CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 90-013

WASTE DISCHARGE REQUIREMENTS
FOR
MITSUBISHI CEMENT CORPORATION
Cushenbury Plant
Lucerne Valley - San Bernardino County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Mitsubishi Cement Corporation (hereinafter also referred to as the discharger), HCR Box 400, Lucerne Valley, California 92356, submitted current information to update the waste discharge requirements for existing unclassified surface impoundments. The discharger's plant is located at 5808 State Highway 18, Lucerne Valley, California, as shown in Attachment "A", incorporated herein and made a part of this Order.

2. The discharger operates a cement manufacturing plant which uses limestone, mined from rock units located within the vicinity of the plant, as raw materials. The raw feed material is calcined in the preheater/precalciner tower and sintered in the kiln. The clinker is cooled and ground to final product in finish mills. The cement is stored in silos for shipment to market.

3. The plant manufactures cement according to a "dry" process. Water usage at the facility is limited to the machine cooling systems, finish mills, dust suppression, cleaning activities at the maintenance shops, and domestic consumption. Water is provided to the plant through ground water wells, which are owned and operated by the discharger, located on the site and in Lucerne Valley.

4. The facility is currently regulated by waste discharge requirements contained in Board Order No. 84-093. These requirements were developed prior to the adoption in November 1984 of Subchapter 15, Chapter 3, Title 23 of the California Code of Regulations, which are more stringent than the previous applicable State regulations. The requirements in said Order No. 84-093 therefore do not adequately protect ground and surface water to the extent required by current State regulations.

5. The discharger discharges an average of 600 gallons-per-day of industrial wastewater which consists of washwater from the maintenance yard steam clean area, and cooling system overflow water. The wastewater is routed to an unlined surface impoundment for final disposal by evaporation and infiltration. The surface impoundment is located in the E½ of Section 10, T3N, R1E, SBB&M, and is approximately 400 X 300 X 6 feet deep in size.

6. In addition to the wastes described in Finding No. 5, the discharger discharges an average of 4500 gallons-per-day of domestic sewage from the plant restrooms through a septic tank/leach field system.

7. The discharger reports that the information obtained from onsite and offsite wells, which provide water for industrial and domestic use at the plant, indicates that the depth to ground water is approximately 60 feet beneath the surface impoundment. Samples collected from the wells in 1989 indicate total dissolved solids (TDS) concentrations ranging from 450 to 500 mg/l. Samples collected from the surface impoundments indicate TDS concentrations ranging from 453 to 595 mg/l.

8. "Designated Waste" is defined in Subchapter 15 as "nonhazardous waste which consists of, or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the State".

9. Considering the quality of the ground water in the vicinity of the site, designated waste for the purpose of these waste discharge requirements is any waste which has a TDS value greater than 750 mg/l and does not contain hazardous constituents.

10. Site geology in the vicinity of the surface impoundments is a north facing alluvial fan with a minimum of 400 feet of mixed sands, gravels, and clays. The alluvial soils have a moderate to high permeability.

11. The Cushenbury Springs are located approximately 1400 feet north of the surface impoundments. The Cushenbury Canyon drainage course passes approximately 1700 feet to the east.

12. The Helendale Fault is located approximately 1500 feet east of the surface impoundments. The Fault acts as a ground water barrier.

13. Mean annual rainfall for the general vicinity of the site ranges from 5 inches in the central basin of Lucerne Valley to over 20 inches in the San Bernardino Mountains. Ground water recharge in the Lucerne Valley Hydrologic Unit results from deep percolation of runoff from precipitation in the San Bernardino Mountains.

14. Zoning within 1000 feet of the surface impoundments is heavy industrial.

15. The Water Quality Control Plan for the Colorado River Basin Region of California designates the beneficial uses of ground and surface waters in this Region.

16. The beneficial uses of ground waters in the Lucerne Hydrologic Unit are:

    a. Municipal supply (MUN)
    b. Industrial supply (IND)
    c. Agricultural supply (AGR)

17. The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements for the discharge.

18. The Board in a public meeting heard and considered all comments pertaining to the existing discharge.

19. In accordance with Section 15301, Chapter 3, Title 14, of the California Code of Regulations, the issuance of these waste discharge requirements, which govern the operation of an existing facility involving negligible or no expansion of use beyond that previously existing, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.).

