

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 98-208

WASTE DISCHARGE REQUIREMENTS
FOR
IT CORPORATION MONTEZUMA HILLS FACILITY
CLASS II SURFACE IMPOUNDMENT
AND
CLOSED CLASS I LANDFILLS
SOLANO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. IT Corporation (hereafter Discharger) owns the Montezuma Hills facility, maintaining two closed Class I landfills and operating a Class II surface impoundment, previously regulated by Waste Discharge Requirements (WDRs) Order No. 90-225, adopted by the Board on 10 August 1990. Closure activities have been completed, and WDRs Order No. 90-225 is neither adequate nor consistent with current plans and policies of the Board.
2. The 320-acre Montezuma Hills property is eleven miles southeast of Fairfield and eight miles west of Rio Vista on California State Highway 12, in the eastern half of Section 22, T4N, R1E, MDB&M (Assessor's Parcel Number 48-05-008). Waste treatment, storage, and disposal activities have occurred within 52 acres of the property referred to herein as the facility. Facility location and site maps are shown in Attachments A and B which are incorporated herein and made part of this Order.
3. The facility is also regulated by the California Department of Toxic Substances Control (DTSC) under a Hazardous Waste Facility Post-Closure Permit issued pursuant to Health and Safety Code Section 25200 (EPA I.D. CAD079089512).
4. The Discharger began operation of the Montezuma Hills Facility in February of 1979. Twelve contiguous Class II-1 surface impoundments constructed of on-site soils, but without engineered liners, received liquid, sludge, and solid waste from gas and oil exploration, production, and refining until April of 1986. Although the wastes were excluded from regulation under the Resource Conservation and Recovery Act (RCRA), they were classified as hazardous pursuant to the California Health and Safety Code and California Code of Regulations (CCR) Title 22 .
5. On 8 September 1978, the Board adopted Order No. 78-115 prescribing waste discharge requirements for the Montezuma Hills Facility Class II-1 Disposal Site. On 28 September 1984, the Board adopted Order No. 84-117 which contained revised requirements for the facility.
6. Between 1980 and 1985, the Discharger constructed two compacted clay barriers and one slurry wall. The surface impoundments were, therefore, surrounded by subsurface barriers installed to inhibit lateral migration of groundwater pollution. However, groundwater pollution persisted outside of these barriers.
7. On 26 June 1987, the Board adopted Cleanup and Abatement (C&A) Order No. 87-124 for the facility due to pollution of groundwater with organic and inorganic waste constituents. The C&A required IT Corporation to submit to the Board by 1 December 1987 a closure plan and a groundwater clean-up plan for the Montezuma Hills Facility.

8. In response to the 26 June 1987 C&A Order, the Discharger submitted a Report of Waste Discharge (RWD), dated 1 December 1987, with a facility modernization plan which included proposed closure of the hazardous waste impoundments and construction of a new Class II solid waste disposal site.
9. The Discharger submitted a revised RWD on 30 June 1988, and a revised closure and post closure maintenance plan in September of 1989. This plan contained the time schedule for closure of the facility. After additional agency comments, the Discharger updated the closure and post-closure maintenance plan in May of 1990.
10. On 10 August 1990, the Board adopted WDRs Order No. 90-225 prescribing closure and post closure requirements for the twelve Class II-1 surface impoundments based upon the closure plan submitted by the Discharger, including excavation and consolidation of wastes and construction of groundwater control features. On 26 April 1991, C&A Order No. 91-106 was issued to amend the time schedule for completion of various closure activities identified in C&A Order No. 87-124.
11. Phase I closure activities, including the construction of a waste consolidation area (WCA), a perimeter slurry wall, a groundwater collection system, and a groundwater evaporation basin (GEB), were initiated in August of 1990. Phase II activities, including the stabilization and consolidation of wastes, the construction of cover systems for both the WCA and waste excavation area (WEA), installation of groundwater recovery trenches, and the construction of a surface water control system were completed in December of 1991.
12. Consistent with Attachment B and previous Board Orders, the WEA and the WCA are closed Class I Landfills identified as Landfill Waste Management Units (WMUs) A and B, respectively. The GEB Class II surface impoundment, which is used for the consolidation and evaporation of extracted groundwater, is identified as WMU C.
13. The IT Montezuma Hills Facility is currently implementing a detection/corrective action monitoring program due to the presence of inorganic and organic constituents in groundwater both within and outside of the perimeter slurry wall. Groundwater is being extracted from beneath WMU B and at locations throughout the facility and conveyed to the WMU C for evaporation. This is necessary to maintain physical separation between wastes and the underlying shallow water bearing zone, and to control the local groundwater gradient and reduce mounding within the slurry walls. Intrawell constituent of concern (COC) trend analyses are performed by the Discharger on all facility point of compliance groundwater monitoring wells. The nature of most, but not all, constituent concentration trends have been stable or downward. Instances of upward trends continue at several locations.

