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Remediating Contaminated Sediments Under California's Regulatory Regime: *Are Regional Water Quality Boards Using the Correct Standard as Required by Law?*

Introduction

California has a legislative mandate to remedy contaminated sediments under state statutory guidelines contained in the Porter-Cologne Water Quality Act.¹ Implementation of these guidelines is delegated to Regional Water Quality Board's (RWQB) throughout California.² RWQB's have interpreted requirements for contaminated sediment cleanup to be a "background level" approach.³ Such an approach is in direct conflict with the specific statutory mandates under Porter-Cologne. Instead of requiring a standard of "background levels", Porter-Cologne is clear in requiring a cost benefit analysis akin to review standards in the federal Comprehensive Environmental Response for Contaminated Liability Act (CERCLA), and more importantly, the California Hazardous Substance Accountability Act (HSAA); the state equivalent to CERCLA.⁴

The purpose of this paper is to show RWQB's have enacted regulations that are in direct conflict with statutory requirements by requiring a standard for cleanup of historical contaminated sediments that is different than California law requires. The effect of this change in standard is additional liability being placed on California

¹ ***See, Porter-Cologne Water Quality Control Act, Cal. Water Code §§13000 et seq. (West 1992 & Supp. 2003).***

² ***Id.***

³ ***See, State Water Res. Control Bd., Resolution No. 92-49: Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304, available at: <http://www.swrcb.ca.gov/plnspols/wqplans/res92-49.html> (as amended Oct. 2, 1996) (last visited: November 2, 2003).***

⁴ ***See, Legislative Counsel's Digest, Section 2, Water Code §13307(d), (copy on file with author).***

businesses, which have to spend exorbitant amounts of money with no indication the cleanup is cost effective. Thus, RWQB's are engaging in ultra-vires actions, resulting in excessive costs and expenses being placed on California businesses subject to background levels of cleanup.

This paper will begin by identifying the manner in which RWQB's are implementing cleanup and abatement orders (CAO's). Emphasis will be placed on the standard that has been adopted by RWQB's. The legislative history of critical sections of the Porter-Cologne Act will then be analyzed to determine whether the standard of "background levels" currently used by RWQB's is in conformance with the legislative mandate in the area of sediment remediation. Specific emphasis will be placed on the connection drawn by the legislature for developing standards between the Porter-Cologne Act and the HSAA. This connection is critical since the HSAA employs the same standards of review as CERCLA in determining cleanup requirements for historical sediment contamination⁵, and this standard is far less than the "background" level currently required by RWQB's. Finally, the current standard set by the RWQB's will be contrasted with the standards being employed under the HSAA and CERCLA, and an argument will be made that a "background level" standard is not authorized under Porter-Cologne, and is therefore an ultra-vires act of the RWQB's.

⁵ **Both CERCLA and the HSAA adopt a cost-benefit analysis when determining the extent of hazardous substance cleanup and remediation. Indeed, if the costs involved in cleanup far exceed the environmental benefit, then this will be a significant factor for consideration prior to actually engaging in cleanup. Further, such an analysis will determine the extent of any cleanup operations. See generally, Cal. Health & Safety Code §§25300 et seq., 42 U.S.C. §§ 9601 et seq.**

The Current Standards Used by RWQB's in developing CAO's for Historical Sediment Contamination.

Water Code §13304 controls the requirement of cleanup for discharges, including past discharges.⁶ It states, in pertinent part: “Any person who had discharged or discharges waste...shall upon order of the regional board, clean up the waste or abate the effects of the waste...”⁷ This language indicates RWQB's have the authority to issue orders to dischargers, including past discharges, requiring cleanup of the waste or abatement of the effects emanating from the waste. The “effects” portion of the language indicates authority to require standards related to water quality. Based on this language, it is obvious RWQB's have the authority to issue cleanup or abatement orders.

Although §13304 speaks to the authority of RWQB's to require cleanup or abatement of discharges, it does not speak to the *standards* to be used when determining if a cleanup or abatement order is required, and if so, what considerations, if any, go into the cleanup/abatement analysis. These questions are answered, in part, by §13307.

