



DEPARTMENT OF THE NAVY

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592-5100

IN REPLY REFER TO:
5090
Ser 100/36

MAR - 8 1988

Mr. Dwight R. Hoenig
Chief, North Coast California Section
Department of Health Services
Toxic Substances Control Division
2151 Berkeley Way, Annex 7
Berkeley, CA 94704

Re: Mare Island Permit Decision (CA 7170024775)

Dear Mr. Hoenig:

On February 1, 1988, we received your January 29, 1988, letter which notified us that the United States Environmental Protection Agency (EPA) and the California Department of Health Services (DHS) have decided to propose denial of our operating permit for our landfill and industrial waste treatment plant (IWTP) surface impoundments. Your notice requires us to raise all ascertainable issues and submit all available arguments and facts supporting our position on the proposed permit denial by the end of the public comment period on March 14, 1988.

This letter provides our preliminary comments. Additionally, we request the EPA/DHS extend this public comment period until June 13, 1988, in order to allow our environmental consultant, Kaman Tempo/Risk Science Associates, sufficient time to independently evaluate the EPA/DHS basis for the proposed denial of our landfill permit and, based on their review, for us to provide to you with a recommended approach for continued operation or for closure, as appropriate. Our rationale for this request is set forth below.

Landfill

At the time we received your January 29, 1988, notification, we were negotiating a contract with Kaman Tempo/Risk Science Associates for environmental consulting services. Kaman Tempo/Risk Science Associates have significant experience in environmental engineering, hydrogeology and risk assessment. One of the major services we were soliciting is an evaluation of our ability to comply with the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board) technical requirements for continued operation of our landfill.

The Regional Board's approach to permitting our landfill under its authority is different than that which you have proposed under EPA/DHS authority. The Regional Board has issued to us a conditional permit which authorizes continued operation of our landfill as long as we are satisfactorily progressing towards completion of a study to evaluate the feasibility of developing acceptable engineered alternatives to Regional Board requirements we may not currently meet. The specific schedule of actions we must take toward completion of this evaluation are set forth in the conditional permit. This conditional permit is the Waste Discharge Requirements (WDR) Order issued by the Regional Board on December 21, 1987. A copy is attached.

As you will see from the following discussion, available information indicates to us that it is in the public interest for EPA/DHS to adopt a similar approach for our RCRA operating permit. We make our request for an extension to the public comment period in order to obtain independent confirmation of our conclusion from an experienced environmental consultant. Working on this project will be Dr. Lorne G. Everett (Kaman Tempo), a recognized expert in hydrogeology, and Dr. Alvin J. Greenberg (Risk Science Associates), an expert in toxicology and health risk assessment.

Under the Waste Discharge Requirements Order, the Regional Board has given us until July 1, 1988, to identify a plan of action and milestones (POAM) necessary to evaluate the feasibility of meeting the Regional Board's technical requirements or developing acceptable engineered alternatives for the landfill site. See Section C.2.e. of the Regional Board WDR Order. In view of the technical complexity of some of your concerns and their similarity to those of the Regional Board, we are tasking Kaman Tempo/Risk Science Associates, in conjunction with our other environmental consultants, ERM West, to review your proposed action and identify for us whether a similar evaluation of the feasibility of meeting EPA/DHS technical requirements for continued landfill operation is also warranted or, in the alternative, whether, in view of EPA/DHS technical requirements for continued landfill operation, limiting our future focus solely to initiating landfill closure is the more prudent course of action at this time.

If Kaman Tempo/Risk Science Associates recommend the feasibility evaluation of EPA/DHS technical requirements as the more prudent course of action, we will propose in our comments at the end of the extended public comment period that EPA/DHS rescind their proposed permit denial and issue, instead, a conditional permit which parallels the Regional Board's. Under this approach, we would task Kaman Tempo/Risk Science Associates to prepare for us to submit to you by July 1, 1988, a POAM for the actions necessary to perform this evaluation, similar to the POAM they will prepare for the Regional Board under Section C.2.e. of the WDR Order. Upon EPA/DHS acceptance of this POAM, we would have Kaman Tempo/Risk Science Associates execute it, along with the Regional Board POAM.

Completion of these feasibility study POAMs will tell us whether all regulatory technical requirements for continued operations can be met to the satisfaction of all the regulatory agencies involved and, if so, whether it would be cost effective for us to undertake the necessary corrective actions. See Section C.2.f. and g. of the WDR Order. Unless evaluations of the feasibility of meeting Regional Board and EPA/DHS concerns for continued landfill operation are both warranted, it makes no sense for us to proceed with the Regional Board POAM alone because, even if it were to show that meeting Regional Board technical requirements was feasible, our inability to meet EPA/DHS requirements would still necessarily result in a closure decision.

