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TO: David Maul
California Energy Commission

Craig M. Wilson
FROM: Craig M. Wilson
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DATE: MAR 24 1999

SUBJECT: REQUEST FOR LEGAL INTERPRETATION

The California Energy Resources Conservation and Development Commission (Energy Commission) expects to receive a number of applications for approval to build and repower¹ thermal power plants in the near future. You have asked that the State Water Resources Control Board (State Water Board) provide its legal interpretation of several laws affecting these applications. Your questions and responses follow:

1. **QUESTION:** *What level of physical and operational alteration of an existing power plant would trigger a new or revised National Pollutant Discharge Elimination System (NPDES) permit?*

RESPONSE: The repowering proposals are likely to involve two types of changes - a change in ownership and an alteration or expansion of an existing power plant. The following discussion very briefly summarizes the law applicable to permit modifications. The memorandum then addresses these two particular changes.

The State Water Board and Regional Water Quality Control Boards (Regional Water Boards) issue NPDES permits under a state program approved by the United States Environmental Protection Agency (EPA) pursuant to the Clean Water Act.^{2,3} Permits issued by the boards

¹ Energy Commission staff have stated that "repowering" projects include any mechanical change in a power plant that increases power by 50 megawatts or more.

² 33 U.S.C. § 1251 et seq.

³ See *id.* § 1342(b); Wat. Code, div. 7, ch. 5.5.

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must comply with all applicable provisions of the Clean Water Act, implementing EPA regulations⁴, and any more stringent state requirements.⁵

State law governing the permit program provides that permits may be terminated or modified for cause.⁶ This provision is implemented with a standard permit condition, stating that the permit may be modified, revoked and reissued, or terminated for cause.⁷ EPA's permit regulations elaborate on the circumstances under which a permit can be transferred, modified, or revoked and reissued.⁸

Additionally, the State and Regional Water Boards have supplementary authority under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act or Act)⁹, to review and revise waste discharge requirements, on their own motion, for both point sources regulated under an NPDES permit and non-point sources regulated under non-NPDES waste discharge requirements. For NPDES permits, this authority is limited to actions that are consistent with NPDES program requirements.¹⁰

a. Change in ownership

EPA regulations provide three ways for a permit to be transferred to a new owner. Under limited circumstances, an NPDES permit can be automatically transferred to a new owner. If this is not possible, the permit will have to be either modified or revoked and reissued to reflect the change in ownership.

An NPDES permit may be automatically transferred to a new permittee if three conditions are met:

- (1) The current permittee notifies the Regional Water Quality Control Board (Regional Water Board) at least 30 days in advance of the proposed transfer date;
- (2) The notice includes a written agreement between the old and new permittees on the terms of the transfer; and

⁴ See 40 C.F.R. § 123.25, specifying the requirements for state permit programs.

⁵ See Wat. Code §§ 13370, 13372, 13377; Cal. Code Regs., tit. 23, §§ 2235.1-2235.3.

⁶ See Wat. Code § 13381.

⁷ See 40 C.F.R. § 122.41(f); Cal. Code Regs., tit. 23, § 2235.2.

⁸ 40 C.F.R. §§ 122.61-122.63.

⁹ Wat. Code § 13300 et seq.

¹⁰ See discussion in Attorney General's Statement for the State [NPDES] Program and State Pretreatment Program Administered by the [State Water Board] and the [Regional Water Boards], May 1987, pp.91-93.

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- (3) The Regional Water Board does not notify either party of its intent to modify or revoke and reissue the permit.¹¹

In all other cases, an NPDES permit can be transferred to a new owner only by modification or revocation and reissuance of the permit.¹² Modifications can be either major or minor. Major modifications require public notice; minor modifications do not.¹³ A permit can be transferred to a new owner by a minor permit modification if the Regional Water Board determines that no other changes in the permit are necessary.¹⁴

If an ownership transfer cannot be done automatically or through a minor permit modification, the transfer has to be done through a major modification or revocation and reissuance of the permit. In a major modification only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened.

b. Alteration or Expansion of the Power Plant

A repowering project that alters or expands an existing power plant in a manner that materially changes the discharge can trigger either a permit modification or revocation and reissuance. The federal regulations provide that an NPDES permit can be modified if "[t]here are material and substantial alterations or additions to the permitted facility or activity.... which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit."¹⁵ The regulations also allow the permit issuer to revoke and reissue on this basis if the permittee either requests or agrees to this approach.¹⁶

Whether a particular repowering proposal falls into the category of "material and substantial alterations" will depend upon the facts specific to that proposal. In general, it is probably safe to say that facility changes or additions that consist only of replacement of existing production equipment and that do not result in any change in the character or volume of the waste stream would not require permit modification. On the other hand, repowering projects that change or expand a power plant in a manner that alters the character or volume of the existing waste stream likely will require a permit modification.

