CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 81-62

WASTE DISCHARGE REQUIREMENTS
FOR
IT CORPORATION
IMPERIAL VALLEY CLASS II-1 WASTE DISPOSAL SITE
Imperial County

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

1. IT Corporation (hereinafter also referred to as the discharger) 2450 Stanwell Drive #100, Concord, CA 94520, submitted a Report of Waste Discharge dated August 20, 1980, with subsequent additions.

2. The discharger proposes to discharge certain Group 1 wastes in Section 16, T13S, R12E, SBB&M. A plat of this Section is shown in Attachment "A" appended hereto as a part of this Order. The 640-acre site is privately owned and operated by the discharger. 300 to 400 acres at this Section appear to be developable for disposal areas. Development is to be in five phases, as shown in said Attachment "A", with a total capacity expectancy of 30 to 50 years.

3. Group 1 wastes requested to be discharged at this site are categorized as follows:

   a. Rotary drilling muds from geothermal wells
   b. Work-over and cleanout fluids from geothermal wells
   c. Testing fluids from geothermal wells
   d. Geothermal brines and residues
   e. Pretreatment sludge from cooling water make-up
   f. Cooling tower and boiler blow-down sludges
   g. Pesticide container rinse water
   h. Small amounts of outdated pesticide stock
   i. Pesticide containers
   j. Fluids coincident to gas/oil exploration and production
   k. Ballast water after oil removal and recycle
   l. Neutralized aqueous solutions of acidic or alkaline origin
   m. Wastewater treatment solids
   n. Storm water runoff from areas used to handle wastes
   o. Other Group 1 wastes and quantities thereof, specifically approved by the Regional Board or, if of an emergency discharge nature, by the Executive Officer.
   p. Tank bottom sediments and cleaning solution from petroleum fuels or feed stocks.

Superseded 11/14/84 by 84-111

4. Manifests are to be utilized for hauling and disposal of all hazardous wastes, wherein the waste producer, hauler, and discharger will certify compliance with State regulations by documenting their proper handling of the wastes.

5. Phase I development (see Attachment "A") will include ten disposal areas (cells) on approximately 50 acres. Cells are to be excavated three to eight feet below existing grade, and the excavated earth will be used to construct a levee or berm three to five feet high around each disposal cell. Liquids are being placed into cells for solar evaporation. Drilling muds and sludges are being discharged by land spreading, soil incorporation and into solar evaporation cells. Eight-foot deep trench and fill is to be used for empty pesticide containers, whether rinsed or unrinsed. Waste pesticides will be discharged into trenches five to eight feet deep, and covered with six inches of soil on each day of discharge. Phase I capacity is expected to be sufficient for four to six years. Cell areas with permeability greater than $1 \times 10^{-6}$ cm/sec will be blanketed with an impermeable membrane of clay material.

6. A typical 5-acre disposal cell would be able to receive approximately 230,000 barrels* of waste liquid per year; and with evaporation, will be able to store a final volume of approximately 116,000 barrels of sludge. The total capacity of all Phase I cells is estimated at 1,200,000 barrels. Total site capacity is estimated at 7,650,000 barrels.

7. The completed fill, upon termination of use of each phase, will be three to five feet above existing grade, with a final soil cover of at least three feet. The final cover will have a permeability of $1 \times 10^{-7}$ to $1 \times 10^{-8}$ cm/sec., and will be graded to drain with a slope of about five percent. The completed surfaces will be revegetated with native plants.

8. Prior to construction operations, the site was vacant, unirrigated desert land, sparsely vegetated, and sloping gently downward towards the northeast. The area immediately adjacent to the site is also uncultivated desert. The nearest dwelling is a farmhouse, approximately one mile to the east. The desert land at the site consists of shallow alluvial soils, underlain by partially indurated clayey silts and silty sands. Disposal areas (cells) will be set back 100 feet from all identified on-site geologic fractures. Groundwater is at a depth of 30 to 90 feet, with total dissolved solids concentrations ranging from 1320 mg/l to 6883 mg/l at several wells traversing the site.