If the decision resulting from the post-feasibility study POAMs is to proceed with corrective actions necessary for continued operations, another POAM will be developed for implementation of these actions. This corrective action

implementation POAM approach is reflected in the Regional Board's WDR Order. See Section C.2.h.

Mare Island believes that this approach can be authorized by EPA/DHS through issuance of a conditional permit prior to November 7, 1988, under 42 U.S.C. § 6925(c)(2)(A)(i) and 40 C.F.R. § 270.33. As authorized by 40 C.F.R. § 233, the conditional permit can be written to include a separate schedule for termination of the feasibility study and/or implementation POAM and shift to a closure POAM in the event that:

(1) The feasibility study provided for in the conditional permit shows that achieving technical compliance is not cost effective or

(2) Continued groundwater monitoring indicates that the corrective actions necessary to achieve technical compliance cannot be implemented in time to prevent unacceptable environmental impairment.

Proceeding with this conditional permit approach in lieu of permit denial at this time is in the public's interest. First, as I next explain, it is environmentally sound, even when viewed in light of the environmental concerns upon which your proposed permit denial is based.

Essentially, EPA/DHS have two general concerns: fires and the non-sudden release of hazardous waste to groundwater and soils. These concerns are based on 40 C.F.R. § 264.31 and 22 Cal. Adm. Code § 67120, which provide, in pertinent part, as follows:

"Facilities must be designed, constructed, maintained and operated to minimize the possibility of fire, . . . or any unplanned . . . non-sudden release of hazardous waste or hazardous waste constituents to . . . soil . . . which could threaten human health or the environment."

As we read 40 C.F.R. § 264.31 and 22 Cal. Adm. Code § 67120, they do not require us to maintain and operate the landfill to minimize the possibility of any fire or any unplanned non-sudden release. They only require us to minimize the possibility of a fire or non-sudden release "which could threaten human health or the environment." EPA/DHS make no express finding that we have not minimized this possibility or that human health and the environment are threatened at this time. Nor do we believe that such a finding is justified at this time.

I will first discuss the EPA/DHS concern with fires. Relying on 40 C.F.R. § 264.31 and 22 C.C.R. § 67120, EPA/DHS conclude that the landfill ". . . is not being operated to minimize the possibility of fire which could result in the release of hazardous waste constituents to the air." EPA/DHS base their conclusion upon previous fires at the landfill. We believe current procedures minimize the possibility of such fires in the future. However, we are tasking Kanan Tempo/Risk Science Associates to review available information about these

prior fires and identify for us by July 1, 1988, whether additional actions can be implemented to provide even greater assurance that such fires will not occur. If such actions are feasible, an implementation schedule can be included in the conditional permit.

I next turn to focus on EPA/DHS concern for non-sudden release to groundwater and soils. EPA/DHS first note that the direction of groundwater flow appears dependent upon the operation of the nearby dredge ponds and conclude from this that this hydrogeologic system "has the potential" for allowing hazardous constituents to migrate out of the RCRA landfill into the adjacent groundwater and soil. What EPA/DHS fail to note, however, is that the dependency of groundwater flow upon dredge pond operation also has the potential for significantly slowing the migration of hazardous constituents out of the RCRA landfill and for controlling the direction of migration away from uncontaminated areas and into the adjacent old landfill site. The old landfill is one of the Shipyard's old hazardous waste disposal sites currently being studied by the Navy for remediation under the Navy's Installation Restoration (IR) Program which has been implemented at Mare Island under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The localized migration of hazardous waste or hazardous waste constituents beyond the boundaries of the RCRA landfill into the old landfill site does not appear to constitute a threat to human health or the environment given the fact that that old landfill is covered by the CERCLA/IR Program.

In view of the above, we conclude that, prior to making a final decision on Mare Island's Part B Permit Application, the potential for migration from the RCRA site should be studied further. Such a study may show that the RCRA landfill is, indeed, currently being operated to minimize the possibility of non-sudden release which could threaten human health or the environment or, if it is not, that a combination of dredge pond operation and engineering initiatives could feasibly result in the control of migration to acceptable boundaries. We are tasking Kaman Tempo/Risk Science Associates to confirm our conclusion and, if they do, we will task them to conduct such a study. Additionally, this possibility will be considered by our CERCLA/IR environmental consultant in identifying appropriate remediation for the old landfill site. A work plan for the CERCLA/IR remedial investigation at the old landfill site is due to be issued July 1, 1988, so both of our environmental consultants should be able to coordinate their studies.