IT IS HEREBY ORDERED, the discharger shall comply with the following:

A. Discharge Specifications

1. Neither the treatment nor discharge of waste shall cause pollution or nuisance as defined in Division 7 of the California Water Code.

2. Wastewater shall be discharged only into waste management units specifically designed for their containment.

3. Wastewater which has a TDS value greater than 750 mg/l shall be discharged only to an appropriate waste management unit as approved by the Regional Board's Executive Officer.

4. By October 1, 1990, the discharge of wastewater with a TDS concentration greater than 750 mg/l to the unlined impoundments shall be discontinued after which only wastewater of 750 mg/l or less may be discharged.

5. Wastewater shall be collected and transported to the surface impoundments through an engineered collection system. Said system shall be in operation by October 1, 1990. The system shall be designed and constructed under the supervision of a California Registered Civil Engineer.

6. The discharger's procedure to ensure that no wastewater exceeding 750 mg/l TDS is discharged to the evaporation/infiltration basins shall be submitted by July 1, 1990 to the Regional Board for review and approval by the Regional Board's Executive Officer. This procedure shall be implemented by October 1, 1990.

7. The surface impoundment shall have sufficient freeboard to accommodate seasonal precipitation. In no instance shall there be less than 2 feet (measured vertically) of freeboard.

8. There shall be no surface flow of wastewater away from the discharge facilities to adjacent geologic materials during the operations, closure and post-closure maintenance period.

9. Domestic sewage shall not be combined with wastewater disposed as described in Finding No. 5.

10. Sewage effluent discharged subsurface shall be retained underground with no materials of sewage origin evident on the ground surface.

11. The discharger shall remove and properly relocate any wastes which are discharged at this site in violation of these requirements.

12. There shall be no discharge of liquid wastes to the surface impoundment other than those identified in Finding No. 5.

13. The discharge shall not cause degradation of ground or surface water.

14. Adequate measures shall be taken to ensure that flood or surface drainage waters do not erode or otherwise render the surface impoundment inoperable.

15. The discharger shall accurately characterize the wastes to determine appropriate location of discharge.

16. Discharges into the unlined basin shall cease in event of any failure in the disposal system which threatens beneficial water uses.

B. Prohibitions

1. The discharge or deposit of hazardous waste (as defined in said Subchapter 15) at this facility is prohibited.

2. The discharge or deposit of designated waste (as defined in said Subchapter 15) to the evaporation/infiltration basin is prohibited after October 1, 1990.

3. The discharge of wastes to surface water, or water drainage courses is prohibited.

C. Provisions

1. The discharger shall maintain a copy of this Board Order at the site and make it available at all times to site operating personnel.

2. The discharger shall notify the Regional Board, in writing, of any proposed change in ownership or responsibility for construction or operation of the waste management facility.

3. By July 1, 1990, the discharger shall submit for approval by the Regional Board's Executive Officer the design plans for the installation of upgradient and downgradient monitoring wells in the vicinity of the surface impoundment. By October 1, 1990 a report of completion of construction of the wells shall be submitted to the Board.

4. The discharger shall adhere to the following schedule for the design, construction, and operation of the waste management facility:

Task	Completion/Due Date
a. Conceptual Design	April 1, 1990
b. Progress Report	June 1, 1990
c. Award Contract	July 1, 1990
d. Progress Report	August 1, 1990
e. Completion of Construction	September 1, 1990
f. Begin Operation	October 1, 1990

5. The discharger shall notify the Regional Board of any material change or proposed change in the character, location or volume of wastes discharged and of any proposed expansion plans. This notification shall be accompanied by an amended report of waste discharge and any additional information as may be required by the Regional Board's Executive Officer.

6. The discharger shall comply with "Monitoring and Reporting Program No. 90-013", and future revisions thereto, as specified by the Executive Officer.

7. The discharger shall maintain legible records on the volume and type of each waste discharged. These records shall be available for review by representatives of the Regional Board at anytime during normal business hours. The records shall be kept until the certified closure of the Waste Management Facility is approved by the Regional Board Executive Officer.