WASTES AND THEIR CLASSIFICATION

14. WDRs Order 90-225 prescribed closure requirements for the twelve Class II-1 surface impoundments, WMUs 101, 102, 103, 104, 201, 202, 203, 204, 301, 302, 303, and 304. These WMUs were closed as Class I Landfills WMUs A and B. Over the life of the facility, the surface impoundments had received a variety of wastes including drilling muds, fluids coincident to gas/oil exploration and production, dilute brines, ballast waste after oil removal and recycle, neutralized aqueous solutions of acidic or alkaline origin, wastewater treatment solids, and storm water runoff from areas used to handle all of these wastes. In 1980, the facility also received waste brine from a chemical manufacturing facility which contained Difolitan, a fungicide. Total waste received during the period of operation was about 4.7 million barrels.

15. Solid wastes at the facility included sludges accumulated from disposal of the wastes described in Finding No. 14 and contaminated soils underlying the impoundments. The solid wastes typically had a high content of soluble calcium, magnesium, sodium, potassium, chloride, and sulfate. Major metal constituents included arsenic, copper, iron, manganese, and titanium. Organic compounds were found in all pond solids at variable but generally low concentrations. These compounds included benzene, ethylbenzene, trichloroethene, tetrachloroethylene, carbon disulfide, trans-1,2-dichloroethene, benzoic acid, and xylenes.
16. In 1989, waste from WMU 101 was removed in preparation for the Phase I closure activities and construction of WMU B in the area formerly occupied by WMU 101. During Phase I of the facility closure, wastes from surface impoundments 102, 201, 202, and 303 were solidified with dry soil removed from the impoundment levees, and deposited in WMU B. During Phase II closure activities, wastes from remaining WMUs were stabilized and solidified in a variety of ways prior to discharge to WMU B. WMUs 104 and 204 were mixed with magnesium oxide as a stabilizing agent, wastes from WMU 304 were mixed with cement, and wastes from WMUs 103, 203, 301, 302, and 303 were mixed and aerated, prior to transfer to WMU B.
17. Approximately 253,000 cubic yards of mixed hazardous and designated wastes, subsoils, and solidification agents were deposited to WMU B. No wastes remain in WMU A.
18. The Class II surface impoundment (WMU C) constructed as part of Phase I closure activities is comprised of an east and west cell. WMU C receives and evaporates contaminated groundwater extracted from subsurface trenches throughout areas of the facility and from beneath WMU B. WMU C also receives liquids from the east and west cell Leachate Collection and Removal Systems (LCRSs). WMU C was constructed in the area of WMU 102, as shown on Attachment B. Contaminated groundwater conveyed to WMU C for evaporation is classified as 'designated waste' using the criteria set forth in CCR Title 27 and the California Water Code.

SITE DESCRIPTION

19. The facility is in the rolling terrain of the Montezuma Hills in southeastern Solano County. Local topographic relief is about 40 feet with the WMUs situated on a topographic high.
20. Land within 1000 feet of the facility is used extensively for grazing and limited grain and hay production.
21. The closest potentially active faults are the Vaca and Montezuma Hills faults, about three miles southwest of the facility. The maximum credible earthquake (MCE) for this fault zone is estimated to have a magnitude of 7.0. The greatest anticipated horizontal ground surface acceleration was calculated by the Discharger to be 0.48g for the MCE at the closest approach of the Vaca and Montezuma Hills faults.
22. The facility is underlain by the Montezuma Formation, a Plio-Pleistocene alluvial deposit, which has been uplifted and dissected by modern surface drainage. The Discharger has informally defined four lithostratigraphic units within the uppermost part of the Montezuma Formation. These units are, from top to bottom, the Organic Silty Clay Unit consisting of 0 to 8 feet of modern soil with minor sand lenses, the Upper Clay Unit with stiff to hard CL and CH type soils which extend to about 30 feet in depth, the Middle Sand Unit with 5 to 15 feet of silty sands and sandy silts, and

the Lower Clay Unit with predominantly CL and CH soils. Drilling logs indicate that discontinuous sand layers occur within the Lower Clay Unit at depths of 28 to 60 feet below the top of the unit.