*42-gallon barrels

9. The main drainage channel, which approximately bisects the site, has been improved and is to be maintained to accommodate the projected 100-year flood from upslope areas. Disposal cells are and will continue to be set back 100 feet from the channel banks. Perimeter drainage is being provided for a 100-year flood. Temporary drainage channels will be constructed to provide for storm water as the phases are developed. Drainage not in contact with waste material is being directed off site. Polluted drainage will remain on site.

10. It is anticipated that the local geothermal industry will need to dispose of approximately 1,000 to 3,000 barrels of wastes per day, and that the local agricultural industrial wastes will be of relatively small amounts. The Regional Board is familiar with wastes from geothermal and agricultural sources. Wastes under categories j, k, l, m, n, and p of Finding No. 3, above, are not familiar to the Regional Board's staff, and will need initial specific review.

11. Waste containment basins No. 3, 5, and 8, and attendant appurtenances, as constructed, are satisfactory for receipt and storage of certain Group 1 wastes as explained in the Discharge Specification No. 4 (below).

12. The Water Quality Control Plan for the West Colorado River Basin (7A) was adopted in April 1975, and was updated on May 9, 1979 to express an implementable method of providing for disposal of selected Group 1 wastes. This Order is an implementation of the updated Plan.

13. The discharger has filed an operation and closure plan, and plans for financing site closure and long-term maintenance.

14. On August 13, 1980, Imperial County Planning Department adopted Environmental Impact Report No. 226-79 for this disposal site. The report indicates that this project would not have a significant effect on water quality.

15. The Hazardous Materials Management Section of the State Department of Health Services reports that it is reviewing the present practices of manifest reporting, and is developing an information management system which may become operable early in calendar year 1982.

16. The discharge has been subject to waste discharge requirements, Order No. 80-90, adopted by the Regional Board on November 12, 1980.

17. The Board has notified the discharger and interested agencies and persons of its intent to review and possibly adopt updated discharge requirements for the proposed discharge.

18. The Board in public meetings heard and considered all comments pertaining to the discharge.

19. The IT Corporation representative stated at the Regional Board's regular meeting on November 12, 1980, that, in accordance with the letter of the Department of Health Services dated October 10, 1980, extremely hazardous wastes and wastes containing volatile toxic substances in excess of 10 percent by weight will not be accepted for disposal.

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

A. Discharge Specifications

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

2. Waste materials shall not be discharged outside the designated disposal areas shown on Attachment "A".

3. Disposal areas 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. The discharge of Group 1 wastes at this site shall be limited to the following:

   a. The following Group 1 wastes may be discharged at this site without further approval of the Regional Board or the Executive Officer provided such discharge does not violate any other Discharge Specification, Prohibition, or Provision of this Order.

      1. Rotary drilling muds from geothermal wells
      2. Work-over and cleanout fluids from geothermal wells
      3. Testing fluids from geothermal wells.
      4. Geothermal brines and residues
      5. Pesticide container rinsewater
      6. Pesticide containers
      7. Storm water runoff from areas used to handle wastes

b. The following Group 1 wastes:

1. Cooling tower and boiler blowdown sludges
2. Pretreatment sludge from cooling water makeup
3. Small amounts of outdated pesticide stock
4. Fluids coincident to gas/oil exploration and production
5. Ballast water after oil removal and recycle
6. Neutralized aqueous solutions of acidic or alkaline origin
7. Wastewater treatment solids
8. Tank bottom sediments and cleaning solution from petroleum fuels and feed stocks
9. Other Group 1 wastes and quantities thereof specifically approved by the Regional Board or the Executive Officer

may not be discharged to this site without prior written authorization from the Regional Board's Executive Officer. Prior to such authorization and discharge, a completed request for authorization of discharge of a specific waste shall be received in the office of the Regional Board, and shall include at least the following information:

1. Type of waste
2. Description of processes generating waste materials
3. Chemical analysis of representative samples of the material, as requested by the Executive Officer
4. Information concerning the maximum concentrations of hazardous materials in the waste, within at least a 10 percent accuracy
5. Other pertinent information concerning the waste, or as requested by the Executive Officer

Chemical analyses submitted to the Regional Board for approval of a specific waste shall not be in excess of 60 days old. Updated analyses of each approved waste shall be submitted to the Board annually for review.

