, as determined by the RWQCB. The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample

*has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions.”*

Statistical procedures are valid tools for assessing trends and analyzing data. It must be recognized however that statistical procedures are not scientific laws. In wastewater engineering it is common place for individual data points to be peaks or depressions far from the statistical norm. This is could be attributed to slug load discharges, discharge practices from local industries, or simply the infrequency of sampling wastewater effluents. Wastewater effluent is generally not sampled continuously. It must also be recognized that wastewater treatment personnel tend to perform their daily functions as a matter of routine, such as sampling the effluent at the same time every day. The likely hood of data peaks being “real” absent erroneously reporting, questionable quality control/quality assurance practices or varying seasonal or daily conditions is more defensible than the data being an “outlier”, hence the EPA and SIP requirement that data may not be arbitrarily discarded or ignored.

Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

Federal Regulation, 40 CFR 122.21(e) states in part that: “The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits.

The Regional Board has routinely failed to include Effluent Limitations for bis(2-ethylhexyl)phthalate despite a clear reasonable potential to exceed water quality standards and contrary to the cited regulations. US EPA has issued an action plan for phthalates citing the threat to the environment, but failed to assure they are properly regulated under the existing regulations. The State Water Resources Control Board and US EPA have failed to provide adequate oversight and assure the Regional Board’s permits are protective of the beneficial uses of the receiving streams.