23. The first water bearing formation is designated by the Discharger as the "Shallow Water-Bearing Unit" and includes water occurring under unconfined conditions in the Upper Clay Unit and the Middle Sand Unit. The "Deeper Water-Bearing Unit" occurs in the discontinuous sandy zones in the upper part of the Lower Clay Unit. Water in the Shallow Water-Bearing Unit historically ranged from less than 5 feet to about 20 feet below ground surface and varied seasonally. Historical groundwater level contours in the Shallow and Deep Water-Bearing Units were characterized by a groundwater mound in the south-central part of the disposal facility. At times, groundwater levels intersected the sludges in the former impoundments. Groundwater moved radially outward from the facility, principally north-northwest and southward from the mound location with some movement east and west. The groundwater mound was due to several features including the cutoff and slurry walls around the disposal area, recharge from the impoundments, and the natural topographic relief where the facility is located.
24. Groundwater control features and extraction trenches constructed during closure were designed to establish and maintain a physical separation between wastes in WMU B and the underlying shallow water bearing unit and to reduce the groundwater mound within the perimeter slurry walls. Compliance with the five-foot minimum separation is monitored through a series of piezometers located in and around WMU B. Attainment of a groundwater level differential across the slurry wall is evaluated through measurements at paired piezometers/wells in the Shallow Water-Bearing Unit. Monitoring reports submitted by the Discharger indicate that the groundwater mound internal to the slurry wall has dissipated, with the exception of the far northeast and southeast corners of the facility, where a slight outward gradient still exists. 500,000 to 1,000,000 gallons of groundwater have been extracted annually for evaporation in WMU C.
25. The Discharger has compiled regional groundwater quality data which show that total dissolved solids (TDS) ranges from 460 to 940 mg/l, chloride from 49 to 360 mg/l, pH from 7.4 to 8.6 and sulfate from 17 to 98 mg/l. On-site monitoring wells used for local backgroundwater quality measurements generally show lower maximum values and a narrower range of concentrations. The on-site background wells have TDS between 300 and 510 mg/l, chloride between 23 and 84 mg/l, and average pH between 7.4 and 7.8.
26. Releases of waste have impacted groundwater both inside and outside of the subsurface cutoff and slurry walls, and in both the shallow and deeper water bearing units. The facility closure covers and groundwater control features serve to limit the movement of COC's downgradient. Progress toward groundwater corrective action and clean-up is evaluated through routine groundwater monitoring and reporting.
27. Impacted groundwater generally has higher than background concentrations of TDS, chloride, sulfate, calcium, magnesium, sodium, boron and alkalinity. Trace element, or heavy metal, contaminants have generally been detected sporadically at low levels. Organic compounds, including benzene, chloroform, trichloroethene, and cis-1,2-dichloroethene also continue to be detected within and outside of the perimeter slurry wall.

28. The beneficial uses of groundwater are domestic and municipal supply, process and service supply, irrigation, and stock watering.
29. The facility receives an average of 16.8 inches of precipitation per year. The calculated average annual net evaporation from surface impoundments at the facility is about 39 inches.
30. The 1000-year, 24-hour precipitation event for the facility is 5.55 inches based on 80 years of record for the Rio Vista station. The 24-hour probable maximum precipitation is 13.56 inches.
31. The estimated 100-year, mean maximum annual precipitation is 31.1 inches with a probable maximum annual precipitation of 98.4 inches.
32. The facility is not within a 100-year floodplain.
33. Surface drainage is northeast to the Big Ditch, a tributary to Lindsey and Cache Sloughs which eventually flow into the Sacramento River.
34. Surface drainages at the facility are tributary to Lindsey and Cache Sloughs which have the following beneficial uses: municipal, domestic, agricultural, and industrial supply; recreation; esthetic enjoyment; fresh water replenishment; groundwater recharge; and preservation and enhancement of fish, wildlife and other aquatic resources.