Section 13307 is entitled, “Establishment of Policies to Supervise Investigation or Clean-up of Discharge of Hazardous Waste.”⁸ The purpose of §13307 is to give RWQB's authority and guidance in the process of evaluating, monitoring, and enforcing discharges of hazardous waste.⁹ The effect of §13307 is to give specific guidelines to

⁶ **California Water Code, Section 13304**

⁷ *Id.*

⁸ **California Water Code, Section 13307.**

⁹ *Id.*

RWQB's in establishing policies for the implementation of §13304. Guidelines for the establishment of such policies include:

1. "The procedures the state board and regional boards will follow in making decision as to when a person may be required to undertake an investigation to determine if an unauthorized hazardous substance discharge has occurred";
2. "Procedures for identifying and utilizing the most *cost-effective* methods for detecting contamination or pollution and cleaning up or abating the effects of contamination or pollution" (emphasis added);
3. "Policies for determining reasonable schedules for investigation and cleanup, abatement, or other remedial action at a site. The policies shall recognize the dangers to public health and the waters of the state posed by an unauthorized discharge and the need to mitigate those dangers *while at the same time taking into account, to the extent possible, the resources, both financial and technical, available to the person responsible for the discharge.*" (emphasis added)¹⁰

At least facially, the statutory language of §13307 seems clear in requiring consideration of financial costs when determining proper remediation of discharges. Thus, as a matter of administrative law, RWQB's are required to consider costs in any regulatory scheme they develop. To see if this has occurred, we must look at the actual implementation regulations that have been adopted by RWQB's and see if they consider costs in determining cleanup requirements.

a. RWQB's Implementation of §13304

¹⁰ *Id.*

RWQB's have focused their analysis for remediation of contaminated sediments, primarily, on Resolution 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304."¹¹ Resolution 92-49 was promulgated by the California State Water Resources Control Board (State Board).¹² The State Board is the head agency, under which RWQB's act, and Resolution 92-49 is an attempt by the State Board to interpret the statutory delegation under §13304.

Resolution 92-49 adopts a "background standard" for contaminated sediment cleanup, claiming §13304 authorizes RWQB's to require complete cleanup of all waste discharged and restoration of affected water to background conditions, which is essentially the water quality that existed before the discharge.¹³ This interpretation does have some degree of flexibility. Specifically, the State Board believes §13304 allows RWQB's the discretion to require attainment of either background levels of water quality, or the best water quality that is reasonable if background levels of water quality cannot be achieved.¹⁴ However, if background levels are *not* achievable, than any other remedy must, "not unreasonably affect present and anticipated beneficial use[s]."¹⁵ Further, specific sections of Resolution 92-49 suggest a "background level" approach is inappropriate. In one part of the Resolution, the language states, "The Regional Water board shall determine whether water quality objectives can reasonably be achieved within

¹¹ **State Water Res. Control Bd., Resolution No. 92-49: Policies and Procedures for Investigation and Abatement of Discharges Under Water Code Section 13304, <http://www.swrcb.ca.gov/plnspols/wqplans/res92-49.html> (last viewed: October 19, 2003).**

¹² *Id.*

¹³ **Resolution 92-49, supra note 5, at Pmbl. Para. 4.**

¹⁴ *Id.*, at Para. III.G.

¹⁵ *Id.*, at Para. III.G.2.

a reasonable period by considering what is *technologically and economically feasible...*”(emphasis added).¹⁶ Thus, even the language of the Resolution itself seems to make clear the need to consider “economic feasibility” when determining relevant cleanup standards. I would argue such “feasibility” considerations are not considered in a “background levels” requirement, as will be discussed further below.

The question that becomes apparent is whether Resolution 92-49, while requiring a “background levels” application of §13304, can be reconciled with *the actual language of the Act*, as well as the legislative history of the Act. There is a strong argument the Act requires a “cost-effective” consideration, i.e., the remediation for contaminated sediments cannot unduly burden a discharger financially, where the benefits of the remediation are minimal. We will now turn to the legislative history of sections 13304 and 13307 to determine whether Resolution 92-49’s reliance on a “background level” standard is an appropriate standard to apply.

Legislative History of 13304 and 13307: The Suggestion of a Different Standard than “Background Levels.”

Unlike the current standards of “background levels” employed by RWQB’s, the legislative history suggests a different standard for remediation of historical discharges.

