

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-____

WASTE DISCHARGE REQUIREMENTS
FOR
AERA ENERGY LLC
REAGAN WASTEWATER DISPOSAL FACILITY
SOUTH BELTRIDGE OIL FIELD
KERN COUNTY

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

1. Aera Energy LLC, a California limited liability company, (Discharger) owns and operates crude oil production wells, oil and produced water treatment plants, and wastewater disposal facilities in the South Belridge Oil Field.
2. The Reagan Wastewater Disposal Facility (Facility) consists of 32 unlined surface impoundments. Wastewater discharged at the Facility is oil field produced water from the Dehydration 20 Plant.
3. This Order implements the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition - 1995* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
4. The discharges are subject to the requirements of Title 27, California Code of Regulations, Section 20090(b) et seq (Title 27), and are currently regulated by Waste Discharge Requirements (WDRs) Resolution No. 58-193. The WDRs are outdated and are being updated to reflect Basin Plan policy, current regulations, and site-specific technical information.

LOCATION AND DESCRIPTION

5. The South Belridge Oil Field is on the west side of the San Joaquin Valley, approximately 35 miles west of the city of Bakersfield and nine miles south of Lost Hills, in Kern County as shown on Attachment A, which is attached to and made part of this Order.
6. The unlined impoundments are in Sections 20 and 21 of T28S, R21E, MDB&M (Assessor Parcel Numbers 085-210-18 and 085-210-15). Wastewater is conveyed to the impoundments via pipelines from the Dehydration 20 Plant. Wastewater is conveyed from the impoundments via an unlined ditch to the Highway 33 wastewater disposal facility. The impoundments are shown on Attachment B, which is attached to and made part of this Order.
7. The impoundments, which have a surface area of approximately 80 acres, are used for the disposal of wastewater by evaporation and percolation. The Discharger has reported that approximately 33,294,000 barrels of wastewater were discharged to the Facility during the 12 months ending in June 2006.

8. The impoundments are unlined and do not meet the prescriptive construction criteria for Class II surface impoundments as specified in Title 27, Section 20005, et seq.
9. The land use around the impoundments consists of oil and gas production to the southwest and irrigated row crops and orchards to the northeast.
10. The South Belridge Oil Field lies on the Antelope Plain, an alluvial piedmont consisting of coalescing alluvial fans from the Temblor Range to the west. The region slopes to the east towards the San Joaquin Valley.
11. The site is in the South Valley Floor Hydrologic Unit, Antelope Plain Hydrologic Area (No. 558.60), as depicted on interagency hydrogeologic maps, prepared by the Department of Water Resources in August 1986.
12. The climate in the area is semi-arid, with hot, dry summers and cool winters. Available weather data through 1997 from a monitoring station at South Belridge indicates the average annual precipitation is 5.96 inches. The annual Class A pan evaporation rate is approximately 108 inches at Lost Hills.
13. The 100-year and 1000-year, 24-hour precipitation events calculated by the California Department of Water Resources (DWR) are 2.53 inches and 3.32 inches, respectively, for the South Belridge monitoring station based on data through 1997.
14. Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel No. 060075 0675 B, dated 26 September 1986, shows the Reagan impoundments are not within the areas of 100-year flooding (Zone A).
15. Table II-I in the Basin Plan designates West Side Streams as having beneficial uses that include: agricultural supply; industrial service and process supply; water contact and non-contact water recreation; warm freshwater habitat; wildlife habitat; rare and endangered species habitat; and groundwater recharge. Some beneficial uses may not be applicable to a body of water.

