

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of
Parents of Jurupa, an Unincorporated
Association, Betty J. Hemm, Charlotte
Trust, Fred McDowell, to Review Order
No. 73-20 of the California Regional
Water Quality Control Board, Santa
Ana Region

Order No. WQ 74-10

BY BOARD VICE CHAIRMAN ROBIE AND MEMBER AUER:

On June 15, 1973, the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) adopted Order No. 73-20 which prescribed waste discharge requirements for Stringfellow Quarry Company (discharger) at a Class I disposal site situated five miles west of the City of Riverside.

On July 16, 1973, Parents of Jurupa, an unincorporated association, Betty J. Hemm, Charlotte Trust and Fred McDowell (petitioners) filed a petition with the State Water Resources Control Board (State Board) requesting review of Order No. 73-20, and specifically requesting that the State Board find the Regional Board action in adopting Order No. 73-20 to be inappropriate and improper. A hearing in this matter was held by the State Board on March 13, 1974, in Riverside, California.

Petitioners advance three specific contentions in support of their petition, all of which are hereafter considered in detail. After review of the records of the Regional Board and the record of the State Board hearing on this matter and after considering the contentions of petitioners, we have determined that the action of the Regional Board in adopting Order No. 73-20 was appropriate and proper except that certain additional operating procedures should be required of the discharger.

I. Background

Stringfellow Quarry Co. has operated a limited Class I industrial waste disposal site near Glen Avon, approximately five miles west of the City of Riverside, in Riverside County, since 1956. The site occupies approximately 22 acres, of which approximately 14 acres constitute the disposal ponds. These disposal ponds are formed by a series of earthen barriers within a canyon which has a natural dike or barrier extending up a tributary canyon on the east side of the main canyon. A concrete dam exists across the mouth of the main canyon, thereby extending the existing natural barrier the full width of the canyon. The pond depth varies from five feet in the small ponds to about twenty feet in the pond immediately behind the concrete dam. Land within 1,000 feet of this site is used as an ammunition loading facility and a rock quarry.

The operation has been conducted under waste discharge requirements prescribed by the Regional Board and a zoning variance approved by the Riverside County Planning Commission. The original discharge requirements were revised by Order No. 55-11 on September 29, 1961, and the operation continued until shortly after March 17, 1969, when storm runoff caused wastes to overtop the containment dam and the acceptance of wastes at the disposal site temporarily ceased while storm drainage improvements were made. The Riverside County Flood Control District subsequently approved the drainage facilities as adequate to contain and divert all surface runoff from the wastes, and the facility was reopened. The discharger voluntarily closed the site in November, 1972 because of additional difficulties, including

apparent escape of leachate and subsurface flows from the site, and for new construction in order to meet new waste discharge requirements.

On January 18, 1973 the State Board staff inspected the site and it was determined that the facility could be reopened if (1) the eastern abutment of the concrete dam was further grouted and (2) a positive hydraulic barrier with a sump was constructed downgradient from the dam to intercept and recycle any potential underflow. Modifications to the groundwater monitoring system were also recommended so that immediate remedial measures could be undertaken to preclude any pollution of water wells in downstream areas.

On June 15, 1973, the Regional Board adopted new waste discharge requirements (Order No. 73-20) which incorporate the State Board staff recommendations and further provide that Group I waste disposal shall not commence until it is determined by the Executive Officer of the Regional Board that the measures necessary to meet waste discharge requirements have been taken.

II. Site Characteristics

The waste disposal site lies entirely within the Jurupa Mountains, which are composed of granitic type rock overlain by a thin veneer of residual soil, commonly referred to as DG. The granitics are unusual in that they are massive, generally unfractured or unjointed, and contain only very thin lenses of foreign rock such as limestone.

The residual soil in the area varies in thickness from a few inches along the upper reaches of the canyon and the canyon sides to 12 feet in Well 2 S/6W-1Q1, located about 3,300 feet south of the

southerly limits of the site. The site is predominately underlain by siliceous metamorphics with granitics such as tonalite, granodiorite, and gabbro being present in lesser amounts. Although surface cracks are evident, it appears that these cracks are discontinuous and that the pond areas are impervious to percolating waste. There is no evidence to suggest that the disposal site is located over any known active or inactive faults.