Authorization for discharge of a specific type of waste may permit additional discharges of said wastes without further approval of the Executive Officer provided:

1. The authorization allows such additional discharge
2. The concentration of any single hazardous constituent in a waste does not exceed the authorized concentrations by more than ten percent (10%) in any single load

Notwithstanding the above, the Executive Officer may approve the discharge of any of the wastes listed in the above category A.4.b., if such discharge will not unreasonably affect water quality and will not violate any other discharge specification, prohibition, or provision of this Order.

Authorization for the discharge of these wastes is conditional and may be withdrawn at any time by the Regional Board or Executive Officer.

5. Group 1 waste materials, and any water that has contacted the waste materials, shall be contained in those areas designated for Group 1 waste discharges.

6. Waste confinement barriers shall be protected and maintained to ensure their effectiveness.

7. All site facilities shall be designed and constructed to minimize damage to the graded foundation or to the structures which control leachate, surface drainage, erosion, and gas due to the maximum probable earthquake which appears to be reasonably expectable within a 100-year period.

8. There shall be no seepage or overflow from liquid waste holding facilities.

9. A minimum freeboard of two feet shall be maintained in the waste holding facilities at all times.

10. Liquid Group 1 wastes shall not be discharged at this site except to holding basins lined with at least two (2) feet of compacted clay and/or soil cement, having a permeability or $1 \times 10^{-6}$ cm/sec or less, or other equivalent material approved by the Executive Officer.

11. Waste materials shall not be discharged on any surface which is less than six feet above the highest anticipated groundwater.

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

13. The final compacted soil covers on completed fills shall be graded to not less than a three (3) percent slope to promote lateral runoff of precipitation and to prevent ponding.

14. The final compacted soil covers on completed fills shall be not less than three (3) feet thick, and at least one (1) foot of the final cover shall be compacted to obtain a permeability of not more than $1 \times 10^{-6}$ cm/sec.

15. Completed portions of the disposal area shall be covered, graded, and maintained in conformance with the closure plan approved by the Regional Board.

B. Prohibition

1. The discharge of waste to surface drainage courses or to groundwaters is prohibited.

2. Waste shall not be accepted for disposal if it contains a substance which is all of the following:

   a. A material that has toxicity upon inhalation that causes it to be toxic as defined by criteria adopted by the California Department of Health Services, or is listed in Section 66680 of Title 22 of the California Administrative Code with an indication that it is toxic; and

   b. A substance with a vapor pressure exceeding 1 ml mercury at 20°C; and

   c. Present in the waste in a concentration greater than 10 percent by weight.

C. Provisions

1. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

2. Waste which conforms to the definition of extremely hazardous waste in Section 25115 of the Health and Safety Code, such as waste which contains a substance listed in Section 66685 of Title 22 of the California Administrative Code shall not be accepted for disposal unless specifically approved by a written permit from the California Department of Health Services, and a written approval from the Regional Board Executive Officer.

3. The discharger shall maintain a legible record using a reporting form approved by the Executive Officer, of the volume and type of each Group 1 waste received at the site and the manner and location of disposal. The record shall be maintained for a period of not less than ten years, with the records to be forwarded to the Board if disposal operations cease.

4. The discharger shall update the operation plan when substantial changes in operations are made, and a letter shall be submitted to the Regional Board annually indicating compliance or non-compliance with said plan. The plan shall conform to Title 23, Chapter 3, Subchapter 15, Article 6, Section 2552 of the California Administrative Code.

5. The owner or operator of the disposal site shall notify the Board in writing of any change in ownership or of other persons responsible for site closure and subsequent maintenance thereof. This notification must be given at least 30 days prior to the effective date of the change and shall conform to Title 23, Chapter 3, Subchapter 15, Article 6.5, Section 2561 of the California Administrative Code.

6. The discharger shall comply with "Montioring and Reporting Program No. 81-62" and future revisions thereto, as specified by the Executive Officer.