HYDROGEOLOGIC INFORMATION

16. The Discharger has conducted a hydrogeologic investigation to delineate the geology and evaluate groundwater conditions in the area east of the South Belridge Oil Field. Predecessor companies to the Discharger have installed 67 groundwater monitoring wells between 1984 and 1992. Currently, 47 groundwater monitoring wells are sampled by the Discharger. An adjacent property owner has installed five groundwater monitoring wells and eight water supply wells. The DWR installed two groundwater monitoring wells. Attachment C, which is attached to and made part of this Order, shows the locations of all groundwater monitoring and water supply wells in the area east of the South Belridge Oil Field with the wells near the impoundments highlighted.
17. The youngest sediments are Holocene Alluvium, which consists of a heterogeneous sequence of alternating sand, silt, and clay. Underlying the Alluvium is the Late Pleistocene Upper Tulare Formation, which also consists of alternating sand, silt, and clay.

18. Reports submitted by the Discharger describe how the stratigraphically lowest sand layer in the Alluvium is laterally continuous and has been designated as the 22K Sand. Underlying the 22K Sand is the Corcoran Clay Equivalent (CCE), which likely correlates with the Corcoran Clay identified further to the east. Unconformably underlying the CCE are Upper Tulare sediments. Attachment D, which is attached to and made part of this Order, shows the stratigraphy.
19. Three stratigraphic intervals have been identified by the Discharger as aquifer zones containing water-bearing sands. Discontinuous water-bearing sand layers separated by clay layers within the Alluvium have been collectively designated as the unconfined Aquifer I. Underlying Aquifer I is a discontinuous clay aquitard. Below this aquitard is the 22K Sand which is water-bearing and is designated as the semi-confined 22K Aquifer. Underlying the 22K Aquifer is another aquitard, the CCE. Below the CCE in the upper Tulare sediments is a thick sequence of relatively continuous, permeable water-bearing sand layers separated by clay layers collectively designated as the confined Aquifer II. Attachment D shows the three aquifer zones.
20. Hydrogeologic information indicates that the geology beneath and to the north, northeast, and east of the Facility does not preclude wastewater from migrating downgradient to the northeast.
21. Oil and wastewater is produced from the Belridge Diatomite and the lower Tulare Formation. The shallowest production is in the lower Tulare Formation at a depth of approximately 300 feet.
22. The Discharger operates 46 Class II injection disposal wells permitted by the California Division of Oil, Gas, and Geothermal Resources to inject wastewater into the Tulare Formation. The wells are in Section 20 and 21, T28S, R21E and Section 11, T29S, R21E, MDB&M. During April 2006, the Discharger reported 4,600,751 barrels of wastewater were injected into 19 disposal wells.
23. No known Holocene faults traverse or are projected through the South Belridge area. The nearest known Holocene fault is the San Andres Fault zone, located 15 miles southwest of the site.

WASTEWATER CHARACTERISTICS AND CLASSIFICATION

24. Wastewater in the impoundments is sampled and analyzed by the Discharger quarterly. On 2 February 2006, wastewater samples were collected from the inlet impoundment, a middle impoundment, and from the terminal impoundment. A state certified laboratory analyzed the samples and the Discharger reported the following results in the *Semi-Annual Monitoring Report January – June 2006*:

<u>Impoundment</u>	<u>EC</u>	<u>TDS</u>	<u>chlorid</u>	<u>boron</u>
	μmhos/cm	mg/L	e mg/L	mg/L
Inlet	46,000	35,000	14,000	77
Middle	47,000	33,000	14,000	83
Terminal	47,000	32,000	14,000	80

25. Non-hazardous waste that contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state is defined in California Water Code, §13173 (b) as “Designated Waste.”
26. The Discharger conducted a feasibility study of disposal alternatives, and decided to implement: (a) wastewater recycling; and, (b) wastewater disposal to Class II disposal wells permitted by the California Division of Oil, Gas, and Geothermal Resources.
27. The Discharger, in correspondence dated 3 August 2005, committed to permanently cease wastewater discharges to land for purposes of disposal and close the surface impoundments in accordance with the time schedule contained in this Order.