8. The discharger shall maintain monuments identifying the boundary limits of the entire waste management facility.

9. One year prior to the anticipated closure of the surface impoundment(s), the discharger shall submit to the Regional Board, for review and approval by the Executive Officer, a closure and post-closure maintenance plan.

10. The Board shall be notified immediately of any failure which threatens the integrity of any feature of the waste management facility. Such failure shall be promptly corrected.

11. Upon abandonment of this facility, or as required, residual solids shall be removed from the surface impoundments and discharged at a disposal facility approved by the Regional Board's Executive Officer.

12. In the event of any change in operation, or in control or ownership of land or waste disposal facilities owned or controlled by the discharger, the discharger shall:

    a. Notify this Board of such change; and

    b. Transmit a copy of this Order to the succeeding owner or operator, and file a copy of the transmittal letter with this Board.

IT IS FURTHER ORDERED that Board Order No. 84-093 be superseded by this Order.

I, Philip A. Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on March 14, 1990.

Philip A Gruenberg
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 90-013 (Revision No. 2)
FOR
MITSUBISHI CEMENT CORPORATION
CUSHENBURY PLANT
Lucerne Valley - San Bernardino County

Location of Discharge: E 1/2 of Section 10, T3N, R1E, SBB&M

The discharger shall monitor wastewater discharged and report to the Regional Board as follows:

WASTEWATER MONITORING

Wastewater discharged to the unlined basin shall be monitored as follows:

	Item	Unit	Type of Sample	Sampling Frequency
a.	Volume of Wastewater to unlined basin (estimate)	GPD[1]	-	Quarterly
b.	Total Dissolved Solids (TDS) of wastewater in basin	mg/L[2]	Grab	Quarterly

GROUND WATER MONITORING

The ground water monitoring wells shall be sampled quarterly during March, June, September and December. The samples shall be analyzed for the same constituents as for the wastewater.

The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures.

REPORTING

1. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year.

2. An annual report summarizing all the data collected during the previous year shall be submitted by January 15 of each year.

[1]GPD = Gallons-per-Day

[2]mg/L = Milligrams-per-Liter

3. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.

4. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurement(s);
   b. The individual(s) who performed the sampling or measurement(s);
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or method used; and
   f. The results of such analyses.

5. Each report shall contain the following statement:

   "I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."

6. A duly authorized representative of the discharger may sign the documents if:

   a. The authorization is made in writing by the person described above;

   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

   c. The written authorization is submitted to the Regional Board's Executive Officer.