ENGINEERED CLOSURE ALTERNATIVE

35. Facility closure construction activities included installation of an engineered alternative liner for WMU's A and B. Closure was completed in December of 1991 pursuant to WDRs Order No. 90-225, adopted by the Board on 10 August 1990.

DESCRIPTION OF THE CLASS I LANDFILLS

WMU A (Waste Excavation Area)

36. WMU A includes the area of former surface impoundment WMUs 103, 104, 203, 204, 301, 302, 303, and 304 and all other areas within five feet outside of the slurry wall, except for the area within WMU B and WMU C. Wastes from the surface impoundment WMUs were removed and consolidated in WMU B as part of the facility closure. No wastes remain in WMU A. In ascending order, the cover system over WMU A consists of a two-foot compacted subgrade, a two-foot compacted clay cover with a hydraulic conductivity of no more than 1×10^{-6} cm/s, and a one-foot vegetative cover layer.

WMU B (Waste Consolidation Area)

37. In preparation for the receipt of consolidated facility wastes, waste from WMU 101 was removed in 1989. Clay material from an on-site borrow area was placed in loose lifts in the area of the former WMUs 101 and compacted to a minimum of 90 percent. A total of four feet of clay was placed as the foundation for the Waste Consolidation Area (WMU B). WMU B received solidified and stabilized wastes from WMUs 102, 201, 202, and 303 during Phase I closure activities. Solidified and stabilized wastes from WMUs 103, 104, 203, 204, 301, 302, 303, and 304 were consolidated in

WMU B during Phase II closure activities. Approximately 253,000 cubic yards of mixed hazardous and designated wastes, subsoils, and solidification agents were deposited to WMU B. During Phase I closure activities groundwater extraction trenches, collection sumps, and conveyance systems were constructed beneath WMU B to maintain the five-foot minimum separation between consolidated wastes and underlying shallow water bearing zone. In ascending order, the cover system over WMU B consists of a two-foot compacted subgrade, a three-foot compacted clay barrier with a hydraulic conductivity no greater than 1×10^{-7} cm/s, a 30 mil PVC synthetic liner layer, a filter fabric layer, and a one-foot vegetated layer.

DESCRIPTION OF GROUNDWATER CONTROL FEATURES

Slurry Wall

38. As part of Phase I closure activities, the slurry wall as shown on Attachment B was extended 2,200 feet and overlapped with previously existing subsurface structures to surround the site. The three-foot wide slurry wall was constructed to extend at least five feet into the lower clay layer beneath the site, approximately 20-25 feet bgs, and 140 to 160 above MSL. Materials used for the wall included bentonite slurry mixed with excavated soil. Upon settling, the completed slurry wall was covered with geotextile and a two-foot soil layer. Slurry wall construction specifics are documented in Appendix G of the Phase I As-Built Construction Report, dated February 1991.

Dewatering System

39. As part of the Phase I closure activities, a groundwater control system comprised of seven collection trenches, sumps, and conveyance appurtenances was installed beneath WMU B and within the perimeter slurry walls to dissipate groundwater mounding and maintain a minimum five-foot separation between waste and groundwater during the post-closure period. Construction details for the groundwater control system are documented in Section 4.0 of the Phase I As-Built Construction Report. Performance of the groundwater control system is monitored by piezometers in and around WMU B.

DESCRIPTION OF THE CLASS II SURFACE IMPOUNDMENT

40. WMU C, a Class II surface impoundment, was constructed in the area of impoundment 102 following the removal of wastes. WMU C is designed for the treatment and disposal, via evaporation, of groundwater collected from the facility extraction trenches. WMU C was constructed as a liner system consisting of the following components in ascending order; a prepared foundation, a three-foot compacted clay barrier layer, a secondary 60 mil HDPE liner, a water drainage layer and two LCRSs, a one-foot silty clay layer, and a primary 60 mil HDPE liner. WMU C was constructed with an east and west cell and internal dike, which separates the cells except during periods of high volume. Each cell is equipped with a LCRS to monitor performance of the primary liner and ensure elimination of hydraulic head on the secondary liner. Leachate collected by the LCRS is returned to WMU C for evaporation. Construction specifics for WMU C are documented in Section 3.0 of the Phase I As-Built Construction Report.