¹⁶ ***Id.***, at Para. III.H.1. It is important to note the language of Resolution 92-49 goes on to define the term “economic feasibility.” It specifically states economic feasibility is not meant to refer to the discharger’s ability to finance cleanup, but should be considered in the, “establishment of reasonable compliance schedules.” ***Id.***, at Para.III.H.1(b). Still economic considerations includes an analysis of the relative benefits of cleanup weighed against the costs of achieving those benefits.

Specifically, both the legislative history and *actual legislative enactments* draw a direct connection between the standards to be used for remediation under the state Hazardous Substance Accountability Act and the Porter-Cologne Water Quality Improvement Act.¹⁷ Further, the standards to be used under both Act's are the same. Based on this information, we look to the standard used under the HSAA, and see it is based on a cost-benefit analysis, rather than a "background-level" standard, which is much stricter.

a. Standards Stated Within Legislative History

The legislative history of Porter-Cologne specifically suggests considerations of costs when dealing with any remediation project. Further, competing interests are to be "balanced." Both of these standards suggest a "background level" approach, without a case-by-case consideration of "costs," and relative benefits, is in direct violation of the policy behind the development of Porter-Cologne.

Specifically, the legislative history reads as follows:

The regional boards must balance environmental characteristics, past, present and future beneficial uses, and economic considerations (both the cost of providing treatment facilities and the economic value of development) in establishing plans to achieve the highest water quality which is reasonable.¹⁸

Based on the language quoted above, it should become apparent the legislature always intended costs of a proposed cleanup standard to be considered when regional

¹⁷ *Id.*, supra note 4.

¹⁸ *See, Legislative History of Porter-Cologne Water Quality Control Act, Chapter II, Legislative Policy, pg. 13, SBAR – 002150 (copy of file with author).*

boards are assessing water quality objectives. Indeed, the fact that regional boards should *balance* environmental characteristics with economic considerations makes clear a legislative intent to consider the relative costs and benefits of any proposed cleanup scheme.

Further evidence of a cost-benefit requirement can be found in the simultaneous enactments of section 25355.7 of the HSAA, and section 13307 of Porter-Cologne. Each deal with the establishment of policies for the investigation and remediation of cleanup standards for discharges. Most importantly, the legislative history suggests each provision was meant to refer to one another, and include the same standards for investigation and remediation. We will now look at the legislative history of these two sections in hopes of making clear the correct standard that should be applied to sediment remediation projects in California.

b. Connection Between Porter-Cologne and HSAA Regarding Standards of Remediation for Historical Sediment Contamination.

Section 13307 is generally considered the statutory authority for the suggestion Resolution 92-49 applies to sediment cleanup.¹⁹ However, §13307, in its enactment, states it should act in the same manner as simultaneous amendments passed for the

¹⁹ See, Benjamin Benumof, *The Applicability, Appropriateness, and Enforcement of the “Background Levels” Standard for Contaminated Sediment Cleanup Under California State Water Resources Control Board Resolution 92-49*, 40 San Diego L. Rev. 749, 762 (2003). “The strongest authority supporting the view that Resolution 92-49 applies to sediment cleanup is found in section 13307 of the Water Code.” *Id.*

HSAA.²⁰ Specifically, the standards for cleanup are to be consistent between the HSAA, and section 13307. This can be seen by analyzing the language included in the simultaneous adoption of section 25355.7 and section 13307.

Section 25355.7 of the HSAA provides the following language for determining reasonable schedules for investigation and removal or remedial action at a site:

The policies shall recognize the dangers to public health and the environment posed by a release and the need to mitigate those dangers while at the same time taking into account, to the extent possible, the resources, both financial and technical, available to the responsible party.²¹

The language makes clear the need to balance the risks of the discharge with the financial burdens of cleanup when making policies for remediation of both soil and groundwater contamination. This same language is then repeated, word-for-word, for the enactment of section 13307 to be added to the Water Code.²² As such, it can only be implied the legislative, both literally and figuratively, meant for both provisions to be implemented in the same manner. Thus, if HSAA (the equivalent of CERCLA) is mandated to consider costs borne by the discharger in its analysis, then so must Regional Boards when determining cleanup of contaminated water columns.