BASIN PLAN INFORMATION

28. The Basin Plan contains maximum numerical salinity limits for the disposal of oil field production wastewater in unlined impoundments overlying groundwater with existing and future probable beneficial uses. The maximum concentration limits are: electrical conductivity at 25° C, 1,000 µmhos/cm; chloride, 200 mg/L; and, boron, 1 mg/L.
29. Table II-2 in the Basin Plan lists the beneficial uses of groundwater. The facility is in the Kern County Basin Hydrologic Unit and the 259 Detailed Analysis Unit (DAU), which has the following beneficial uses of groundwater: municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND). Due to the size of the DAU, the listed uses may not exist throughout the DAU. The Basin Plan defines MUN as uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply. The Basin Plan defines AGR as uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing. The Basin Plan defines IND as uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.
30. The Basin Plan allows the Regional Water Board to consider criteria for exceptions to beneficial uses of groundwater. One of the exception criteria for both the MUN and AGR beneficial use designations is: “The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, Section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy...” An exception criteria for just the MUN designation is: “The total dissolved solids (TDS) must exceed 3,000 mg/L (or an electrical conductivity exceeding 5,000 µmhos/cm) and the aquifer cannot be reasonably expected to supply a public water system.”
31. Where the Regional Water Board finds that one of the exception criteria apply, it may remove the designation for the particular water body through a formal Basin Plan amendment, which includes a public hearing. The exception becomes effective upon approval by the State Water Resources Control Board (State Water Board) and Office of Administrative Law. Table II-2 in the Basin

Plan lists those beneficial use exceptions that have been considered by the Regional Water Board. The Regional Water Board has not considered a request or amended the Basin Plan to allow an exception to the beneficial uses of groundwater for this location.

GROUNDWATER INFORMATION

32. The Discharger owns and operates 35 industrial water supply wells in Sections 20, 21, 27, 28, 34, and 35 of T28S, R21E, MDB&M. The wells supply approximately 420,000 barrels per day of groundwater for use by the Discharger for waterflood injection. The groundwater has concentrations that average about 14,667 mg/L for TDS, 8,700 mg/L for chloride, and 45 mg/L for boron.
33. The Discharger owns and operates two groundwater wells near Spicer City and in Section 10, T28S, R22E, MDB&M, approximately six miles northeast of the impoundments. The wells are a facility supply source for non-drinking water.
34. Twelve groundwater monitoring wells, completed in Aquifer I, are located near the impoundments. The wells were installed by a predecessor company to the Discharger between 1984 and 1992. Well water samples collected by the Discharger and the predecessor company between 1984 and 2006 had the following chemical concentration ranges in mg/L:

<u>Well</u>	<u>TDS</u>	<u>Chloride</u>	<u>Boron</u>
15P1	1,788 – 6,300	312 – 1,800	2.8 – 7.4
21C1	3,332 – 11,100	249 – 3,500	1.5 – 4.0
22K1*	7,050 – 21,600	2,113 – 5,920	3.2 – 15.1
22M1	6,084 – 28,000	556 – 9,900	12.5 – 51
22P1	9,652 – 27,000	3,929 – 9,400	3.6 – 36
217(1)-22	14,200 – 37,000	7,222 – 15,000	8.2 – 74
217(2)-22	3,300 – 7,680	380 – 2,280	1.6 – 8.8
275(1)-20	12,400 – 42,750	4,660 – 23,500	44.4 – 90
275(2)-20	8,560 – 18,800	3,045 – 5,400	1.8 – 9.7
320F1	13,000 – 32,000	5,900 – 11,000	9.9 – 30
321P1	5,980 – 16,000	1,370 – 4,200	ND – 3
322MPZ1	22,900 – 36,000	10,400 – 16,000	46.5 - 99

* Sample results for well 22K1 are from 1984 through 1998.

Some of the wells had high TDS, chloride, and boron concentrations since they were installed while others have shown increasing concentrations with time. Groundwater has been impacted by wastewater migrating from the impoundments.