CEQA AND OTHER CONSIDERATIONS

41. This action to revise WDRs for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code, Section 21000 et seq., in accordance with Title 14 CCR, Section 15301.
42. This Order implements:
the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin, Fourth Edition, and
the prescriptive standards and performance goals of Title 27, CCR, Division 2, Subdivision 1 and Title 23, CCR, Division 3, Chapter 15.

PROCEDURAL REQUIREMENTS

43. The Board has notified the Discharger and interested agencies and persons of its intention to revise the WDRs for this facility.
44. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

IT IS HEREBY ORDERED that Order No. 90-225, and C&A Orders 87-124 and 91-106 be rescinded and that IT Corporation and its agents, in order to meet provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS:

38. The acceptance of any off-site waste for discharge at this facility is prohibited. Waste disposed at this facility shall be limited to existing wastes, groundwater extracted as part of the cleanup program, wastes generated and/or collected by on-site leachate collection systems, and on-site liquids from monitoring, maintenance and equipment decontamination.
39. The discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids) to the landfill units is prohibited.
40. The discharge to the landfill units of solid waste containing free liquid in excess of the waste's moisture holding capacity is prohibited.
41. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.
42. The discharge of waste from the Class II surface impoundment containment is prohibited.
43. The discharge of wastes into the Class II surface impoundment to a point where the accumulation of wastes exceed the criteria which designates the waste to be hazardous is prohibited.
44. The discharge of waste to any ponded water, except in the Class II surface impoundment, is prohibited.

45. The discharge of waste within 100 feet of surface waters, excluding any storm water diversion structures around the waste management units, is prohibited.
46. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:
 - a. require a higher level of containment than provided by the unit,
 - b. are 'restricted hazardous wastes', or
 - c. impair the integrity of containment structures,

is prohibited.

B. DISCHARGE SPECIFICATIONS

GENERAL SPECIFICATIONS

1. Wastes shall only be discharged into, and shall be confined to, the waste management units specifically designed for their containment as stated in this Order.
2. The dewatering system under the WMU B shall be used to maintain a minimum separation of five feet between wastes or leachates and the highest anticipated elevation of underlying groundwater.
3. The discharge of liquid waste to the Class II surface impoundment shall be limited to leachate from the LCRSs of the surface impoundment and the facility groundwater control systems, and site generated liquids from monitoring, maintenance, and equipment decontamination.
4. Water used for WMUs closure maintenance shall be limited to the minimum amount necessary for dust control and to establish vegetation on the landfill caps.
5. The treatment or disposal of waste shall not cause a pollution or a nuisance, as defined in the California Water Code, Section 13050.
6. The discharge shall not cause a degradation of any water supply.
7. The Discharger shall maintain and monitor the WMUs in accordance with the approved IT Corporation Montezuma Hills Facility Closure and Post-Closure Plan, Revision 1.0, dated September 1989, and the amendments as approved by the Board and DTSC.
8. There shall be no seepage or overflow from the landfill and surface impoundment.
9. The Discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

PROTECTION FROM STORM EVENTS

10. The drainage control systems and structures for the Class I landfills shall be maintained to prevent inundation or washout due to floods with a 100-year return period. The drainage control systems and structures for the Class II surface impoundment shall be maintained to accommodate the anticipated volume of precipitation under the 1,000-year, 24-hour precipitation conditions, normal seasonal precipitation and must maintain two feet of freeboard.
11. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes.
12. Annually, prior to the anticipated rainy season but no later than **15 October**, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through the wastes.

SURFACE IMPOUNDMENT SPECIFICATIONS

13. At no time shall the freeboard of the surface impoundment be less than two feet.
14. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
15. The surface impoundment shall be maintained to prevent scouring and/or erosion of the liner and other containment features at points of discharge to the impoundment and by wind-caused wave action at the waterline.
16. Leachate removed from the surface impoundment LCRSs shall be placed back into the surface impoundment for evaporation.
17. Leachate generated by the surface impoundment LCRS shall not exceed 27 gallons per day (gpd) until the Discharger has installed a remote monitoring system that notifies the Discharger of pump failure in the LCRS sump. Once the remote monitoring system has been installed, the leachate generated by the surface impoundment LCRS shall not exceed 158 gpd. If leachate generation exceeds this value, the Discharger is required to take action to locate the leak(s) in the liner system. If the depth of fluid in an LCRS sump exceeds the level where leachate would back up into the drainage layer, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the surface impoundment and shall notify the Board in writing within seven days. Notification shall include a time table for remedial action to repair the upper liner of the impoundment or other action necessary to reduce leachate production.
18. The Discharger shall take the following actions in response to leachate generation in the LCRS in the Class II surface impoundment:

Action Leakage Rate (ALR) - If leachate generation in the LCRS exceeds 160 gpd for 30 consecutive days or 4800 gallons over a 30 day period, the Discharger shall immediately take steps to locate leak(s) in the liner system and notify the Board. Leak detection work may be done without ceasing discharge or draining the pond, if possible.

