STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of NORTH CHOLLAS CITIZENS ASSOCIATION for Review of Order No. 80-31 (Waste Discharge Requirements for the City of San Diego's North Chollas Sanitary Landfill), of the California Regional Water Quality Control Board, San Diego Region. Our File No. A-277.	Order No. WQ 81-10

BY THE BOARD:

On June 2, 1980, the California Regional Water Quality Control Board, San Diego Region (Regional Board), adopted waste discharge requirements in Order No. 80-31 for the City of San Diego's proposed North Chollas Sanitary Landfill (landfill). The requirements establish discharge specifications and prohibitions for operation of the landfill, which will accept Group 2 and 3 wastes.[1/]

On July 2, 1980, the State Water Resources Control Board (State Board) received a petition from North Chollas Citizens Association (petitioners) seeking review of Order No. 80-31. On December 3, 1980, the State Board received an amended petition from petitioners.

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1. Group 1, or toxic, wastes are excluded from the landfill. Group 2 wastes include chemically or biologically decomposable materials, and Group 3 wastes consist of nonwater soluble, nondecomposable inert solids. 23 Cal. Admin. Code Sections 2520-2522.

This matter was discussed at a special meeting of the State Board on January 6, 1981. At that meeting, we indicated that certain additional information regarding the proposed site would be necessary prior to taking an action. On January 14 and April 14, 1981, the State Board sent letters to the City of San Diego, requesting it to drill additional groundwater exploration wells and to provide data on seeps encountered at the site. Data was received from the City of San Diego in May and June 1981 and has been made a part of the record. Additional submittals have also been received from petitioner in March and April 1981.

I. BACKGROUND

The City of San Diego is proposing to establish a Class II landfill, capable of accepting Group 2 and Group 3 wastes. The proposed site is adjacent to the existing South Chollas Landfill, which was recently closed after reaching its design elevation. The requirements adopted by the Regional Board provide, in part, that Group 2 wastes shall be separated by 15 feet from the capillary fringe of any groundwater, that such wastes shall be placed not lower than 330 feet elevation, and that surface and internal site drainage are not to come in contact with or percolate through any Group 2 wastes. Petitioners generally contend that the requirements and the design of the proposed landfill will not adequately protect water quality.

II. CONTENTIONS AND FINDINGS

1. Contention: Petitioners contend that the requirements violate the Basin Plan and the State Board's regulations because they permit the deposition of waste below historic water levels and below groundwater levels.

Finding: Petitioners rely on the following portions of the Basin Plan and the State Board's regulations, respectively:

> Dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural wastes into natural or excavated sites below historic water levels or deposition of soluble industrial wastes at any site is prohibited, unless such site has been specifically approved by the Regional Board for that purpose.2/ Basin Plan, I-5-74.

23 California Administrative Code Section 2511(d) requires that the following criteria be met to qualify as a Class II site:

> Subsurface flow into the site and the depth at which water soluble materials are placed shall be controlled during construction and operation of the site to minimize leachate production and assure that the Group 2 waste material will be above the highest anticipated elevation of the capillary fringe of the groundwater. Discharge from the site shall be subject to waste discharge requirements.

Petitioners contend that the Basin Plan prohibition will be violated because surface and groundwater exist at elevations of 360 to 385 feet at the site, while waste placement is proposed to be at elevations from 330 to 360 feet. Thus, petitioners claim, the requirements will permit placement of

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2. We note that petitioners neglected to include the last clause of this sentence in their petition.

waste below historic water levels, in violation of the Basin Plan. In support of their argument regarding Section 2511(d), petitioners claim that groundwater exists at 341 feet elevation, above the lowest elevation for waste placement in the landfill.

Petitioners' contention as to the Basin Plan prohibition is refuted by reading the prohibition in full. An exception to the dumping prohibition is created where "such site has been specifically approved by the Regional Board for that purpose." Since the landfill project has been approved by the Regional Board, there can be no violation of the Basin Plan prohibition.