35. Nine groundwater monitoring wells, completed in the 22K Aquifer, are located near the impoundments. The wells were installed by a predecessor company to the Discharger between 1984 and 1992. Water samples collected by the Discharger and the predecessor company between 1984 and 2006 had the following chemical concentration ranges in mg/L:

<u>Well</u>	<u>TDS</u>	<u>Chloride</u>	<u>Boron</u>
14N1	2,400 – 6,771	310 – 1,239	1.7 – 10.4
21C2	2,518 – 20,000	225 – 4,800	2.0 – 6.6
23J1*	3,430 – 17,500	411 – 5,600	8.5 – 26.2
217(3)-22	3,910 – 30,000	1,340 – 12,000	2.1 – 33.0
275(3)-20	3,550 – 28,000	174 – 17,000	1.0 – 88
313N3**	2,620 – 4,400	139 – 1,300	4.0 – 8.2
320F3	3,850 – 5,090	181 – 1,700	1.1 – 4.5
321P3	3,490 – 11,800	894 – 3,680	2.1 – 5.3
323G3	4,200 – 8,460	1,200 – 2,770	5.6 – 16

* Sample results for well 23J1 are from 1984 through May 2001.

** Sample results for well 313N3 are from 19934 through May 2004.

Some of the wells had high TDS, chloride, and boron concentrations since they were installed while others have shown increasing concentrations with time. Groundwater has been impacted by wastewater migrating from the impoundments.

36. Three groundwater monitoring wells in the vicinity are completed in Aquifer II. The predecessor company to the Discharger installed two of the wells in 1984 and 1990. The Discharger installed the third well in 2000. Water samples collected by the Discharger and the predecessor company between 1984 and 2006 had the following chemical concentration ranges in mg/L:

<u>Well</u>	<u>TDS</u>	<u>Chloride</u>	<u>Boron</u>
13E5*	2,800 – 4,463	199 – 496	7.1 – 10.0
18L1	4,000 – 4,400	320 – 410	3.6 – 5.9

* Sample results for well 13E5 are from 1984 through August 1994 and exclude two sampling events as outliers.

The results from well 13E5, located approximately 3.3 miles northeast of the impoundments; and, well 18L1, located approximately 1.5 miles northwest of the impoundments, indicate that groundwater in Aquifer II has not been impacted by wastewater from the impoundments.

37. The Discharger has not delineated the lateral extent of groundwater impacted by wastewater migrating from the impoundments. In accordance with the time schedule contained in this Order, the Discharger must complete an investigation to determine the lateral extent of wastewater impacts on groundwater in Aquifer I and the 22K Aquifer. Following completion of the investigation, a plan is to be submitted to implement a Corrective Action Program in accordance with Title 27, California Code of Regulations, Section 20430.

CEQA AND OTHER LEGAL REFERENCES

38. The action to adopt WDRs for existing facilities is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, California Code of Regulations, Section 15301.
39. This Order requires the Discharger to submit technical reports as authorized under Section 13267(b)(1) of the California Water Code, which states in part:

“In conducting an investigation specified in subdivision (a), the Central Valley Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Central Valley Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from it. In requiring those reports, the Central Valley Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

40. The technical reports required by this Order and the attached “Monitoring and Reporting Program No. R5-2006-____” are necessary to assure compliance with these WDRs. The Discharger operates the Facility that discharges the waste subject to this Order.
41. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) general industrial stormwater permit, provided the Facility has not experienced a reportable spill since 19 November 1987. It is the responsibility of the Discharger to comply with United States Environmental Protection Agency federal stormwater regulations (40 CFR Parts 122, 123, and 124) should the Facility not qualify for exemption.
42. This Order imposes significant new and more stringent requirements compared to those in WDRs Resolution No. 58-193. This Order is consistent with the antidegradation provisions of State Board Resolution 68-16. Provided the Discharger complies with the Order, discharges in the future should not cause adverse impacts on groundwater.