7. Prior to the discharge of any liquid Group 1 wastes into any newly constructed containment basin (cell), the discharger shall submit to the Board a technical report showing the construction of the basin, and a certificate signed by a California Registered Civil Engineer stating that the basin and attendant facilities are constructed to meet the requirements of this Order, and shall obtain the approval of the Executive Officer prior to commencement of discharge.

8. Wells for monitoring elevation and quality of groundwater shall be installed within and around the site at locations approved by the Executive Officer. The procedure for obtaining samples from these wells is also subject to approval by the Executive Officer.

9. The Environmental Protection Agency is preparing regulations for implementation of the Resources Conservation and Recovery Act. Upon adoption of those regulations, this permit shall be revised to incorporate those standards relevant to protection of water quality and prevention of nuisance, which will be applicable to issuance of a final permit under the Resources Conservation and Recovery Act.

10. This Order supersedes Board Order No. 80-90.

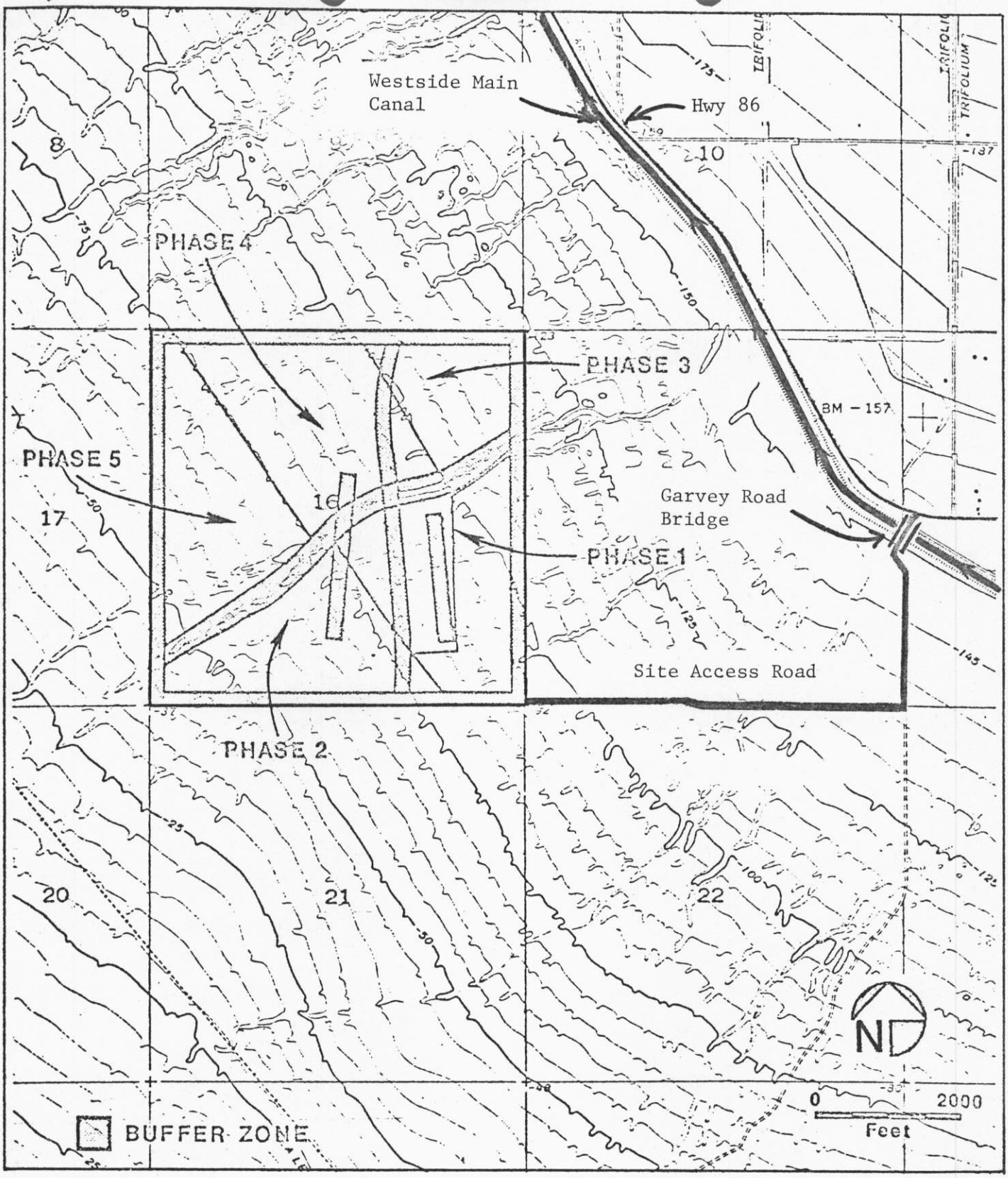
11. This Order does not authorize violation of any federal, state or local laws or regulations.