Petitioners appear to argue that the cited provisions in the Basin Plan and the regulations require that no waste can be placed at a specified elevation if water exists at that elevation anywhere in the site. In addressing this question, both the regulations and the waste discharge requirements must be read in whole. The general purpose of Section 2511 is to prevent degradation of water quality by contact between Group 2 wastes and surface or groundwater. So long as there is no place in the site where water levels will reach the elevation of deposited wastes, no violation of the provisions will occur. The discharge specifications contained in the requirements insure that no such contact will occur. Discharge Specification 7 provides:

> The minimum distance separating Group 2 waste materials and the highest elevation of the capillary fringe of the underlying groundwater shall be 15 feet.

We read Discharge Specification 6, which establishes 330 feet as the minimum elevation for placement of wastes, to mean that

wastes can be placed at that elevation only where groundwater is no higher than 315 feet and direct the Regional Board to follow this interpretation.[3]

In our January 14 and April 14, 1981 direction to the City, we requested that the following tasks be performed to obtain a more complete picture of groundwater levels at the site.[4]

1. Seven additional groundwater wells were to be placed within the site at the following locations: The northwest corner of Area 1; the northeast corner of Area 1, the west end of Area 3; the center southeast side of Area 3 near an alleged seep reported by petitioner; the southeast corner of Area 3; and near SCS boring No. 3 on the north side of Area 2. These locations were selected by staff as being able to disclose a representative cross-section of the site.

2. In order to ensure an ample margin of safety for compliance with the requirements, the City was required to drill either to groundwater or to the maximum depth permitted in their drilling contract, whichever is reached first. Three wells were required to be placed just inside the berm surrounding the site in order to permit deeper drilling.

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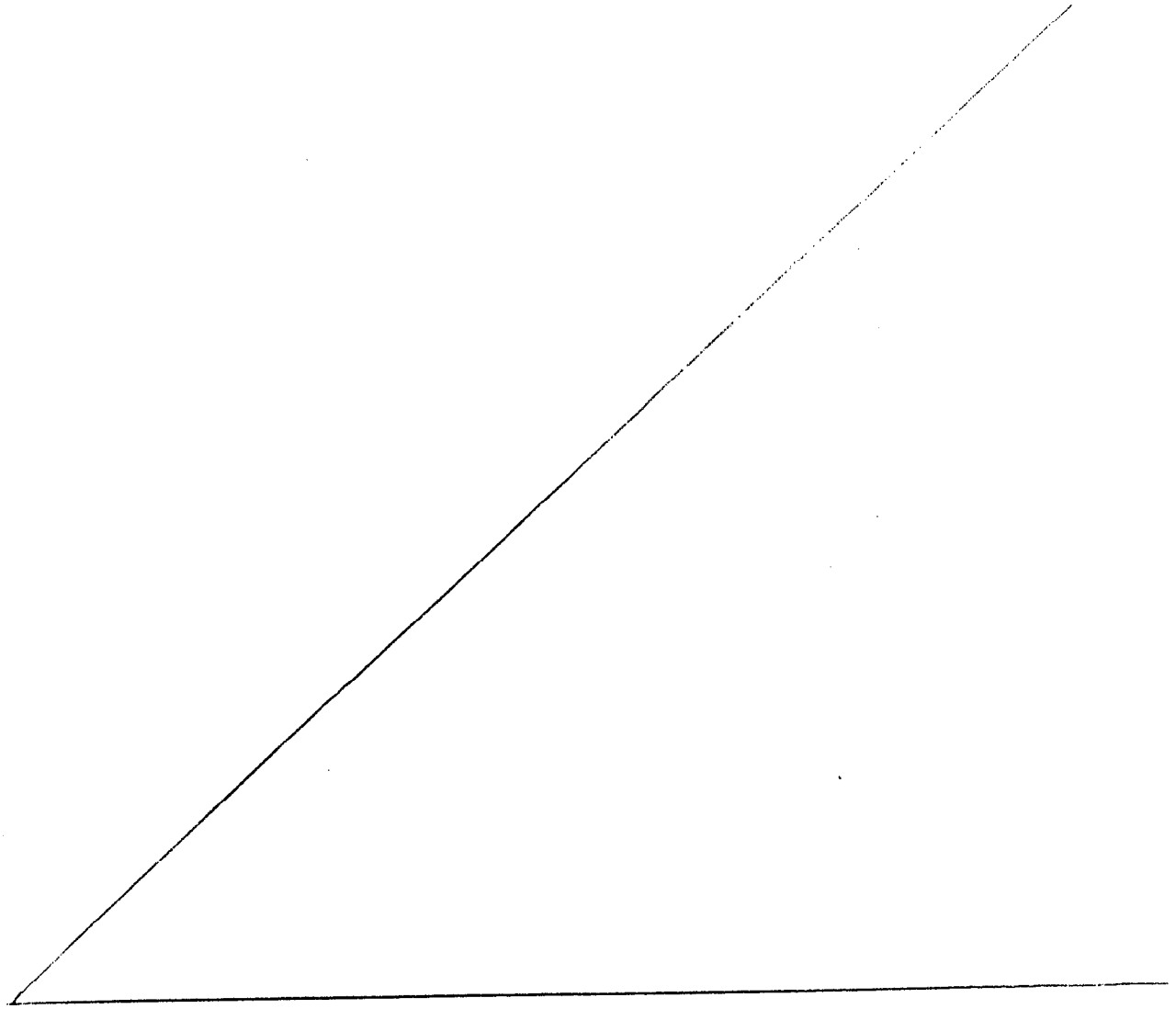
3. In fact, the Regional Board has indicated its agreement to such interpretation. Regional Board response to petition, dated September 4, 1980, at page 2.