The Regional Board has authorized such an approach in its WDR Order and it makes sense for EPA/DHS to do likewise. Except as it may provide a conduit for soil contamination, 40 C.F.R. § 264.31 and 22 Cal. Adm. Code § 27120 do not expressly authorize EPA/DHS to base permit denial upon the possibility of groundwater contamination alone. The Regional Board appears to have the state regulatory authority and expertise for the water quality aspects of discharges to land. See 23 Cal. Adm. Code § 2510(a). It is our understanding that both EPA/DHS normally give great weight to the judgment of the Regional Board in matters

involving groundwater. As groundwater is, indeed, the migration conduit which EPA/DHS have focused on in their proposed denial, we ask that you give great weight to the Regional Board's approach to evaluating continued operation of our landfill by taking a similar approach.

We also question the EPA/DHS conclusion that a structurally sound foundation is required in this case in order to meet 40 C.F.R. §264.31 and 22 Cal. Adm. Code § 67120. These provisions do not expressly require a foundation. They seem to permit any combination of design, construction, maintenance and operation techniques as long as, in conjunction with one another, they "minimize the possibility of . . . any unplanned . . . non-sudden release of hazardous waste or hazardous waste constituents to . . . soil . . . which could threaten human health or the environment." If the engineering alternative/dredge pond operation approach discussed above provides such minimization, a foundation would not be required. Such an approach makes particular sense in cases of old landfills such as ours which were established prior to the establishment of current regulations.

The Regional Board regulations applicable to landfills recognize this approach. They provide for the use of engineered alternatives in cases in which the foundation is not adequate. More specifically, 23 Cal. Adm. Code § 2530(c) requires that the landfill be operated to ensure that waste will be a minimum of five feet above the highest anticipated elevation of underlying groundwater. Section 2531(b)(1) requires that the unit shall be immediated underlain by natural geological materials which have a permeability of not more than 1×10^{-7} CM/SEC, and which are of sufficient thickness to prevent vertical movement of fluid, including waste and leachate to the unit to waters of the state. Section 2531(b)(2) requires the use of natural and artificial barriers to prevent the lateral movement of fluid, including waste and leachate. Section 2510(b) permits the use of engineered alternatives to these requirements. These are some of the requirements which Kaman Tempo/Risk Science Associates will study for us under their Regional Board WDR Order tasking. Thus, their results will be directly applicable towards evaluating the EPA/DHS concern about the landfill foundation.

EPA/DHS final general concern is for "continuing releases" from the older landfill located beneath the RCRA landfill. EPA/DHS note that "By law corrective action is required for . . . documented releases." The specific technical concerns of EPA/DHS are: (1) a perceived increase in the amount of waste which ultimately must be remediated through corrective action at the old landfill and (2) a perceived interference with corrective action measures at the old landfill such as excavation or capping.

On their face, these specific concerns do not appear to make sense. It does not appear as if waste migration from the RCRA landfill into the old landfill site will affect the degree of remediation already required. The EPA/DHS justification and rationale for proposed denial of our permit application notes that groundwater/leachate is already present in both landfills; the hazardous waste

constituents are similar in both landfills; and no impermeable layer is between the units. If waste deposited into the RCRA landfill as a result of continued operations does migrate into the old landfill, it will be remediated under our CERCLA/IR Program with the similar waste already located there. If, instead, this waste remains in the RCRA landfill, it will still have to be remediated under RCRA when the landfill is eventually closed. As long as we can prevent the migration of such waste from beyond the boundaries of the old landfill site, it should not matter whether remediation of any additional waste which would be placed in the RCRA landfill as a result of continued operations is undertaken as a part of our CERCLA/IR Program remediation of the old landfill site or, should it not migrate from the RCRA landfill site, as part of future RCRA landfill closure. In either case the amount of waste which would have to be remediated is the same.

It is also not apparent that waste which migrates from the RCRA landfill would interfere with the remediation of the old landfill to be undertaken through the CERCLA/IR Program. As EPA/DHS note in their justification for their proposed permit denial, the hazardous waste constituents are similar in both landfills. Additionally, it is our understanding that on-site containment and/or treatment are to be given serious consideration as remediation methods under CERCLA. Therefore, concerns about excavation do not appear warranted at this time. Without further explanation, we are unable to provide comments to the EPA/DHS concerns about capping.

We do not question EPA's authority to require corrective actions under § 3008(h) of RCRA. We believe, however, that the approach which EPA/DHS should use in this case is that provided for by § 3004(u) of RCRA (42 U.S.C. § 6924(u)). Under § 3304(u), EPA/DHS may specify in our permit a schedule of compliance for such corrective actions where corrective action cannot be completed prior to issuance of the permit. In furtherance of this approach, we will task both Kanan Tempo/Risk Science Associates and our CERCLA/IR environmental consultant to evaluate the potential which continued operation of the RCRA landfill would have on corrective actions at the old landfill during their work for us.