¹¹ 40 C.F.R. § 122.61(b); Wat. Code § 13377; Cal. Code Regs., tit. 23, § 2235.2.

¹² 40 C.F.R. § 122.61.

¹³ See *id.* §§ 122.62, 122.63.

¹⁴ See *id.* § 122.63(d).

¹⁵ See *id.* § 122.62(a)(1). See also *id.* § 122.41(l), which requires a permittee to report planned physical alterations or additions to a permitted facility.

¹⁶ *Id.* § 122.62(a).

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In some cases, reconstruction at an existing industrial site, such as a power plant site, can result in a "new source", rather than a permit modification.¹⁷ If reconstruction results in a "new source", a new NPDES permit would be required.

Under the Clean Water Act, the United States Environmental Protection Agency (EPA) is required to establish federal standards of performance for new sources in certain industrial categories. The categories include steam electric powerplants.¹⁸ A "source", in general, is an industrial facility from which pollutants are discharged.¹⁹ A "new source" is a source that is constructed after EPA publishes proposed standards of performance for that industrial category.²⁰ EPA published new source performance standards for the steam electric power generating point source category in the early 80's.²¹

The new source performance standards were intended to apply state-of-the art treatment technology requirements to new sources because these dischargers have the opportunity to install the new technology at the time of start-up.²² This philosophy also has been applied to certain reconstruction activities at the site of an existing source. Thus, reconstruction will result in a "new source" if it "totally replaces the process or production equipment that causes the discharge of pollutants at an existing source", or "[i]ts processes are substantially independent of an existing source at the same site."²³ In determining whether "its processes are substantially independent", the permit issuer must consider factors such as the extent to which the new facility is integrated with the existing plant; and the extent to which the new facility is engaged in the same general type of activity as the existing source.²⁴

Two important consequences flow from a Regional Water Board determination that a repowering project results in a new source. First, discharge from the new facility must comply with the applicable new source performance standards, which are effective upon

¹⁷ See *id.* § 122.62(a)(1), note.

¹⁸ 33 U.S.C. § 1316.

¹⁹ Section 1316(a)(3) states that "[t]he term 'source' means any building, structure, facility, or installation from which there is or may be the discharge of pollutants."

²⁰ Section 1316(a)(2) defines "new source" as "any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section."

²¹ 40 C.F.R. Part 423.

²² Training Manual for NPDES Permit Writers (EPA 833-B-93-003), March 1993, p. 4-1.

²³ *Id.* § 122.29(b).

²⁴ *Id.* § 122.29(b)(1)(iii).

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commencement of operation.²⁵ Second, the Regional Water Board's adoption of a permit for the activity will be subject to the California Environmental Quality Act (CEQA).^{26 27}

2. *QUESTION: Should the discharge from a repowered thermal power plant with once-through cooling be treated as an "existing discharge" or a "new discharge" under the State Water Board's Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (1975) (Thermal Plan or plan)?*

RESPONSE: It depends. In the majority of repowering cases, the developers propose to build a new plant at the existing plant site but to use the existing plant's intake and discharge structures. Discharge from the new plant will be a "new discharge". In all other cases, whether the discharge from the upgraded plant is new or existing will depend on whether there is a "material change" in the existing discharge.

The Thermal Plan was originally adopted as state policy for water quality control in January 1971.²⁸ It was revised several times and ultimately replaced with the current plan.²⁹ The original policy version distinguished between "existing discharge" and "new discharge". The original definitions were carried through largely unchanged into the later versions and, finally, into the plan.³⁰

The Thermal Plan defines a "new discharge" as:

- A. Any discharge that is not presently taking place unless waste discharge requirements were adopted and construction had commenced prior to plan adoption; or
- B. Any discharge which is presently taking place and for which a "material change" is proposed but no construction had commenced prior to plan adoption.³¹

Construction had commenced if the discharger had executed a contract for on-site construction or for major equipment related to the condenser cooling system.³²

²⁵ *Id.* § 122.29(d)(4). The permittee has no more than 90 days to demonstrate compliance.

²⁶ See Public Resources Code § 21000 et seq.

²⁷ See Wat. Code § 13389; Cal. Code Regs., tit. 14, § 15263. See also response to Question 5 of this memorandum.

²⁸ The policy was titled "Policy Regarding the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California".

²⁹ The policy was revised in October, 1971, and May, 1972.