4. The City had drilled previous boring at the site. Of three borings drilled by the City in 1975, one boring encountered water at 33 feet, and two borings remained dry at depths of 12 and 20 feet. Of seven borings drilled in 1979, one encountered water at 29 feet, and six were dry at depths of 45, 35, 23, 20, 18 and 10 feet. Two monitoring wells installed by the City in December 1980 encountered water at 30 and 50 feet.

3. The City was requested to report their determinations as to whether there is adequate separation between the level of waste placement and the highest elevation of the capillary fringe.

The City responded to our request for additional drilling data on May 6 and June 10, 1981.

The May 6, 1981 submittal contained the following data from the seven new drillings:



Sheet 1. Monitoring Well Summary Sheet, North Chollas Landfill.

Well No.	Completion Date	Well Depth (Ft)	Ground Elevation[2] (Ft)	Well Screen Depth (Ft)	Water Depth[4] (Ft)	Water Elevation[2] (Ft)
1[1]	4-23-81	72	335	54-72	36	299
2[1]	4-22-81	50	348	32-50	40	308
3[1]	4-23-81	67	405	49-67	dry hole	<338
4	4-22-81	65	375	47-65	48	<327
5[1]	4-23-81	83	405	65-83	dry hole	<322
5a[3][1]	4-23-81	63	405	45-63	dry hole	<342
6	4-21-81	95	445	77-95	dry hole	<350
7	4-22-81	85	415	67-85	dry hole	<330