The main canyon drains to the southwest and south along a gradient of about 300 feet per mile. The watershed above the disposal ponds is about 320 acres in area. Surface drainage moves southerly to a point approximately 3,000 feet south of U. S. Highway 60 where the drainage is captured by Pyrite Channel which then wastes the water to the south and west in the Chino Groundwater Basin.

Depth to water in wells south of the Jurupa Mountains generally varies from a minimum of 14 feet to a maximum of 41 feet.

III. Contentions of Petitioners and Findings

The contentions of the petitioners and our findings relative thereto are as follows:

A. Noncompliance with Water Code Sections 13241 and 13263.

Petitioners contend that the "regional board failed to comply with the requirements of Water Code Section 13263 in that the discharge requirements set forth in the order do not implement the relevant water quality control plan and do not take into consideration the beneficial uses to be protected, the water quality objectives required therefore and the factors set forth in Water Code Section 13241."

The record clearly refutes this contention and no evidence was offered in support of it. The requirements set forth in Order No. 73-20 provide, among other things:

- "1. A positive hydraulic barrier with a sump to recycle any wastes passing through the retaining dam shall be constructed prior to the discharge of any additional group I waste.
- "2. The treatment or disposal of waste shall not create a nuisance. Included with this condition is a provision that an adequate means for excluding persons and animals from the site by an adequate fencing program. (Sic.)
- "3. The discharge of any waste from the disposal area to the surface or groundwaters of the State is prohibited. All wastes and any waters reaching the disposal area must be contained within the designated disposal area shown on Attachment 'A'."

Obviously, whatever concern petitioners may have that the discharger will not comply with these requirements, no complaint can be made that the requirements themselves are not sufficiently stringent. So long as the treatment and disposal of waste does not create a nuisance and so long as "all wastes and any waters reaching the disposal area [are] contained within the designated disposal area" there can be no doubt that the provisions of Water Code Section 13263 will be met.

Order No. 73-20 properly contains numerous additional requirements to implement the general requirements quoted above and to ensure that they will be faithfully observed.

Certain of these additional provisions also are necessary to ensure proper operation and maintenance of this site in order to comply with the requirements for a Class I disposal site. These are considered in connection with another of petitioners' contentions.

As discussed at the State Board hearing, the real concerns of the petitioners are not with what the requirements say, but are with what petitioners fear will actually happen based upon their understanding of past events. The concerns expressed by the petitioners are two-fold: that renewed disposal of Class I wastes will (1) cause pollution of water in wells used for irrigation and domestic supply, and (2) cause noxious odors over a large area inhabited by petitioners and others. Since these matters are related to petitioners' further contention that the Stringfellow site does not meet the criteria for a Class I disposal site, they will be discussed at a later point in this order.

B. Failure to Require or Consider an Environmental Impact Report

Petitioners contend that the Regional Board's action was improper in that the Board failed to receive and/or consider an Environmental Impact Report with respect to the order.

The Stringfellow Quarry Co. has operated at the site under waste discharge requirements since 1956 and more recently pursuant to waste discharge requirements prescribed by Order

No. 55-11 dated September 29, 1961. The site has been in continuous operation with the exception of a temporary closure in 1969 due to the storm damage and the voluntary closure in November, 1972. The discharger has not abandoned the site and has indicated willingness and intent to reopen as soon as necessary site improvements are completed. There will be no material change in prior operations when the site is reopened.