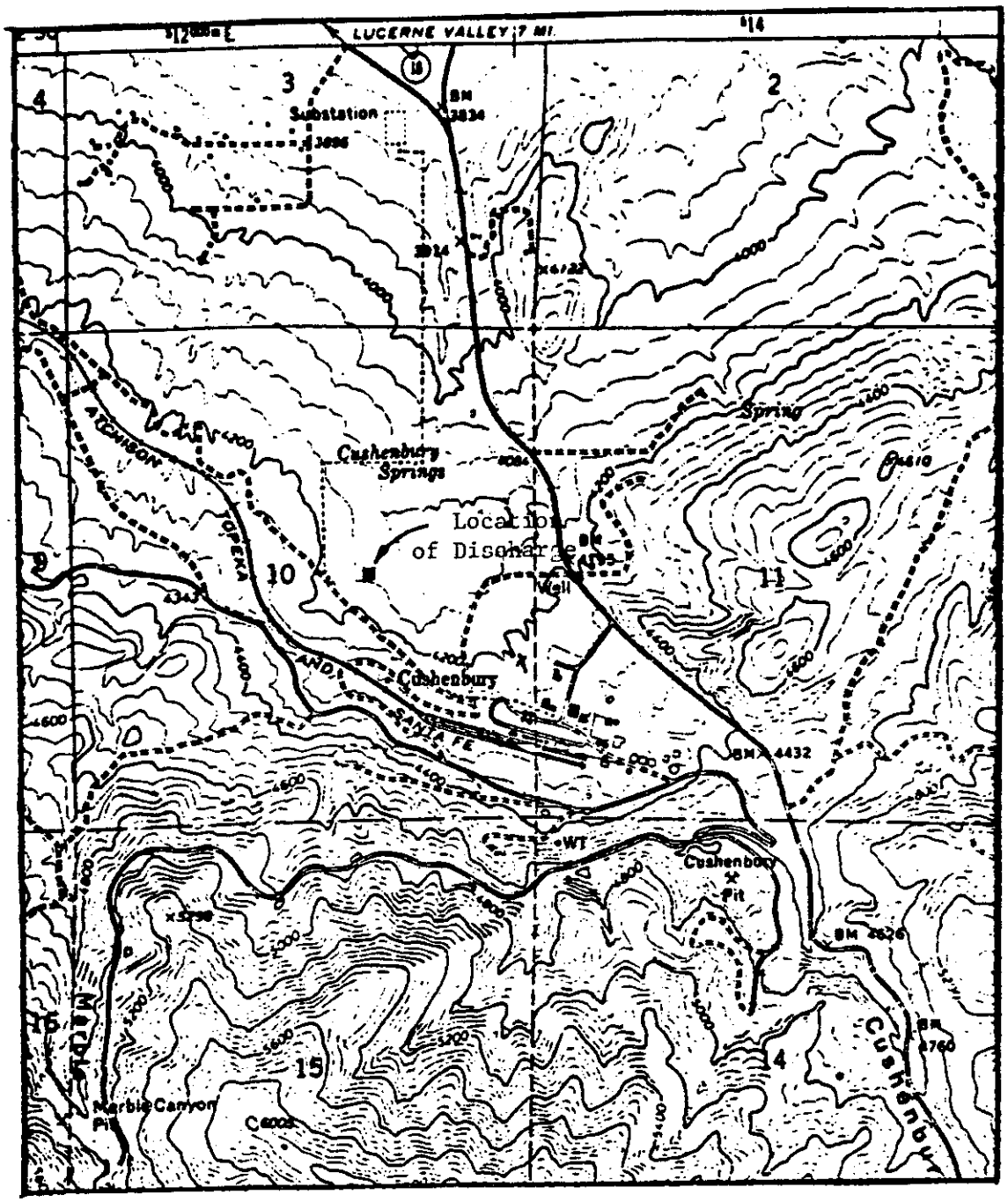
7. Submit monitoring reports to:

   California Regional Water Quality Control Board
   Colorado River Basin Region
   73-720 Fred Waring, Suite 100
   Palm Desert, CA 92260

Ordered by: Philip A Gruenberg
Executive Officer

11-12-97
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - 7



N.

Scale: 1" = 2,000

ATTACHMENT "A"

SITE MAP
MITSUBISHI CEMENT CORPORATION
Cushenbury Plant
Lucerne Valley - San Bernardino
E½, Section 10,T3N, R1E,SBB&M
USGS 7.5 min Topographic Map - Big Bear City Quadrangle

Order No. 90-013

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 90-013 (Revision No. 1)
FOR
MITSUBISHI CEMENT CORPORATION
CUSHENBURY PLANT
Lucerne Valley - Sa Bernardino County

Location of Discharge: E 1/2 of Section 10, T3N, R1E, SBB&M

The discharger shall monitor for all wastewater discharged and report to the Regional Board as follows:

WASTEWATER MONITORING

I. Wastewater discharged to the unlined basin shall be monitored as follows:

Item	Unit	Type of Sample	Sampling Frequency
a. Volume of Wastewater to unlined basin (estimate)	GPD[1]	-	Quarterly
b. Total Dissolved Solid (TDS) of wastewater in basin	mg/L[2]	Grab	Quarterly

II. The discharge from the truck wash in the maintenance yard shall be sampled at the end of the discharge pipe quarterly during March, June, September and December. The samples shall be analyzed for the following:

Constituents	Unit	Type of Sample	Sampling Frequency
Discharge Flow (Estimate)	GPD	--	Quarterly
TPH (Total Petroleum Hydrocarbons for Gasoline and Diesel-DHS recommended methods)	mg/L	Grab	Quarterly
Hydrogen Ion (pH)	--	Grab	Quarterly