12. The discharger shall maintain an impermeable road surface on the Garvey Road bridge at the Westside Main Canal to prevent any materials on the bridge from entering the canal. The discharger shall maintain a surface water drainage system to prevent lateral runoff from the bridge or its approaches from entering the Westside Main Canal.

I, Arthur Swajian, 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 April 29, 1981.

Arthur Swajian

Executive Officer




ATTACHMENT A

IT CORPORATION - IMPERIAL VALLEY CLASS II-1 WASTE DISPOSAL SITE
Section 16, T13S, R12E, SBB&M

A 100-foot buffer zone will be provided on each side of each area of geologic and hydrologic constraint. A 200-foot wide buffer zone will be provided around the site perimeter.

ORDER NO. 81-62

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 81-62
FOR
IT CORPORATION
IMPERIAL VALLEY CLASS II-1 WASTE DISPOSAL SITE
Imperial County

Site Location: Section 16, T13S, R12E, SBB&M

## MONITORING

IT Corporation shall report monitoring data to the Regional Board in accordance with the following schedule:

A. WASTE MONITORING

1. The following information shall be reported monthly to the Regional Board concerning each load of Group 1 wastes accepted at the site for disposal:

   a. Quantity of each waste received in gallons, tons, or cubic yards.

   b. Type of waste received classified by the general categories of Group 1 wastes which have been approved for disposal at this site.

   c. Location of disposal of the waste.

   d. Manifest number of the waste.

   e. Date of receipt of the waste.

2. Quantity, type, and location of Group 2 and Group 3 wastes discharged at this site.

3. IT corporation shall annually submit a report concerning each approved waste which the Corporation plans to continue to accept for disposal. Said report shall contain the following information:

   a. An analysis of each waste not in excess of 60 days old. If no wastes of a specific type have been received during the last 60 days of the calendar year, the Corporation shall submit the latest available analysis.

b. A statement concerning the maximum anticipated concentrations of hazardous constituents in the waste.

c. Anticipated maximum quantity of material to be discharged on a quarterly basis.

B. WASTE DISPOSAL BASIN MONITORING

The discharger shall inspect all liquid waste containment and disposal basins weekly and report the results of the inspections monthly. The report shall contain the following information:

1. Freeboard of each basin.
2. Whether the basins contain observable liquids.
3. Any apparent seepage from the basins.
4. General condition of berms.
5. Steps taken to correct any problems found during inspections, and when taken.

C. GROUNDWATER MONITORING

1. Upon completion and purging of each approved groundwater monitoring well, the discharger shall obtain quarterly samples for four (4) consecutive quarters and analyze them for the following constituents:

| Constituent | Unit |
|---|---|
| *pH | pH units |
| *Specific Conductance | micromhos/cm |
| Total Dissolved Solids (TDS) | mg/l |
| *Total Organic Carbon (TOC) | mg/l |
| Chemical Oxygen Demand (COD) | mg/l |
| *Total Organic Halogen | mg/l |
| Total Hardness | mg/l |
| Total Alkalinity | mg/l |
| Calcium (Ca) | mg/l |
| Sodium (Na) | mg/l |
| Lithium (Li) | mg/l |
| Potassium (K) | mg/l |
| Chloride (Cl) | mg/l |
| Fluoride (F ) | mg/l |
| Nitrate ($NO_3$ as N) | mg/l |
| Nitrite ($NO_2$ as N) | mg/l |
| Phosphate, Total (P) | mg/l |
| Sulfate ($SO_4$) | mg/l |
| Sulfide (S ) | mg/l |
| Oil and Grease | mg/l |
| Phenols | mg/l |
| Radium | pCi/l |
| Gross Alpha | pCi/l |
| Gross Beta | mrem/year |