Repair Leakage Rate (RLR) - If leachate generation in the LCRS exceeds 425 gpd the Discharger shall immediately cease the discharge of waste, including leachate, to the surface impoundment and notify the Board. The notification shall include a time table for remedial action to repair the upper liner of the surface impoundment or action necessary to reduce leachate production.

19. Solids which accumulate in the surface impoundment shall be periodically removed, as necessary, to maintain sufficient capacity. Prior to disposal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Title 27, CCR.
20. The LCRS shall be operated and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of fluid in the LCRS sump shall be kept at approximately six inches, the minimum needed to ensure efficient pump operation.

GENERAL LANDFILL MAINTENANCE SPECIFICATIONS

21. Surface drainage courses and areas subject to erosion by wind or water shall be maintained to prevent such erosion.
22. Vegetation shall be maintained over each closed WMU. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the WMU vegetative layer thickness.
23. At least two permanent monuments, installed by a licensed land surveyor, shall be maintained from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period.

D. PROVISIONS:

1. The Discharger shall comply with Standard Provisions and Reporting Requirements, dated August 1997, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of the Standard Provisions and Reporting Requirements is a violation of these WDRs.
2. The Discharger shall comply with Monitoring and Reporting Program No. 98-208, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities, precipitation and drainage controls, and groundwater control systems, and monitoring groundwater, leachate from waste management units, and surface waters, throughout the active life of WMU C and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. 98-208 is a violation of these WDRs.
3. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel. All other site operating records required by this Order may be maintained offsite, but must be available to Board staff within 48 hours of being requested.

4. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for maintenance or operation of the landfill and the surface impoundment. The Discharger shall also notify the Board of a material change in the character, location, or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given 120 days prior to the effective date of the change and shall be accompanied by an amended RWD and any technical documents that are needed to demonstrate continued compliance with these WDRs. The discharger need not provide advance notification of operational refinements in existing groundwater pumping systems, provided these are described in the semi-annual monitoring reports and such refinements do not compromise compliance with prohibitions and specifications of this Order.
5. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order and of the California Water Code.
6. The Discharger shall maintain legible records of the volume and type of each waste discharged to the Class II surface impoundment and the manner and location of discharge until the end of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours, as further discussed in paragraph No. 3 of this subsection. At the end of the post-closure maintenance period, copies of these records shall be sent to the Board upon request.
7. The Discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
8. The post-closure maintenance period shall continue until the Board determines that remaining wastes in WMUs A, B, and C will not threaten water quality.
9. In an effort to address existing releases of wastes from the facility, and changes in LCRS volume, the Discharger shall complete the tasks below in accordance with the following time schedule:

Task

Compliance Date

a. Groundwater Corrective Action Evaluation Report: 15 March 1999

The Discharger shall submit a technical report assessing groundwater corrective actions to date including an evaluation of the appropriateness and effectiveness of the existing groundwater monitoring network for concurrent detection and corrective action monitoring and delineation of the lateral and vertical extent of impacted groundwater, an evaluation of existing groundwater control features and their impact on corrective action, additional investigative measures or data points, if necessary, to ensure characterization of the extent of groundwater pollution or effectiveness of corrective actions and the effectiveness of the existing system in detecting any subsequent release(s) from the facility. Additionally, an upper water bearing zone monitoring well location(s) shall be proposed by the Discharger as a replacement for existing monitoring wells 177 and/or

178. This evaluation report may be combined with the annual self-monitoring report required by this Order.

Task

Compliance Date

b. Updated Corrective Action

Water Quality Protection Standard (WQPS) Report 15 March 1999

The Discharger shall submit an updated Corrective Action WQPS Report which supports proposed COC concentration limits for corrective action monitoring developed in accordance with CCR Title 23, Section 2550.4. This report may be combined with the annual self-monitoring report required by the Order.

c. Class II Surface Impoundment/LCRS Evaluation 15 March 1999

The Discharger shall include in the March 1999 annual monitoring report, a summary of LCRS pumping data for calendar year 1998.