PROCEDURAL REQUIREMENTS

43. The Regional Water Board has notified the Discharger, interested agencies, and persons of its intent to prescribe WDRs for this discharge and has provided them with an opportunity to submit their written views and recommendations.
44. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this proposed Order.
45. Any person adversely affected by this action of the Regional Water Board may petition the State Water Board to review the action. The petition must be received by the State Water Board within 30 days of the date of issuance of this Order. Copies of the law and regulations applicable to filing petitions are available at http://www.waterboards.ca.gov/water_laws and will be provided upon request.

IT IS HEREBY ORDERED that pursuant to Sections 13263 and 13267 of the California Water Code, Aera Energy LLC, its agents, successors, and assigns, in order to meet the provisions of Division 7 of

the California Water Code and plans, policies, and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The acceptance, treatment, or discharge of “hazardous waste” is prohibited. For purposes of this Order, the term “hazardous waste” is as defined in Title 23, California Code of Regulations, §2510, et seq.
2. The discharge of waste to land other than wastewater associated with the production of petroleum hydrocarbons described in Finding No. 2 is prohibited.
3. Discharges to surface water or surface water drainage courses are prohibited.
4. After the impoundments are closed, the temporary discharge of wastewater to any impoundment(s) retained for use during an upset or emergency condition is prohibited without having a Spill Prevention Control and Countermeasures (SPCC) Plan previously approved by the Executive Officer. The uses of an impoundment during an upset or emergency condition must be described in the SPCC Plan. Any impoundment(s) used for emergency containment must have been constructed in accordance with the applicable criteria in the Department of Water Resources – Division of Dam Safety publication entitled *Guidelines for the Design and Construction of Small Embankment Dams*.

B. SPECIFICATIONS

1. Wastewater discharged to unlined surface impoundments that do not meet the prescriptive construction criteria for classified waste management units as specified in Title 27 and overlying groundwater with existing and future probable beneficial uses shall not exceed the following limits prescribed in the Basin Plan: electrical conductivity at 25° C, 1,000 µmhos/cm; chloride, 200 mg/L; and, boron, 1 mg/L.
2. In order to comply with Specification B.1, the Discharger shall implement its disposal alternatives and closure plans for the surface impoundments described in Finding No. 2 and Finding No. 6 in accordance with the time schedule contained in Provision C.12 of this Order.
3. The impoundment berms shall be maintained to prevent seepage or leakage caused by erosion, slope failure, or animal burrowing.
4. Wastewater production shall be controlled to the extent necessary to maintain consistent compliance with the terms of this Order.
5. The impoundments shall have sufficient freeboard to prevent overtopping as a result of successive precipitation events, high velocity winds, or seismic shaking. In no case shall there be less than two feet (measured vertically) of freeboard.
6. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions. Annually, prior to the anticipated rainy

season, 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 impoundments.

7. The impoundments shall either be free of oil or effectively netted to preclude entry of wildlife in accordance with Title 14, California Code of Regulations, §1770 (b) (3).
8. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
9. The Discharger shall operate and maintain the impoundments in a manner that prevents liquids, precipitates, and sludges from concentrating to hazardous levels.

C. PROVISIONS

1. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2006-____, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
2. The Discharger shall comply with those applicable sections of the "*Standard Provisions and Reporting Requirements for Waste Discharge Requirements*" (Standard Provisions) dated August 1997, which are attached to, and by reference, a part of this Order. To the extent that the Standard Provisions are inconsistent with any terms, conditions, or requirements in this Order, this Order shall govern.
3. In the event of any change in control or ownership of the wastewater disposal facility, then the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall also be forwarded to this office, at least 14 days in advance of the change in control or ownership.
4. To assume ownership or operation of the wastewater disposal facility under this Order, the succeeding owner or operator must apply in writing to the Regional Water Board requesting transfer of the Order within 14 days of assuming ownership or operation of the facility. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name, address, and telephone number of the persons responsible for contact with the Regional Water Board, and a statement that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, which is a violation of the California Water Code. Transfer of this Order to a succeeding owner or operator shall be approved or disapproved by the Regional Water Board.
5. The Discharger shall maintain a copy of this Order and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel upon request.