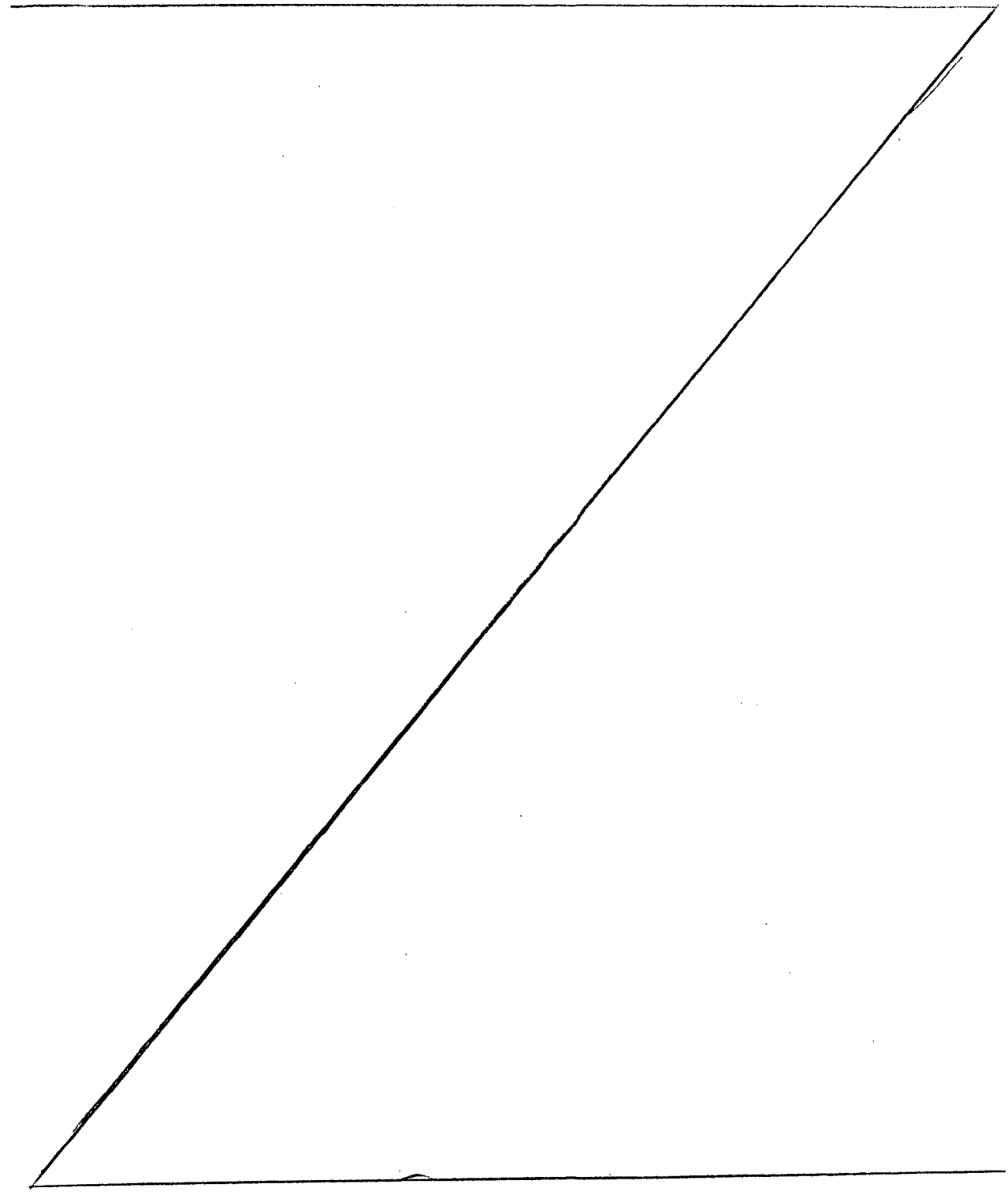
(1) Hole logged by SCS personnel.

(2) Ground elevation based on existing topographic map.

(3) Installed in same hole as Well No. 5.

(4) At time holes were drilled.

The June 10, 1981 submittal contained additional data from the new wells and from the two earlier wells:



NORTH CHOLLAS SOLID WASTE FACILITY

GROUND WATER DATA

WELL NO.	APPROX. DEPTH OF WELL	GROUND ELEV.	WATER DEPTH	WATER ELEV.	ADJACENT PAD ELEV.	COMMENTS
1	72'	335º	37'	298º	332º	5/19/81
2	50'	348º	43'	305º	340º	5/19/81
3	67'	405º	~~44'~~ 45'	360º	340º	5/19/81 ~~5/22/81~~
4	65'	375°	56'	319º	360º	5/19/81
5 S	63'	405º	~~35'~~ ⊖	?	345°	5/19/81 ~~5/22/81~~
5 D	83'		60' 75'	330º		
6	95'	445º	⊖	⊖	370º	DRY 5/19/81
7	85'	415º	⊖	⊖	355º	DRY 5/19/81
EAST	45'	380º	33'	347º	-NA-	5/19/81
WEST	65'	320º	28' *	292º	331º	* Last recorded depth obstructed at 22'±

West seep elevation 355º

East seep elevation 370º

The City concludes from this data that at each well location there was significantly more than the required 15-foot separation between refuse placement and groundwater.