*Four replicate analyses to be performed on each sample.

| | |
|---|---|
| Coliform Bacteria (total) | MPN/100ml |
| Arsenic (As) | mg/l |
| Barium (Ba) | mg/l |
| Cadmium (Cd) | mg/l |
| Chromium (Cr) | mg/l |
| Copper (Cu) | mg/l |
| Iron (Fe) | mg/l |
| Lead (Pb) | mg/l |
| Manganese (Mn) | mg/l |
| Mercury (Hg) | mg/l |
| Nickel (Ni) | mg/l |
| Selenium (Se) | mg/l |
| Silver (Ag) | mg/l |
| Zinc (Zn) | mg/l |
| Endrin | mg/l |
| Lindane | mg/l |
| Methoxychlor | mg/l |
| Toxaphene | mg/l |
| 2, 4-D | mg/l |
| 2, 4, 5-TP Silves | mg/l |

2. Upon completion of the sampling program described in Section C.1., representative samples of groundwater shall be obtained from each groundwater monitoring well and analyzed for the following constituents:

| Constituent | Units | Frequency |
|---|---|---|
| Total Dissolved Solids | mg/l | Semi-annual |
| pH | pH units | Semi-annual |
| Specific Conductance | micromhos/cm | Semi-annual |
| Total Organic Carbon | mg/l | Semi-annual |
| Total Organic Halogen | mg/l | Semi-annual |
| Chloride (Cl) | mg/l | Semi-annual |
| Iron (Fe) | mg/l | Annual |
| Manganese (Mn) | mg/l | Annual |
| Phenols | mg/l | Annual |
| Sodium (Na) | mg/l | Annual |
| Sulfate (SO ) | mg/l | Annual |

3. The following additional information shall be reported for each sampling of the groundwater monitoring wells:

   a. Date of sampling.
   b. Date well purged prior to sampling.
   c. Estimate of volume of water purged from each well prior to sampling.
   d. Static water level in well prior to pumping (MSL elevation).
   e. Date static water level measurement taken.

D. FLOOD PROTECTION FACILITIES

The discharger shall inspect all internal and external flood protection facilities at least quarterly and following each storm which generates any stormwater flow through the diversion channels. The results of inspection shall be reported quarterly to the Regional Board. If significant damage to the flood protection facilities are found, the discharger shall report immediately to the Regional Board by telephone and letter the following information:

1. Location and extent of damage.
2. Type and quantity of Group 1 and 2 wastes threatened, if any.
3. Interim measures to be taken to assure that no Group 1 and 2 wastes are discharged from the facility.
4. Time schedule for repairs.

E. Prior to discharge of any liquid Group 1 wastes into any newly constructed containment basin (cell), the discharger shall submit to the Board a technical report showing the construction of the basin (including results of soil tests for permeability of liner), and a certificate signed by a California Registered Civil Engineer stating that the basin and attendant facilities are constructed to meet the requirements of this Order.

G. The discharge of any Group 1 waste other than those allowed in the specifications, or any other non-compliance with the operations plan, shall be reported to the Board immediately upon the discharger becoming aware that said violation(s) occurred, along with an explanation of how the correction of said violation(s) will be accomplished expeditiously.

H. A report shall be submitted annually summarizing progress and compliance, and including any non-compliance, with the operations plan.

REPORTING

The above monitoring program shall be implemented beginning May 1, 1981.

Monitoring reports shall be submitted to the Regional Board as follows:

Monthly reports - by the 15th day of the following month.

Quarterly reports - by January 15, April 15, July 15, and October 15 of each year.

Semi-Annual Reports - By January 15 and July 15 of each year.

Annual reports - by January 15.