²⁰ *See, 42 U.S.C. §§ 9601 et seq. (West 1992 & Supp 2003).*

²¹ *See, Legislative Counsel's Digest, Section 1, Health and Safety Code §25355.7(d), (copy on file with author).*

²² *See, Legislative Counsel's Digest, Section 2, Water Code §13307(d), (copy on file with author).*

The HSAA is essentially a state-equivalent to the federal Comprehensive Environmental Response and Cleanup Liability Act (CERCLA).²³ CERCLA requires a cost-benefit assessment, weighing the associated costs involved with cleanup against the environmental benefits that can be achieved.²⁴ If the benefits are significantly diminished against substantial costs, CERCLA may not require full remediation of the project.²⁵ Further, a CERCLA-type assessment is the *same* assessment employed under the state HSAA.

A “background” level requirement under a CAO, although subject to varying interpretations of cleanup requirements, goes much farther than a CERCLA or HSAA assessment. At the most extreme, a “background” level requirement does not even consider the costs associated with cleanup. Rather, background levels of water quality are to be achieved regardless of the expense.²⁶ Such an analysis is in direct conflict with the statutory mandate set forth within the Water Code. As such, Resolution 92-49 must be seen as an ultra vires act of the state agencies interpreting section 13307 of the Water Code.

Another problem that occurs when dealing with sediment remediation is the difference between *sediment quality* and *water quality*. RWQB’s assert jurisdiction over

²³ *See supra*, note 21.

²⁴ *See*, 42 U.S.C. §9621, 40 C.F.R. 300 (West 1992 & Supp. 2003).

²⁵ *Id.*

²⁶ **As will be discussed further below, certain RWQB’s have taken the position “background level” requirements include removal of every “molecule” of contamination that was discharged by an anthropogenic source. Such an approach does not consider costs, or relative “water quality” achieved, but instead focuses presence of discharged material when analyzing remediation.**

submerged sediments because the sediments, as well as the contamination, occur within the water column. Further, once jurisdiction has been asserted, RWQB's maintain a *water-quality* minded approach to the cleanup of contaminated sediments. This can be seen in the adoption of Resolution 92-49, and the *water-quality* approach to sediment cleanup. The problem with such an approach, however, is water quality standards cannot be readily applied to sediment contamination. Indeed, the processes involved in sediment contamination are very different from water quality issues. Sediments are not subject to the same physical processes as water, and most importantly, have a "buffering" effect regarding contamination. This is precisely why CERCLA and HSAA, which deal with sediment contamination, use a different standard to deal with remediation assessment.

One strong argument to suggest the adoption of "background" levels of water quality is not the proper assessment tool for *sediment contamination* is to look at the original purpose of Resolution 92-49. Under its original purpose, Resolution 92-49 was meant to apply to sub-surface stormwater, not sediments.²⁷ As such, and from a formalistic standpoint, there is no basis to support the notion "background" remediation is the appropriate standard for sediments, but was rather intended to apply *solely* to stormwater.

Further, Resolution 92-49 expressly defines background conditions as "the *water quality* that existed before the discharge." (emphasis added)²⁸ There is no suggestion in

²⁷ *See supra*, note 19 at 760.

²⁸ **Resolution No. 92-49: Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304, at para. III.G.**

the language of Resolution 92-49 that it was intended to apply to sediment contamination as well as water quality contamination. This definition seems to specifically exclude sediment remediation because, “as a matter of general scientific knowledge, water quality objectives—acceptable chemical concentrations in water—should not be the primary or fundamental measure of whether sediment is contaminated and therefore should not exclusively be used to remediate sediment.”²⁹ Thus, if Resolution 92-49 was intended to apply to sediment remediation, it would have specifically included “sediment quality” language in the definition of “background conditions.”³⁰ By not providing such language, Resolution 92-49 cannot be seen as authorizing a proper standard for the remediation of sediment contamination to “background levels.”

It is important to remember Resolution 92-49 is an administrative regulation adopted to interpret specific statutory delegations. As indicated above, the regulation itself does not seem to appropriately cover sediment contamination, and therefore cannot justify RWQB’s requirement of “background levels” of water quality. Moreover, the legislative history dealing with sediment contamination under the Water Code specifically requires assessment and remediation should work in exactly the same manner as the HSAA.³¹ Thus, if the HSAA requires, like CERCLA, an assessment of the associated costs and benefits of cleanup, then the Water Code should be in conformance with such requirements.

Available at: <http://www.swrcb.ca.gov/plnspols/wqplans/res92-49.html> (Last viewed: October 26, 2003).

²⁹ *Id supra* note 27.