10. The Discharger shall comply with all applicable provisions of Chapter 15 of Title 23, Title 27, and applicable portions of Title 22, Parts 66260 through 66265 and 66268 that are not specifically referred to in this Order.
11. The Board will review this Order periodically and may revise requirements when necessary.

REPORTING REQUIREMENTS

12. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program No. 98-208 and in the Standard Provisions and Reporting Requirements.
13. The Discharger shall maintain a closure and post-closure maintenance plan (or submit suitable modifications to a pre-existing plan), that complies with Titles 23 and 27 of the CCR.
14. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.
15. The Discharger shall submit annually a copy of the financial assurances for corrective actions and post-closure provided to the DTSC, pursuant to the June 1989 Consent Order and Schedule of Compliance, that either validates the ongoing viability of the financial instrument or proposes and substantiates any needed changes.

I, GARY M. CARLTON, 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, Central Valley Region, on 23 October 1998.

GARY M. CARLTON, Executive Officer

MONITORING AND REPORTING PROGRAM NO. 98-208
IT CORPORATION MONTEZUMA HILLS FACILITY
CLASS II SURFACE IMPOUNDMENT AND CLOSED CLASS I LANDFILLS
SOLANO COUNTY

AMENDED

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INFORMATION SHEET

IT CORPORATION MONTEZUMA HILLS FACILITY CLASS II SURFACE IMPOUNDMENT AND CLOSED CLASS I LANDFILLS SOLANO COUNTY

The 320-acre Montezuma Hills property, including the 52 acre permitted facility is eleven miles southeast of Fairfield, eight miles west of Rio Vista on California State Highway 12 in southeastern Solano County. The facility consists of two closed Class I landfills and an active Class II surface impoundment. These Waste Discharge Requirements (WDRs) are being updated to reflect closure activities which were accomplished at the facility.

The facility is also regulated by the California Department of Toxic Substances Control (DTSC) under a Hazardous Waste Facility Post-Closure Permit issued pursuant to Health and Safety Code Section 25200 (EPA I.D. CAD079089512).

The Discharger began operation of the Montezuma Hills Facility in February of 1979. Twelve contiguous Class II-1 surface impoundments constructed of on-site soils, but without engineered liners, received liquid, sludge, and solid waste from gas and oil exploration, production, and refining until April of 1986. Although the wastes were excluded from regulation under the Resource Conservation and Recovery Act (RCRA), they were classified as hazardous pursuant to the California Health and Safety Code and California Code of Regulations Title 22.

On 10 August 1990, the Board adopted WDRs Order No. 90-225 prescribing closure and post closure requirements for the twelve Class II-1 surface impoundments, including excavation and consolidation of wastes and construction of groundwater control features. Closure activities included the construction of a waste consolidation area (WMU B), perimeter slurry wall, groundwater collection system, and a Class II surface impoundment (WMU C), the stabilization and consolidation of wastes, the construction of cover systems for both WMU B and the Waste Excavation Area (WMU A), the installation of groundwater recovery trenches and the construction of a surface water control system, all of which were completed by December 1991.

The IT Montezuma Hills facility is currently implementing a detection/corrective action monitoring program due to the presence of inorganic and organic constituents in groundwater both within and outside of the perimeter slurry wall. Groundwater is being extracted from beneath WMU B and at locations throughout the facility, and conveyed to a Class II surface impoundment (WMU C) for evaporation in an effort to maintain physical separation between wastes and the underlying shallow water bearing zone, and to control the local groundwater gradient and reduce mounding within the slurry walls.

Impacted groundwater generally has higher than background concentrations of TDS, chloride, sulfate, calcium, magnesium, sodium, boron and alkalinity. Trace element, or heavy metal, contaminants have generally been detected sporadically at low levels. Organic compounds, including benzene, chloroform, trichloroethene, and cis-1,2-dichloroethene also continue to be detected within and outside of the perimeter slurry wall.

Surface drainage from the facility is northeast to the Big Ditch, a tributary to Lindsey and Cache Sloughs which eventually flow into the Sacramento River.

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