In practical effect, use of the disposal site as a Class I disposal site was approved by the Santa Ana Regional Water Pollution Control Board, predecessor of the present Regional Board, in July of 1955 at the time of issuance of the original waste discharge requirements. This approval was ratified by the Regional Board itself in September of 1961 when revised requirements for the site were adopted by Order No. 55-11. Order No. 73-20 represents, in reality, nothing more than revised and more stringent requirements for a disposal site and disposal operations which have been on-going since 1956. Our regulations provide that a project, such as the present project of Stringfellow Quarry Company, need not be supported by an Environmental Impact Report where the project was approved prior to December 5, 1972. [California Administrative Code, Title 23, Chapter 3, Section 2715(a)]. Our regulations further provide that adoption of waste discharge requirements by a Regional Board are categorically exempt from the provisions of the California Environmental Quality Act (Public Resources Code Sections 21000 through 21174). [California Administrative Code, Title 23, Chapter 3, Section 2714(d)(1)].

While it is clear from our present regulations that the Regional Board could have required an Environmental Impact Report to be prepared, it is equally clear from the regulations just recited that it was not required to do so. Under the circumstances of this case, we do not believe that the Regional Board abused its discretion in proceeding without an Environmental Impact Report.

C. Sufficiency of the Evidence to Support a Finding That the Disposal Site Meets the Criteria for Classification as a Class I Disposal Site.

Petitioners contend that the disposal site, with the proposed modifications, does not meet the criteria contained in the California Administrative Code, Title 23, Chapter 3, Subchapter 15 for classification as a Class I disposal site.

Class I disposal sites are those at which complete protection is provided for all time for the quality of ground and surface waters from all wastes deposited therein and against hazard to public health and wildlife resources. [California Administrative Code, Title 23, Chapter 3, Section 2510]. The criteria which must be met to qualify a Class I disposal site are as follows:

1. Geological conditions at the site must be naturally capable of preventing vertical hydraulic continuity between liquids and gases emanating from the waste in the site and usable surface or groundwaters.
2. Geological conditions must be naturally capable of preventing lateral hydraulic continuity between liquids

and gases emanating from wastes in the site and usable surface or groundwaters, or the disposal area must be modified to achieve such capability.

3. Underlying geological formations which contain rock fractures or fissures of questionable permeability must be permanently sealed to provide a competent barrier to the movement of liquids or gases from the disposal site to usable water.

4. Inundation of disposal areas shall not occur until the site is closed in accordance with requirements of the Regional Board.

5. An unlimited Class I site cannot be subject to flooding or to washout.

6. Leachate and subsurface flow into the disposal area must be contained within the site unless other disposition is made in accordance with requirements of the Regional Board.

7. Sites shall not be located over zones of active faulting or where other forms of geological change would impair the competence of natural features or artificial barriers which prevent continuity with usable waters.

8. Sites made suitable for use by man-made physical barriers shall not be located where improper operation or maintenance of such structures could permit the waste, leachate, or gases to contact usable ground or surface water.

The evidence before the Regional Board and this Board supports the determination of the Regional Board that the disposal site will meet the necessary criteria after modification as required by Order No. 73-20. Specifically, the evidence indicates that geological conditions at the site are naturally capable of preventing vertical hydraulic continuity, and that site modifications will protect against inundation, flooding, washout and overflow. The site, as modified, will be such that leachate and subsurface flow into the site will be appropriately contained, the site is not located over a zone of active faulting, and the waste discharge requirements and monitoring programs, as supplemented by this Order, are such as to prevent failure due to improper operation or maintenance.

Petitioners point to the results of certain well samples in support of their position that past operation of the Stringfellow site caused pollution of groundwater and that therefore the site should not be reopened.

During the 1969 period of excessive rainfall and runoff, liquid wastes from the disposal ponds were carried downstream along with surface storm flow to the vicinity of the monitoring well located 0.7 mile downstream from the disposal site. This water subsequently infiltrated the thin soil mantle and the bedrock and probably entered the well through the gravel pack and the perforated pipe casing. By October 1, 1972, water in the monitoring well developed a high nitrate concentration in addition to higher salinity and hexavalent chromium content. On November 14, 1972, the Regional Board staff advised the discharger that the increase in mineral content indicated an apparent violation of waste discharge requirements.