³⁰ *Id.*

³¹ *See, supra* notes 21-22.

RWQB's are using an incorrect standard for sediment remediation by relying on the water quality-based standard of "background levels." Such a standard is in direct contrast to the HSAA and CERCLA, which are the appropriate environmental regimes for dealing with sediment contamination. "Background levels" requires a standard that usually goes much farther than a cost-benefit analysis employed under HSAA/CERCLA because there is no consideration of costs with a "background level" approach, while costs are a significant consideration under a traditional sediment contamination analysis. However, RWQB's argue there are differing "background levels" that may be required based on circumstances, with some considering costs and benefits. We will now look at the different "background levels" that may apply under certain circumstances.

Differing Background Level Standards

There are four distinct background level standards that apply under varied circumstances: pre-anthropogenic sediment conditions; conditions of the sediment that would exist but for the discharge; background water quality for the area in question; and water quality that would exist but for the discharge. We will look at each one of these variations in turn to see if any accommodate a cost-benefit approach.

Pre-anthropogenic sediment conditions requires removal of all man-made contaminants within the sediment. This standard is far removed from a cost-benefit analysis, and arguably does not even consider ambient water quality conditions. Indeed,

removal of *all* man-made chemicals and compounds does not equate to indications of water quality. Many man-made chemicals are innocuous to the marine environment, and have little to no anthropogenic risks. Further, those chemicals that may pose a risk only do so in certain quantities. Thus, it is not simply the *presence* of man-made chemicals that creates water quality issues, but it is the potential risk and quantity of the substance that speaks to the potential environmental harm and subsequent need for remediation. By not considering these variables, a pre-anthropogenic requirement fails to accommodate the cost-benefit approach.

Pre-discharge sediment conditions are simply the condition of the sediment prior to the discharge. This “level” of remediation is similar to the pre-anthropogenic condition, although it does not necessarily limit its application to man-made pollutants. Like pre-anthropogenic standards, there is no consideration of the resulting harm caused by the condition to either the environment or man. Further, the associated costs involved with remediation are likewise not considered. As such, this standard equally fails to accommodate the statutorily mandated cost-benefit approach.

Background water quality concerns the overall water quality of a given water region, and requires the contaminated section to achieve the same level of water quality as exists in the surrounding region. This standard, at least conceptually, incorporates some form of water quality analysis, and implicates some standard by requiring a base (the surrounding region) upon which the quality of the affected regions water can be measured. However, it does not consider the water quality that existed in the affected

area prior to the discharge. Rather, it automatically assumes the affected-areas water quality was the same as the surrounding area. Aside from other concerns of developing water quality standards, this standard also fails to conform to a cost benefit analysis because it does not consider the costs of cleanup, and link those costs to the associated water quality standards, whatever those standards might require.

Finally, background levels can be defined as levels of water quality that would exist but for the discharge. This is the most accurate assessment of cause and effect. It attempts to determine the level of water quality existing prior to a discharge, and then require remediation to that same level. Implicit in this standard is the understanding that dischargers should only be responsible for the effects of their specific actions. However, there is no indication costs are to be considered in determining how to obtain pre-discharge water quality. Certainly, there can be instances where 95% of pre-discharge water quality can be achieved at reasonable costs, but the costs then become exorbitant to achieve the remaining 5%. This may be the case even where the additional 5% of water quality achievement has no appreciable effect on the “quality” of the water to support marine life, or interfere with human activities.

As can be seen, all of the “background level” standards discussed above place an absolute burden on the discharger to remediate beyond the normal cost benefit analysis required under HSAA/CERCLA. This is the case even where there is no appreciable consideration of costs involved in the cleanup, and the associated benefits achieved from such costs.

Conclusion

RWQB's, through the use of a "background level" standard for the remediation of contaminated marine sediments, are engaging in an ultra vires action. Both the express statutory provisions, as well as the legislative history, indicate RWQB's are required to employ a cost-benefit analysis when remediating contaminated sediments. However, RWQB's continue to use "background level" standards, even though they cannot be reconciled with the required cost-benefit standards. The effects of these actions suggest dischargers are being forced to expend substantial amounts of money that, in many cases, they would otherwise not be required to spend. The implications are these dischargers may seek legal redress under a writ of mandamus procedure in California for state agency actions that go beyond statutory delegation.