³⁰ The word "plan" was substituted for "policy" in the Thermal Plan. In addition, one of the policy amendments substituted "or" for "and" as the conjunction in the definition of "new discharge".

³¹ Thermal Plan, par. 11.

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Presumably, the Regional Water Boards have not yet adopted permits for the proposed repowering projects, and construction has not yet commenced. Thus, a surface water discharge from a repowering project will be a "new discharge" under the Thermal Plan if either the discharge is not presently taking place or it is a "material change" in an existing discharge.

When the original thermal policy was adopted in 1971, the concept of "material change" in a discharge was already included in the Porter-Cologne Act. Under the Act, any discharger proposing a material change in the character, location, or volume of the discharge was required to file a new report of waste discharge.³³ In 1972 the State Water Board defined "material change" in regulations. These regulations provide that a material change includes, but is not limited to, the addition of a new process or product by an industrial facility resulting in a change in the character of the waste, a significant change in disposal method or area, or an increase in flow beyond that specified in the waste discharge requirements.³⁴ Three years later, the State Water Board adopted the Thermal Plan without substantively revising the definitions of new and existing discharges. Thus, the term "material change" in the Thermal Plan must be interpreted to have the same meaning as that contained in the State Water Board's regulations.

In contrast to a "new discharge", an "existing discharge" under the Thermal Plan includes any discharge that is currently taking place or a material change in an existing discharge for

³² *Id.*, par. 10.

³³ Stats. 1969, c. 482, § 18. This requirement is currently contained in Water Code § 13260(c). See also Water Code § 13264.

³⁴ Cal. Code Regs., tit. 23, § 2210. The regulation reads:

"A material change in the character, location, or volume of the discharge requiring a waste discharge report includes, but is not limited to, the following:

(a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

(b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

(c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

(d) Increase in flow beyond that specified in the waste discharge requirements.

(e) Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements."

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which construction had commenced prior to plan adoption.³⁵ Existing thermal discharges were grandfathered-in in the original thermal policy for two reasons. First, it was felt that the investment that would be needed to upgrade the existing facilities to meet more stringent thermal limitations might not be justified, given the age of the facilities. Second, the turbines, condensers, and cooling systems in these facilities were designed for a particular design temperature that dictated the flow across the condensers and the temperature differential between the intake water and the discharge. New facilities, on the other hand, could be built with a different condenser design that could enable these facilities to meet the thermal limitations for a new discharge.

A majority of the repowering project developers propose to build a new plant at the site of an existing plant but to use the existing plant's intake and discharge structures. The discharge of thermal waste from the new plant should be considered "new" under the Thermal Plan for several reasons. First, this discharge is not, in fact, "currently taking place." Second, even assuming that the discharge is "currently taking place", discharge from the new plant would very likely be a material change in the discharge from the old plant because a greater amount of heat will be discharged from the new plant. Because the new plant will operate more efficiently than the old one, the new plant likely will be in operation a greater length of time on a daily or annual basis. Finally, the discharge should be classified as new because this is consistent with the intent of the original thermal policy. If a new power plant is built, the project proponents will have the opportunity to design the plant to meet the more stringent thermal limits for a new discharge.³⁶

If a repowering project involves something less than complete replacement of the existing plant, discharge from the upgraded plant will be "new" if the construction results in a material change in the discharge from the existing plant. This must be decided on a case-by-case basis. If the modifications result in increased heat loading, increased temperature, or altered flow, discharge from the upgraded plant should be considered new. The discharge of thermal waste from an upgraded plant is likely to result in increased heat loading because the plant will be more efficient and, thus, can be operated a greater length of time on a daily or annual basis.

3. *QUESTION: Water Code Section 13550 through 13552 address the use of potable water for nonpotable uses under certain circumstances where recycled water is available. Are all*

³⁵ See Thermal Plan, par. 10. An "existing discharge" also included a discharge for which waste discharge requirements had been established and construction commenced prior to plan adoption.

³⁶ Under these circumstances, the new plant probably is also a "new source" under the Clean Water Act because it will "totally [replace] the process or production equipment that causes the discharge of pollutants at an existing source." See 40 C.F.R. § 122.29(b).

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"sources of drinking water", as defined in State Water Board Resolution 88-63, considered potable?

RESPONSE: No. Water in a "source of drinking water", in fact, may not be potable.