We have reviewed the City's data. We find in general, that the wells encountered sands and silts at the higher elevations and sands and gravels in the lower elevations. Such conditions are similar to those found in the earlier exploratory work. In May 1981, three wells contained groundwater at depths in excess of 15 feet below the base of prepared waste disposal. One contained water only at the level of the Area No. 1 seeps. (The seeps will be discussed, infra.) One contained water both at the seep level and at depth. Two wells did not contain groundwater. The City's portrayal of the groundwater body as having a general slope from east to west and more than 15 feet below the proposed waste disposal appears accurate. However, neither of the City's reports focused on the question of whether there is adequate separation between waste placement and the highest elevation of the capillary fringe as called for by the waste discharge requirements. We note that the capillary fringe will be above level of the groundwater level. It could be as little as a few inches above to several feet.

In all wells drilled, except the deep No. 5 well, it can be concluded that the separation between groundwater levels and waste disposal is great enough to conclude that a 15-foot separation between waste disposal and the highest elevation of the capillary fringe will be maintained. The same assurance

cannot be given with well No. 5 since the separation between waste disposal and the groundwater itself was only 15 feet. While it is true that well No. 5 is outside the area of projected waste disposal, it is the only monitoring well in reasonable proximity to the northeast corner of Area 1. Therefore in order to ensure that the waste discharge requirements are met in this area, we are conditioning our approval of the waste discharge requirements upon the receipt of information that demonstrates that there is at least a 15-foot separation from the outside edge of proposed waste placement in the northeast section of Area 1 and the highest elevation of the capillary fringe. Such information shall be provided from a well to be placed at this location under the supervision of a registered geologist. The City shall provide it's findings to the Regional Board together with an acceptable plan for maintenance of adequate separation.[5/]

2. Contention: Petitioners contend that construction of the landfill according to the requirements will violate the State Board's regulations because of the presence of surface water and the threat of surface water runoff where waste placement will occur.

Finding: Petitioners claim that the presence of surface water and the threat of runoff from storm water at the site will result in violation of 23 California Administrative Code Section 2511(a) and (b).

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5. Even if the well demonstrates less than a 15-foot separation, the City could provide assurance that the requirements will be met. For example, the City could alter its operation plan to raise the level of Group 2 waste placement. This level could be raised by placement of Group 3 fill to provide the required separation.

Section 2511(a) and (b) provides that the following criteria must be met to qualify a site as Class II:

> (a) Disposal areas shall be protected by natural or artificial features so as to assure protection from any washout and from inundation which could occur as a result of tides or floods having a predicted frequency of once in 100 years.
>
> (b) Surface drainage from tributary areas shall not contact Group 2 wastes in the site during disposal operations and for the active life of the site.

The following Discharge Specifications found in the requirements specifically require implementation of the above-cited regulations:

> 3. The disposal area shall be protected from any washout or erosion of wastes or covering material, and from inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.
>
> 4. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources, shall not contact or percolate through Group 2 wastes discharged at the site.

In addition, two other specifications require placement of runoff diversion channels (Discharge Specification 11) and prohibit placement of Group 2 wastes in ponded water (Discharge Specification 13).

To insure compliance with these specifications, the report required from the design engineer prior to the initiation of operations must certify the adequacy of each component of the landfill. The Regional Board staff must also inspect the landfill prior to operation. We regard as an essential part of such inspection verification of the adequacy of all construction intended to convey surface waters away from the site.

This Board regards the requirements as complying with Section 2511(a) and (b) of the regulations.

3. Contention: Petitioners contend that violation of the Basin Plan and the State Board's guidelines may occur due to failure of the Chollas Reservoir, causing flooding of the landfill.