On May 18, 1972, tests at the Glen Avon school well, located about one and one-half miles downstream from the disposal ponds, indicated a slight increase in salinity characteristic of wells in the general area. A trace of hexavalent chromium was also found.

Thereafter, on December 4, 1972, the monitoring well showed a 0.07 mg/l content of hexavalent chromium content and a continuing high salinity. On the same date the Glen Avon school well showed a slight salinity increase from that obtained on May 18, 1972, but there was an absence of hexavalent chromium. No recurrence of hexavalent chromium in groundwater has been detected at the school well.

At the State Board hearing, Doctor Harold M. Erickson, Director of Public Health, County of Riverside, recommended that the Stringfellow site not be reopened as a Class I disposal site (RT 52). His concern was based on the deterioration in quality of the monitoring well caused by the escape of toxic wastes from the site and the fear that other wells in the area might become contaminated (RT 57). However, Dr. Erickson further testified that although the County Health Department had been conducting a continuous testing program of other wells in the area, including the Glen Avon school well, none has been found to be contaminated (RT 60-62).

In the opinion of Mr. Robert C. Fox, a consulting engineer geologist, the deterioration in quality of the monitoring well resulted solely from the storm runoff in 1969 which overflowed the disposal ponds and carried the wastes downstream into the residual soil from which they entered the unsealed well. Mr. Fox testified that as a result of this occurrence, continued fluctuation in the quality of this well can be expected for many years to come as water from rainfall flushes out the soil. The witness pointed out that although the disposal site had been operated since 1956, the monitoring well showed no signs of degradation until after the 1969 flood (RT 163). The opinion of this witness was not disputed by any other competent evidence.

The petitioners contend that adequate precautions have not been taken by the discharger to protect against a recurrence of the damage which followed the 1969 flood. Petitioners further contended at the State Board hearing that there was insufficient evidence available to assure that further contamination of the wells in the valley below the site would not occur should the site be reopened.

Mr. Richard Bueerman, consulting engineer for the discharger, testified at the State Board hearing that the carrying capacity of the drainage ditches surrounding the site had been greatly enlarged since 1969 and that in the event of a 100-year storm all surface water runoff would be intercepted and diverted. In his judgment, there would not be a recurrence of pond overflow such as that which created the damage in 1969 (RT 138, 142, 147).

Mr. Fox testified that he was the geologist who did the original work in 1955 on this site, and that he was satisfied that the site afforded adequate protection to downstream well water, either from damage from earthquake or storm, or through normal operations. He presented persuasive evidence that a proposed interceptor well, which will be drilled between the site and well 1Q1, will create a barrier which will prevent degradation of downstream wells. He concluded his presentation by demonstrating that the pollution which was found in the Glen Avon school well following the 1969 storm did not come from underground transmission of waste (RT 168-175).

We find that the proposed site, with the modifications made, or to be made, by the discharger and when operated in accordance with appropriate waste discharge requirements, will provide adequate protection against flooding or seepage into the groundwater of the basin.

The State Board received both oral and written testimony from the petitioners contending that the operation of the site had created a nuisance through emission of noxious odors and fumes which were alleged to have been carried downwind into residential areas approximately $1\frac{1}{2}$ to 2 miles distant. The petitioners and other opponents of the project further contend that contaminated dust may be spread over the community threatening irreparable harm and health hazards to the residents.

We take note, however, that there was contradictory testimony, both oral and written, given by residents of the Glen Avon community and occupants of property adjacent or near the disposal site, that the site had not created an odor nuisance.

The discharger admits that on at least one occasion a load of unauthorized material was dumped into one of the ponds. The discharger presented evidence, however, that further incidents of this kind will be prevented by the establishment of strict operating and monitoring procedures. The discharger and other proponents of the project further agreed that established operating procedures should be incorporated in the waste discharge requirements in the event the site is allowed to resume operations.

Although there was considerable testimony in support of the petitioners' position concerning the effects of previous operations, we believe that the petitioners failed to establish that operations at this site in accordance with the order of the Regional Board and this order will create a nuisance in the residential community.