[1]GPD = Gallons-per-Day

[2]mg/L = Milligrams-per-Liter

Superseded by
by: Bd. Order #
90-013 Rev. 2
11/12/97

Item	Unit	Type of Sample	Sampling Frequency
Volatile Organic Compounds (EPA Methods 601 & 602)	$\mu g/L^3$	Grab	Quarterly
Total Dissolved Solids (TDS)	mg/L	Grab	Quarterly
Lead	mg/L	Grab	Quarterly
Chromium	mg/L	Grab	Quarterly

GROUND WATER MONITORING

The ground water monitoring wells shall be sampled quarterly during March, June, September and December. The samples shall be analyzed for the same constituents as for the wastewater.

The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures.

REPORTING

1. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year.

2. An annual report summarizing all the data collected during the previous year shall be submitted by January 15 of each year.

3. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.

4. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurement(s);
   b. The individual(s) who performed the sampling or measurement(s);
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or method used; and
   f. The results of such analyses.

5. Each report shall contain the following statement:

   "I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."

---

[3] $\mu g/L$ = Microgram-per-Liter

6. A duly authorized representative of the discharger may sign the documents if:

   a. The authorization is made in writing by the person described above;

   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

   c. The written authorization is submitted to the Regional Board's Executive Officer.

7. Submit monitoring reports to:

   California Regional Water Quality Control Board
   Colorado River Basin Region
   73-720 Fred Waring, Suite 100
   Palm Desert, CA 92260

Ordered by: Philip A Gruenberg
Executive Officer

4-4-96
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 90-013
FOR
MITSUBISHI CEMENT CORPORATION
Cushenbury Plant
Lucerne Valley - San Bernardino County

Location of Discharge: E½ of Section 10, T3N, R1E, SBB&M

The discharger shall monitor for all wastewater discharged to the waste management units and report to the Regional Board as follows:

WASTEWATER MONITORING

I.

	Item	Reporting Unit	Frequency
a.	Volume of Wastewater (Unlined Basins)	Gallons	Quarterly
b.	Volume of Domestic Sewage (Septic Leach System)	Gallons	Quarterly

II. The discharge to the evaporation/infiltration units (except the septic tank/leach line unit) shall be sampled quarterly during March, June, September and December except as noted. The samples shall be analyzed for the following:

	Parameter and Constituent	Units	Type of Sample	Frequency
1.	pH	Number	Grab	Monthly
2.	TDS	mg/l	Grab	Monthly
3.	Electrical Conductivity	micromhos/cm	Grab	Monthly
4.	Calcium	mg/l	Grab	Quarterly
5.	Sulfate	mg/l	Grab	Quarterly
6.	Sodium	mg/l	Grab	Quarterly
7.	Magnesium	mg/l	Grab	Quarterly
8.	Chloride	mg/l	Grab	Quarterly
9.	Phosphate	mg/l	Grab	Quarterly
10.	Bicarbonate	mg/l	Grab	Quarterly
11.	Boron	mg/l	Grab	Quarterly
12.	Chromium (hexavalent)	mg/l	Grab	Quarterly
13.	Zinc	mg/l	Grab	Quarterly
14.	Lead	mg/l	Grab	Quarterly
15.	Volatile Organics (EPA Methods 601, 602)	micrograms/l	Grab	Quarterly

Superseded by: Bd. Order # 90-013 Rev. 1 4/4/96

GROUND WATER MONITORING

The ground water in the monitoring wells shall be sampled quarterly during March, June, September and December. The samples shall be analyzed for the same parameters and constituents as for the wastewater in the waste management facility.

Sampling procedures shall be in accordance with EPA approved methods. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

REPORTING

1. Monthly monitoring reports shall be submitted by the 10 day of the following month; quarterly monitoring reports by January 15, April 15, July 15, and October 15 of each year.

2. An annual report summarizing all the data collected during the previous year shall be submitted by January 15 of each year.

3. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the waste management unit is operating in compliance with waste discharge requirements.

3. Submit monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY: Philip A Gruenberg
Executive Officer

March 14, 1990
Date