6. The Discharger shall immediately notify Regional Water Board staff of any flooding, equipment failure, slope failure, or other change in site conditions, which could impair the integrity of waste containment facilities or precipitation and drainage control structures.
7. The Regional Water Board will review this Order periodically and will revise these requirements when necessary.
8. Technical and monitoring reports specified in this Order and additional technical reports and plans that may be required as directed by the Executive Officer as provided for in the California Water Code Section 13267 are to be prepared by or under the direction of and signed and certified by the appropriate registered professional licensed by the State of California. A licensed professional may be a Registered Geologist, Registered Civil Engineer, Certified Engineering Geologist, or Certified Hydrogeologist.
9. The Discharger shall demonstrate financial responsibility for initiating and completing corrective action of all known or reasonably foreseeable releases, and shall submit a report of financial assurance by **April 30th of each year** for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Water Board as beneficiary and shall provide that funds for corrective action shall be available to the Regional Water Board upon issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
10. The Discharger shall demonstrate financial responsibility for closure and post-closure maintenance, and shall submit a report of financial responsibility by **April 30th of each year** for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Water Board as beneficiary and shall provide that funds for closure and post-closure maintenance shall be available to the Regional Water Board upon issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
11. This Order does not authorize violation of any federal, state, or local laws or regulations.

COMPLIANCE SCHEDULE

12. The Discharger, whose wastewater effluent exceeds the limitations stated in Specification B.1 shall implement a wastewater disposal program consistent with current state regulations and policy. The wastewater disposal program shall include the following tasks to be completed by the compliance dates:

Task & Description	Compliance Date
<p><u>Compliance Plan</u> The Discharger shall submit to the Executive Officer for review and approval a detailed master plan and time schedule describing a wastewater disposal program that will result in compliance with this Order. The Plan must set forth the tasks needed to implement the disposal program in accordance with the time schedule.</p>	31 January 2007
<p><u>Groundwater Investigation Work Plan</u> The Discharger shall submit to the Executive Officer for review and approval a detailed work plan and time schedule to determine the lateral impact of wastewater on groundwater. The Plan must set forth the tasks needed to implement the investigation in accordance with the time schedule.</p>	28 February 2007
<p><u>Cease Wastewater Discharge</u> The Discharger shall cease the discharge of wastewater to the Facility in accordance with the approved Compliance Plan.</p>	31 March 2008
<p><u>Closure Plan</u> The Discharger shall submit to the Executive Officer for review and approval a Closure Plan and time schedule in accordance with Title 27, California Code of Regulations, Section 21400. The Plan shall include a Report of Waste Discharge and must set forth the tasks needed to implement closure of the Facility in accordance with the time schedule. The time schedule must include submittal of a Closure Certification Report.</p>	31 May 2008
<p><u>Complete Groundwater Investigation</u> The Discharger shall have completed the investigation to delineate the lateral impact of wastewater on groundwater, and submitted to the Executive Officer for review and approval the final groundwater investigation report.</p>	2 September 2008
<p><u>Corrective Action Plan</u> The Discharger shall submit to the Executive Officer for review and approval a detailed master plan and time schedule describing a corrective action program that will result in compliance with this Order. The Plan must set forth those tasks needed to implement corrective action in accordance with the time schedule.</p>	31 December 2008

The Discharger shall, where appropriate, submit quarterly reports describing progress towards achieving compliance with each task, and shall report any delay in the implementation of any required task, describing in detail the reasons for such delay.

AERA ENERGY LLC
REAGAN WASTEWATER DISPOSAL FACILITY
SOUTH BELRIDGE OIL FIELD
KERN COUNTY

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that 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 _____.

PAMELA C. CREEDON, Executive Officer

DLW:11/2/06