Based upon the evidence before us, the Board finds that if the discharger adopts strict controls over the materials which are deposited in the ponds, and adheres to required operating procedures, operations at the site will not create a nuisance.

IV. Conclusions

After review of the record, and consideration of contentions of the petitioners and the evidence produced as a result of the hearing, the State Board concludes as follows:

1. Order No. 73-20 implements the relevant water quality plan, takes into consideration the beneficial uses to be protected, and complies in all respects with Water Code Section 13263.

2. The Regional Board was not required to obtain or consider an Environmental Impact Report on the proposed project prior to issuance of Order No. 73-20.
3. The disposal site, with modifications required by Order No. 73-20 will meet the criteria for classification as a Class I disposal site.
4. The record discloses that at some time in the past, during the operation of the disposal site, malodorous substances entered the site in violation of waste discharge requirements. There is no evidence that this was a regular practice of the site operators. The new monitoring requirements, and the operating procedures required by this order, should prevent the recurrence of such incidents.
5. Order No. 73-20 is appropriate and proper except that additional operating procedures which have been submitted by the discharger subsequent to the hearing in this matter should be incorporated into the order and operation of the site in accordance therewith should be required.

NOW THEREFORE, IT IS HEREBY ORDERED:

1. Order No. 73-20 of the Santa Ana Regional Board is amended by adding paragraph 10 to page 3 to read:

"10. In addition to the preceding provisions, String-fellow Quarry Co. shall comply with the following operating procedures:

- a. Evaporation Sprays
Sprays to be operated only when wind velocity is 10 MPH or less as determined by an anemometer located inside the entrance gate to the site.
- b. Evaporation Pond Freeboard
Ponds will be operated such that there is at least a 20-inch freeboard at all times. No waste will be placed in a pond with less than a 20-inch freeboard.
- c. Operating Hours
The site will operate from 8:00 a.m. to 5:00 p.m. on regular business days. The site may be available for after-hour disposal only by prior arrangement with Stringfellow personnel.
- d. Access Control
The gate entrance to the disposal site will be unlocked only to admit disposal trucks, company personnel, and authorized visitors.
- e. Personnel on Duty
Dumping will be permitted only in the presence of an authorized company agent of Stringfellow.
- f. Maintenance
Exterior faces of dikes and levees will be constantly maintained free of rodent burrowings and will be promptly repaired after significant erosion by rainfall.

All flood drainage channels will be continuously maintained free of obstruction to flow, including excessive vegetation and debris. Eroded channel sides will be repaired promptly following periods of runoff.

g. Evaluation of Wastes to be Disposed

Wastes listed on the Attachment 'A' will be accepted only upon certification in writing, accompanying each load, by the hauler and producer as to the nature of the material.

Waste, not listed in the attachment, will not be accepted until permission to do so has been obtained from the Executive Officer of the Regional Water Quality Control Board, Santa Ana Region, and the Riverside County Department of Public Health.

h. Placement of Wastes in Evaporation Ponds

Stringfellow will designate, by posted sign, the material that is to be disposed of into each pond. Each hauler will be accompanied by a Stringfellow agent to the exact disposal pond that he is to use for a particular waste.

i. Fencing

Additional fencing of the site will be accomplished as required by the County of Riverside.

j. Records

Stringfellow will keep a daily log showing:

- (1) Weather conditions
- (2) Name of wastehaulers using site
- (3) Type of waste disposed, pond used and time discharged
- (4) Visitors (regulatory agencies, authorized visitors, etc.)
- (5) Storm runoff occurrences (general description only)
- (6) Complaints (nature, complainant, and result of investigation)
- (7) Unusual occurrences and observations
- (8) Date, time and nature of samplings of wells, ponds, etc., and results received from sampling.

k. Monitoring and Reporting

Information required by the regulatory agencies will be furnished as directed by those agencies.

l. Return Pumping

Any waste that reaches the catch sump at the base of the concrete barrier will be pumped out daily and returned to the disposal site.

All water pumped from the proposed interference well and Well 1Q1 will be returned to the disposal site."