Finding: Petitioners rely on California Administrative Code Section 2511(a), supra, and the following provisions in the Basin Plan:

> The dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly into inland waters or watercourses or adjacent to the watercourses in any manner which may permit its being washed into the watercourse is prohibited. Basin Plan, I-5-74.

In support of their argument, petitioners cite portions of the EIR prepared for the project.[6/] The EIR indicates that the Chollas Reservoir, immediately to the east of the site, has not been the subject of a seismic study. The draft EIR states, "should the dam fail prior to completion of the fill, flooding of the landfill could occur, causing considerable downstream degradation of water quality". Draft EIR, at page 31. Further, at page 62, the EIR discusses the possibility of dam failure and concludes:

> Until a seismic safety analysis is available, potential for failure of the dam as a result of earth shaking is considered to be present.

The fact that there exists a possibility of failure of the dam does not result in violation of either Section 2511(a) or the quoted portion of the Basin Plan. It is our reading of

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6. Petitioners also cite the alleged inadequacy of the proposed drain pipe. This aspect of the landfill is discussed, infra, at Number 4.

both of these provisions that they require efforts to minimize the possibility of flooding due to such events as dam failure, but not that they require the absence of any such possibility. It is the opinion of this Board that the probability of such occurrence would be comparable to the likelihood of a 100-year flood.

More importantly, the requirement in Section 2511(a) that Class II disposal sites be protected from washout or inundation by a 100-year flood, is not merely intended to diminish the possibility of flooding to a specified increment. The amount of water which would be moving downstream in such a flood would be so great as to cause dilution sufficient that the eroded wastes would not significantly increase the degradation of water quality already caused by the flooding. This analysis of the effect of dilution by flooding due to rainfall applies with equal force to flooding caused by dam failure. We therefore conclude that the possibility of dam failure noted in the draft EIR will not cause a violation of the Basin Plan or the regulations.

4. Contention: Petitioners contend that the inadequacy of the proposed reservoir drain pipe under the landfill, along with uncontrolled surface drainage from tributary areas, may cause leachate contamination downstream in violation of the State Board's regulations.

Finding: Petitioners rely on 23 California Administrative Code Section 2511(c), which states:

> Gases and leachate emanating from waste in the site shall not unreasonably affect groundwater during the active life of the site.

Petitioners' claims refer to the proposed placement of a 36-inch drain pipe under the landfill. The purpose of the pipe is to carry surface waters which may collect at the eastern edge of the site, near the dam, to the western edge of the site. The pipe is intended to minimize the possibility of any leachate contamination through contact between the wastes and the surface water.

Petitioners argue that both the State Solid Waste Management Board (Solid Waste Board) and the Legal and Technical Services Division of the State Board have confirmed that the proposed reservoir drain is unacceptable. The Solid Waste Board did indicate to the City of San Diego, in a letter dated May 20, 1980, that the proposed reservoir drain was "unacceptable". However, on August 15, 1980, the Solid Waste Board issued to the City a permit to operate the site. (Solid Waste Facility Permit No. 37-SS-016.) This permit specifically provided for drainage by a 36-inch drain conduit (Specification 14). We are therefore not persuaded that this Board should be bound by the statement in the May 20 letter from the Solid Waste Board.

The petitioners also refer to a comment by an employee of the State Board's Legal and Technical Services Division, in a memorandum to the Regional Board staff dated April 28, 1980, which expressed reservations about the pipeline and suggested surface diversion facilities. The memo further recommended that if a pipeline is used, it should be designed and constructed so as to prevent any leachate contamination for up to 1,000 years.

The specific concerns addressed in the memorandum discussed above were met by subsequent design changes in the proposed pipeline. The new design calls for materials which are resistant to the effects of gases and leachate, have watertight joints and are of sufficient strength to withstand the weight of the materials to be placed in the landfill.

In reviewing the design plans approved by the Regional Board, the staff of this Board questioned the capacity of the pipeline to divert the runoff from a storm having a predicted frequency of once in 100 years. The concerns of the staff involved the hydrology of the runoff area and the existence of a flow from a 100-year storm through the channel leading to the pipe and through the pipe itself.