Finally, the environmental soundness of our proposed conditional permit approach is supported by the results of chemical analyses of the groundwater adjacent to the RCRA landfill. As the Regional Board notes in its WDR Order, data indicates that the groundwater contains levels in excess of drinking water standards for some inorganic parameters. This groundwater is not, however, used for drinking water. Nor, as the Regional Board notes, is drinking water a potential use for this groundwater. These results show that there currently is no significant contamination beyond the boundaries of the RCRA landfill site. By November 1988, we will have a RCRA required groundwater monitoring system capable of detecting any changes in these conditions.

In addition to being environmentally sound, the issuance of a conditional permit in lieu of permit denial at this time could save the Government a significant amount of money. We estimate that loss of use of the landfill at this time

could cost the Government in excess of \$1 million per year in alternate transportation and disposal costs at current prices. The Shipyard is exploring possible recycling methods for reducing the amount of hazardous waste disposed of in the landfill as part of our overall hazardous waste minimization plan; however, until such methods are developed and implemented, unnecessary closure of the RCRA landfill will have a significant fiscal impact upon the Government.

Given the environmental soundness of pursuing a conditional permit approach, and the potential significant increased costs to the Government associated with permit denial, it is in the public interest to postpone the permit denial decision and pursue instead a conditional permit at this time. Only through the conditional permit approach can Mare Island and all the concerned regulatory agencies make an informed, fiscally responsible final decision about the landfill without serious risk to the environment. Through a similar conditional permit approach, the Regional Board has allowed us a reasonable time to conduct the additional studies necessary to make an informed, fiscally responsible decision about continued operation of our landfill under their requirements. We ask EPA/DHS do the same.

On February 29, 1988, we completed negotiations with Kaman Tempo/Risk Science Associates and executed a contract which will cover the efforts discussed herein. Under this contract, we are negotiating a delivery order which tasks Kaman Tempo/Risk Science Associates to review the administrative record and make the threshold recommendation whether evaluating the feasibility of correcting the technical inadequacies alleged in the administrative record is warranted or, in the alternative, whether focusing solely on closure of the landfill is the more appropriate course of action at this time. In view of the short time remaining before the end of the public comment period, Kaman Tempo/Risk Science Associates has advised us that they cannot complete this threshold evaluation by March 14, 1988. Based on our discussion with them, we request the public comment period be extended to June 13, 1988, in order to permit Kaman Tempo/Risk Science Associates the necessary time to make the threshold determination to us and, based on their recommendation, for us to provide appropriate comments to you.

If the threshold recommendation is to proceed with a conditional permit approach, we will provide in our comments a proposed schedule similar to that contained in the Regional Board's WDR Order. If we recommend closure, we will provide a proposed date for discontinuing use of the landfill.

Please advise us as soon as possible about the disposition of our request for an extension to the public comment period.

Industrial Waste Treatment Plant Sludge Pond

Prior to receipt of your proposed permit denial, Mare Island had decided to modify industrial waste treatment plant operations in such a manner that future

use of the sludge ponds would not be required for hazardous waste treatment. The Regional Board WDR Order allows Mare Island until January 1, 1989, to cease deposition of sludge in these ponds. This time is necessary to implement modifications negating the need for the ponds. Mare Island requests that EPA/DHS issue a conditional permit that allows for continued use of the sludge ponds for sludge deposition until this same date. Available data indicates that such continued use will pose no significant environmental threat while cessation of use prior to this date could adversely impact industrial processes which are critical to the timely completion of submarine repair work.

We welcome the opportunity to discuss our proposed conditional permit approach with you. Our point of contact is Dr. William Cornils. Please refer any questions to Dr. Cornils at (707)644-3375.

Sincerely,



H. P. MANN
Captain, USN
Shipyard Commander

Encl: (1) Regional Board WDR Order

Copy to:

Mr. Jeff Zelikson
Environmental Protection Agency

Ms. Lila Tang
Regional Board

Mr. John O'Kane
Department of Health Services

Mr. Clifford K. Covey
Solano County Environmental Health
601 Texas Street
Fairfield, CA 94533

ENCLOSURE

REGIONAL WATER BOARD WASTE DISCHARGE
REQUIREMENTS ORDER

THIS ENCLOSURE WAS NOT RECEIVED IN THE
RESTORATION RECORD FILE.

FOR ADDITIONAL INFORMATION, CONTACT:

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