2. The petition of Parents of Jurupa, et al., be, and
it is, denied.

Dated: JUN 20 1974

Ronald B. Robie
Ronald B. Robie, Vice Chairman

W. W. Adams
W. W. Adams, Chairman

Mrs. Carl H. Auer
Mrs. Carl H. (Jean) Auer,
Member

Roy E. Dodson
Roy E. Dodson, Member

W. Don Maughan
W. Don Maughan, Member

OPERATING PROCEDURES
STRINGFELLOW QUARRY CO., INC.

1. Evaporation Sprays

Sprays to be operated only when wind velocity is 10 MPH or less as determined by an anemometer located inside the entrance gate to the site.

2. Evaporation Pond Freeboard

Ponds will be operated such that there is at least a 20-inch freeboard at all times. No waste will be placed in a pond with less than a 20-inch freeboard.

3. Operating Hours

The site will operate from 8:00 a.m. to 5:00 p.m. on regular business days. The site may be available for after-hour disposal only be prior arrangement with Stringfellow personnel.

4. Access Control

The gate entrance to the disposal site will be unlocked only to admit disposal trucks, company personnel, and authorized visitors.

5. Personnel on Duty

Dumping will be permitted only in the presence of an authorized Company agent of Stringfellow.

6. Maintenance

Exterior faces of dikes and levees will be constantly maintained free of rodent burrowings and will be promptly repaired after significant erosion by rainfall.

All flood drainage channels will be continuously maintained free of obstructions to flow, including excessive vegetation and debris. Eroded channel sides will be repaired promptly following periods of runoff.

7. Evaluation of Wastes to be Disposed

Wastes listed on the Attachment "A" will be accepted only upon certification in writing, accompanying each load, by the hauler and producer as to the nature of the material.

Waste, not listed in the attachment, will not be accepted until permission to do so has been obtained from the Executive Officer of the Regional Water Quality Control Board, Santa Ana Region, and the Riverside County Department of Public Health.

8. Placement of Wastes in Evaporation Ponds

Stringfellow will designate, by posted sign, the material that is to be disposed of into each pond. Each hauler will be accompanied by a Stringfellow agent to the exact disposal pond that he is to use for a particular waste.

9. Fencing

Additional fencing of the site will be accomplished as required by the County of Riverside.

10. Records

Stringfellow will keep a daily log showing:

1. Weather conditions
2. Name of wastehaulers using site
3. Type of waste disposed, pond used and time discharged
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7. Unusual occurrences and observations.
8. Date, time and nature of samplings of wells, ponds, etc., and results received from sampling

11. Monitoring and Reporting

Information required by the regulatory agencies will be furnished as directed by those agencies.

12. Return Pumping

Any waste that reaches the catch sump at the base of the concrete barrier will be pumped out daily and returned to the disposal site.

All water pumped from the proposed interference well and Well 1Q1 will be returned to the disposal site.

Attachment

ATTACHMENT A

LIST OF ACCEPTABLE WASTES

STRINGFELLOW QUARRY CO., INC.

as of May 1, 1974

Ammonium Bifluoride
Boric Acid
Brine
Chromic Acid
Chromate compounds
Copper Sulfate
Ferric Chloride
Hydrochloric Acid (Muriatic Acid)
Hydrofluoric Acid
Iron Oxide (Ferric Oxide)
Iron Sulfate (Ferric Sulfate)
Nitric Acid (excepting fuming nitric acid)
Oxalic Acid
Paint Sludge
Paint Strippers (except organic solvents)
Phenolic Compounds (Cresilics, carbolic acid, etc.)
Phosphoric Acid
Sodium Chloride
Sodium Fluosilicate
Sodium Hydroxide
Sodium Nitrate
Sodium Phosphate
Sulfuric Acid
Zinc Sulfate

Substances not on the above list will be accepted at the site only with prior approval of both the Executive Officer of the Regional Water Quality Control Board, Santa Ana Region, and the Riverside County Department of Public Health.