After the staff set forth its concerns in an initial draft order, the City indicated that it had redesigned the drainage system and recalculated the volume of flow for a 1,000-year storm. This Board has reviewed the new design and is now convinced that the proposed drainage system will meet the requirements of our regulations.

The design flow was revised to 103 cubic feet per second (cfs) from an earlier estimate of 118.3 cfs. The revision reflects the peak flow reduction effected by the storage capacity of the dam. The channel leading to the pipeline has been replaced by a drop inlet structure with a ponding area for use during flood conditions. The 36-inch pipe is wide enough to carry a 103 cfs flow. After leaving the pipe, the runoff will be routed through an energy dissipator to slow the velocity and

then into a creek bed. Our hydraulic analysis indicates that the proposed drainage system will be adequate to contain runoff from a 1,000-year storm.

We therefore conclude that the proposed drainage system is adequate to prevent flood waters from eroding the wastes in the landfill. The requirements adopted by the Regional Board are consistent with 23 Cal. Admin. Code Section 2511(c).

5. Contention: Petitioners assert that the Regional Board's approval of requirements violated the State Board's regulations because the City did not perform test borings in some areas of the proposed landfill and because the City did not include in its report of waste discharge adequate certification of all local agencies with jurisdiction.

Finding: In support of its claim regarding the adequacy of the test borings performed by the City, petitioners cite California Administrative Code Section 2551(d), currently Section 2552(b)(4). That section requires submission of an operation plan for hazardous waste disposal sites which includes, "detailed hydrological and geological data for the disposal area". The operation plan is to be submitted along with the report of waste discharge, prior to the issuance of requirements.

Petitioners claim that the City has not complied with this regulation since it did not perform test borings in the southern and western portions of the site. First, there is some question whether the section applies at all, since it is limited to "hazardous or liquid waste" disposal sites. In any event, the City has complied with Section 2552(b)(4). There is

no specific requirement in the section that any certain number of test borings be done. The number of borings which have been performed by the City are sufficient to support the requirements.

As is discussed above, at Number 1, the City of San Diego has presented data from groundwater exploration wells around the perimeter of the site. The City also presented data concerning reported seeps at and near the site and regarding material from a previously existing burning area. This data has provided us with a detailed view of the hydrological and geological characteristics of the disposal area. We conclude that the data supplied by the City of San Diego complies with the intent of Section 2552(b)(4).

Petitioners' contention regarding adequate certification by local agencies is now moot. Petitioners rely on California Administrative Code Section 2551 which provides that the report of waste discharge, "shall contain, or be accompanied by a certification that all local agencies with jurisdiction have approved use of the site for the intended purpose". Petitioners claim that for purposes of this section, the Solid Waste Board was acting as a local enforcement agency and that the City's report of waste discharge did not include a permit from that agency. It is not necessary, however, for us to resolve the question of whether the Solid Waste Board is a local agency for purposes of our regulation. While at the time the City submitted its report of waste discharge, the Solid Waste Board had not yet issued a permit, it did so on August 15, 1980.

Since the permit has now been issued, and since we can discern no prejudice by the fact that it was filed after the report of waste discharge, we consider petitioners' claim herein to be moot.

6. Contention: Petitioners claim that the requirements violate the California Environmental Quality Act (CEQA) in that the draft EIR fails to consider events which have occurred since 1975.

Finding: Petitioners argue that because the draft EIR for this project was prepared in December, 1975, it fails to take into account the heavy rainfall over the last three years in the San Diego area. CEQA provides that no subsequent or supplemental EIR shall be required unless: (1) There are substantial changes in the project requiring major revisions of the EIR; (2) There are substantial changes in the circumstances under which the project is being undertaken requiring major revisions in the EIR; or (3) New information becomes available. Public Resources Code Section 21080.1; 23 California Administrative Code Section 2706.