Forward monitoring reports to:

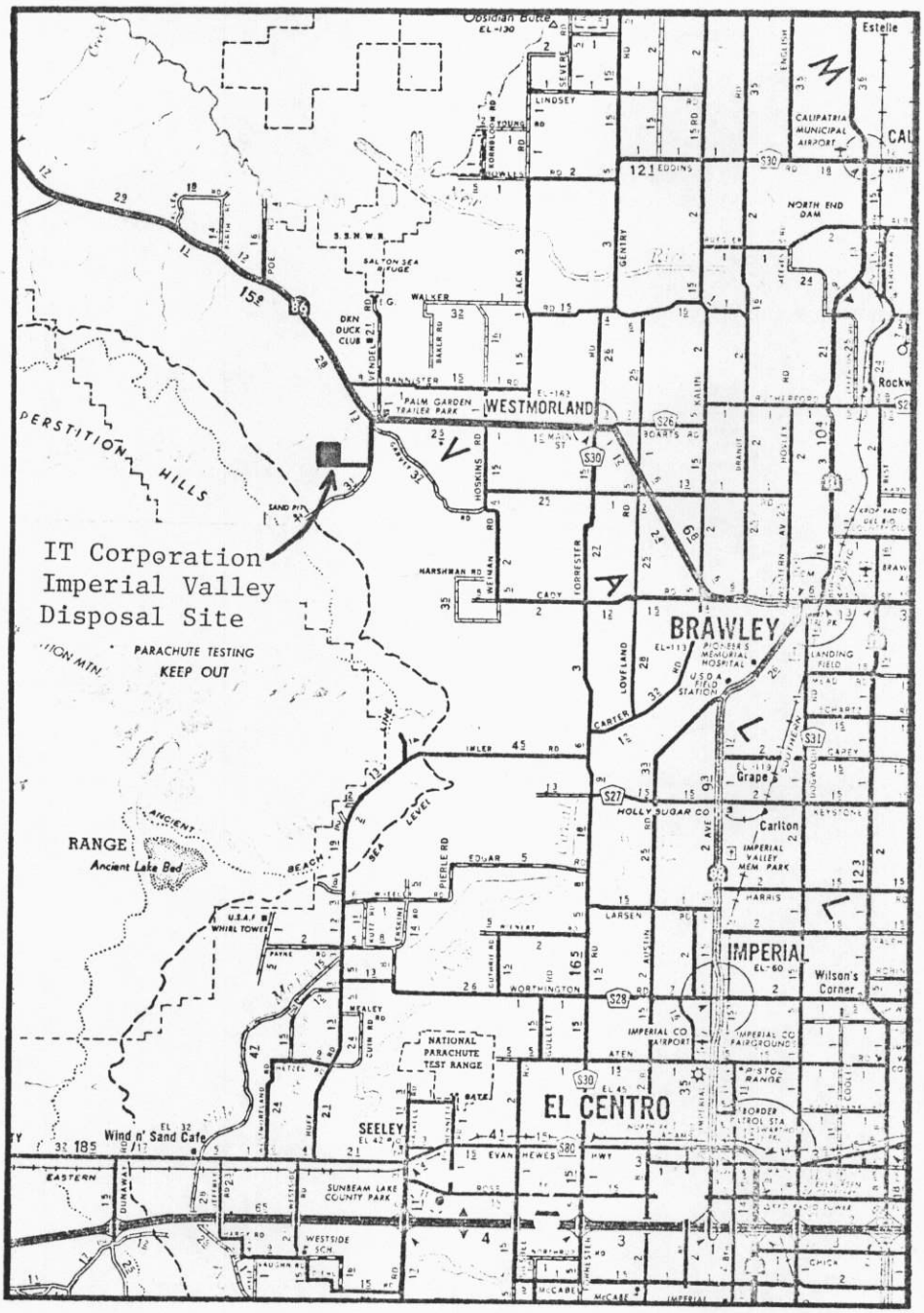
California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY _____
Executive Officer

April 29, 1981
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

COLORADO RIVER BASIN REGION




AREA MAP

IT CORPORATION

IMPERIAL VALLEY CLASS II-1 WASTE DISPOSAL SITE

Imperial County

ORDER NO. 81-62