Resolution 88-63 defines "sources of drinking water" as those waterbodies that are designated as suitable, or potentially suitable, for municipal or domestic supply. Resolution 88-63 focusses on identifying those waterbodies that actually or potentially could be used for drinking water, i.e. they have sufficient yield, etc. The water in these waterbodies, however, may or may not be potable. "Potability" focusses on the suitability of the water for drinking. Water that is "potable" has to meet certain drinking water standards established by EPA and the State Department of Health Services.³⁷

4. *QUESTION: Water Code Section 13550(a) requires the use of recycled water in lieu of potable water under certain conditions. One of these conditions is that the "source of recycled water is of adequate quality for these uses" Does "adequate quality" mean that the recycled water can be used without additional treatment?*

RESPONSE: The answer is probably yes. "Recycled water" is defined to mean "water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." Wat. Code §13050(n). Thus, the definition of "recycled water" assumes that it has been treated in order to be usable. Section 13550, likewise, compares the cost of "supplying and delivering the treated recycled water" with supplying potable domestic water. Again, the wording of this section implies that the recycled water has received prior treatment.

5. *QUESTION: Can final non-NPDES waste discharge requirements be issued for a repowering project prior to Energy Commission certification of the project?*

RESPONSE: No. As a responsible agency, the Regional Water Board cannot adopt final non-NPDES waste discharge requirements or an NPDES permit for a new source before the lead agency, the Energy Commission, certifies the project under its certified regulatory program.

The Energy Commission certifies power plant sites and related energy facilities under the Warren-Alquist Act.³⁸ The act of certifying a project is a discretionary approval subject to

³⁷ See, e.g., Health & Saf. Code § 113843, which defines "potable water" as water that complies with the standards for a transient noncommunity water system under the California Safe Drinking Water Act, § 116275 et seq.

³⁸ Pub. Resources Code § 25500 et seq.

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CEQA.³⁹ The Energy Commission acts as lead agency when certifying power plant projects because it has the principal responsibility for project approval.⁴⁰

The Energy Commission's power plant certification program has been certified by the Resources Agency as exempt from the CEQA requirement to prepare environmental impact reports (EIRs), negative declarations, and initial studies.⁴¹ In lieu of these, the Energy Commission prepares a substitute environmental document, called a staff assessment. Energy Commission staff prepare both a preliminary and a final staff assessment prior to project certification. Project certification is the Energy Commission's final project approval.

When a Regional Water Board adopts waste discharge requirements, the Regional Water Board gives its discretionary approval for a project. This action is subject to CEQA.⁴² The Regional Water Boards must also comply with CEQA when adopting NPDES permits for new sources.⁴³ They are exempt from the CEQA requirement to prepare environmental documents, however, for all other NPDES permits. When issuing waste discharge requirements or new source permits for power plant projects, the Regional Water Boards act as responsible agency.

A responsible agency complies with CEQA by considering the EIR or negative declaration prepared by the lead agency when reaching its own decision on project approval.⁴⁴ Before reaching a decision on a project, a responsible agency must consider the environmental effects of a project as shown in the lead agency's EIR or negative declaration and feasible mitigation measures and alternatives within the agency's power.⁴⁵ The responsible agency must certify that its decision-making body reviewed and considered the information in the EIR or negative declaration; and the responsible agency must make the required CEQA findings.⁴⁶

When a lead agency prepares a substitute environmental document under a certified program, the document must be used by responsible agencies where certain conditions are met.⁴⁷ These conditions address the information that must be included in the substitute document,

³⁹ See *id.* §§ 21065, 21080, 25500.

⁴⁰ See *id.* § 25500; Cal. Code Regs., tit. 14, § 15367.

⁴¹ See Cal. Code Regs., tit. 14, § 15251(c).

⁴² See Pub. Resources Code § 21065, 21080; Wat. Code § 13260, 13377.

⁴³ See Wat. Code 13389; Cal. Code Regs., tit. 14, § 15263.

⁴⁴ See Pub. Resources Code § 21080.1.

⁴⁵ See Cal. Code Regs., tit. 14, §§ 15050(b), 15096(f)-(g).

⁴⁶ See *id.* §§ 15050(b), 15096(h).

⁴⁷ See *id.* § 15253.

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consultation requirements, and other provisions. In the absence of evidence of noncompliance by the certified lead agency, compliance with the conditions will be presumed.⁴⁸

Thus, assuming that the Energy Commission has complied with the conditions for use of a substitute environmental document, the Regional Water Boards will have to use that document when adopting waste discharge requirements or a new source permit for a repowering project. As explained above, however, the Regional Water Boards cannot take final action on a project until the lead agency, the Energy Commission, has taken final action itself.

⁴⁸ *City of Sacramento v. State Water Resources Control Board*, (1992) 2 Cal.App.4th 960, 977, 3 Cal.Rptr. 2d 643, 653.

California Environmental Protection Agency