We do not find that any of the three specified circumstances which would require a new or supplemental EIR are present here. Petitioners argue that the heavier rainfall constituted changed circumstances in the project, but we cannot agree with that contention. The draft EIR contemplates a project which will be able to withstand a 100-year storm. See, e.g., draft EIR at page 31. The fact of a heavier than normal rainfall over the last few years presents no change in the circumstances under

which the project is being undertaken. We conclude that no major revisions of the draft EIR are necessary and that the Regional Board's adoption of Order No. 80-31 did not violate CEQA.

7. Contention: In their amended petition, petitioners claim that areas of seepage and of ash deposits in the landfill site will cause leachate contamination.[7/]

Finding: Two relatively small and isolated areas of seepage are apparent in the wall surrounding the northern portion of site. The source of these seepages, however, has not been positively identified.

The petitioner, in letters dated April 13 and April 27, 1981, argues that the seeps are of natural groundwater and are an indication of high groundwater levels in the area. In support of this contention, petitioner cites a chemical analysis of water samples taken from one of the seeps. We have reviewed this information and compared it to the City's recent well drilling data. We conclude that the most likely source of the seep is a very localized perched water occurrence fed by landscape irrigation or other similar source.

Regardless of the source of the seeps, the relatively small amount of moisture involved does not appear to pose a water quality problem. We note that our guidelines, "Waste Discharge Requirements for Nonsewerable Waste Disposal to Land,"

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7. The amended petition meets the requirements of 23 Cal. Admin. Code Section 2066(b) for the submission of additional evidence after the close of the record. The amended petition is therefore made a part of the record in this matter.

do permit the addition of some liquids to Group 2 wastes, since such wastes can absorb approximately 25 to 40 gallons of fluid per cubic yard. Guidelines, at page 16.

While the quantity of water coming from the seep is small, the City's water quality analysis of such water discloses it to be quite mineralized and of rather poor quality. Therefore, the Regional Board should ensure, during its review of the City's preoperation report on the landfill, that adequate steps have been taken to prevent these waters from either contacting the Group 2 waste or being discharged to potable water.

Petitioners have alleged that there is a seep in the center southeast side of Area 3. In our letter of April 14, 1981, we directed that one of the City's monitoring wells be placed in close proximity to the reported seep. This was not done. Therefore, we are conditioning our approval of these waste discharge requirements so that no wastes may be deposited in Area 3 until such a well is drilled at this location and the results therefrom provided to the Regional Board, together with designs of any proposed works needed to mitigate seepage flows from this area.

In addition, petitioners have also pointed to potential leachate problems stemming from the existence of ash and glass deposits on the floor of the site. The area was formerly a burning site, so such deposits are found at various locations. While petitioners are correct in arguing that ash is more permeable than the surrounding soils, the ash constitutes only a thin veneer above these soils. This conclusion is confirmed by excavations

performed by the City at our direction. We therefore conclude that the higher permeability of the ash layer will not cause any leachate contamination.

III. CONCLUSION

1. The waste discharge requirements which the Regional Board adopted for the operation of the North Chollas Landfill are proper and appropriate and are in conformity with the Porter-Cologne Act, the California Environmental Quality Act, and this Board's regulations.

2. Our approval of these waste discharge requirements is based on two conditions:

a. That the data from a new well in Area No. 1 waste placement and revised plans if needed show that there will be at least a 15-foot separation between projected waste placement and the highest elevation of the capillary fringe.

b. That no wastes shall be placed in Area 3 until the City provides assurances to the Regional Board from well and other data, that wastes can be placed in the vicinity of the reported seep in compliance with the waste discharge requirements.

IV. ORDER

IT IS HEREBY ORDERED that:

1. Order No. 80-31 is appropriate and proper, and the relief sought by petitioners is denied.

2. That our approval of Order No. 80-31 is conditional, as described above.

DATED: July 16, 1981

/s/ Carla M. Bard
Carla M. Bard, Chairwoman

/s/ L. L. Mitchell
L. L. Mitchell, Vice-Chairman

/s/ Jill B. Dunlap
Jill B. Dunlap, Member

/s/ F. K. Aljibury
F. K. Aljibury, Member