

CALIFORNIA REGIONAL WATER QUALITY CONTROL REGIONAL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2004-0037

WASTE DISCHARGE REQUIREMENTS

FOR  
RITCHIE BROTHERS PROPERTIES, INC.  
DUNNIGAN AUCTION YARD WASTEWATER TREATMENT FACILITY  
YOLO COUNTY

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

1. On 21 May 2003, Ritchie Brothers Properties, Inc. (hereafter Discharger) submitted a Report of Waste Discharge (RWD) for a wastewater treatment facility to treat and dispose of domestic wastewater generated at a proposed heavy equipment auction facility in the town of Dunnigan. Additional information was received from the Discharger on 14 August, 19 August, 22 August, and 23 October 2003; and on 8 January 2004.
2. For the purposes of this Order, wastewater treatment facility (WWTF) shall mean the wastewater pumping system and treatment/evaporation ponds. The facility site location is shown on Attachment A, which is attached hereto and made part of this Order by reference.
3. The auction facility and WWTF are on County Road 99W, ½ mile south of County Road 8, Dunnigan, in Section 26, T12N, R1W, MDB&M. The land, which is owned by the Discharger, is on Assessor's Parcel Nos. 52-050-08, -09, and -78. Surrounding land uses are highway commercial and agricultural. The facility site plan is shown on Attachment B, which is attached hereto and made part of this Order by reference.

**Proposed Facility and Discharge**

4. The Discharger's auction facility will be used to stage and store heavy equipment such as construction and farm equipment for sale at auctions that will occur approximately four times per year. Improvements associated with the auction facility include approximately 50 acres of gravel-paved equipment storage/staging areas, a 20,000-square foot office building, outdoor covered seating for 900 people, an 8,000-square foot building for equipment refurbishing, bathrooms, a commercial kitchen, and a guard house. The facility will have approximately 25 full-time employees, and an additional 200 temporary employees will work at the facility only on auction days.
5. The refurbishing building will be in operation for approximately eight weeks prior to each auction. Wastewater from pressure washing equipment will flow to an oil/water separator and will be recycled through a closed-loop water recycling system consisting of a compartmented concrete sump and pumps. The abrasive blasting booth and paint booth will also be closed systems that will not generate wastewater. All floor drains will be connected to the industrial wastewater recycling system.
6. Domestic wastewater from the bathroom, janitorial, and kitchen facilities will be discharged to an on-site gravity sewer system that will convey the wastewater to a wet well lift station. The lift station will pump the wastewater into one of two lined evaporation ponds. Passive oxidation will take place through algal and microbial activity.

7. The evaporation ponds cover a total area of approximately two acres and provide a total storage capacity of 1.3 million gallons with three feet of freeboard. At two feet of freeboard, the storage capacity is 1.7 million gallons. The pond berms are constructed of engineered fill with a top elevation of 61.5 feet above mean sea level (MSL). The base elevation of each pond will be 55.5 feet MSL, approximately equal to the surrounding grade elevation.
8. Each pond will be lined with a 30-mil polyvinyl chloride (PVC) geomembrane liner, and will be constructed in accordance with an approved Construction Quality Assurance (CQA) Plan. The ponds are expected to be dry during the late summer each year, and the Discharger will use an electrical leak imaging system to test the liners for leakage at least once per year. Liner damage will be repaired as discovered. When the liner is no longer serviceable, it will be removed along with any accumulated biosolids and replaced with a new liner. The Discharger has provided design details, examples of installation specifications, and a CQA Plan. Based on these documents, the proposed liner system should adequately protect groundwater quality if installed as proposed.
9. The Discharger's RWD did not include an assessment of the chemical character of wastewater discharged into the ponds. However, based on the wastewater sources described in the RWD, the wastewater character is expected to be similar to typical domestic wastewater, with a BOD of 100 to 300 mg/L and a total nitrogen concentration of 20 to 85 mg/L.
10. The Discharger's hydrogeologic report indicates that the facility water supply may exhibit a TDS concentration of approximately 400 mg/L. In such case, domestic usage can be expected to result in an initial influent TDS concentration of approximately 650 to 700 mg/L.
11. Odors will be prevented and controlled through operation and maintenance practices such as ensuring appropriate BOD loading rates, removing surface scum as needed, and preventing aquatic weed growth.
12. The Discharger has completed a water balance for the facility to demonstrate that adequate storage and disposal capacity is available for the design monthly average influent flow rate of 1,600 gpd (including infiltration and inflow). The Discharger's water balance was prepared based on the design average daily flow, local evaporation rates, and the 100-year total precipitation rate.
13. Staff completed a supplemental water balance to assess appropriate flow limits for the full capacity at two feet of freeboard and concluded that the ponds will provide adequate capacity to support a monthly average influent flow rate of 2,200 gpd (including infiltration and inflow).
14. The lift station will be equipped with two pumps, each capable of pumping at a rate of 135 gallons per minute (gpm). A liquid level switch in the wet will actuate the second pump well.
15. Domestic and industrial water will be supplied by an on-site well that will produce approximately 100 to 120 gpm. The well will be approximately 400 feet deep and is expected to be screened from 250 to 400 feet bgs. Water for landscape irrigation and fire protection will be obtained from the Dunnigan Water District.

### Site-Specific Conditions

16. The facility lies within the Sacramento River Hydrologic Subarea No. 520.21, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
17. The 100-year total annual precipitation in the vicinity is approximately 31 inches. The total annual reference evapotranspiration rate is approximately 57 inches per year.
18. All portions of the facility are outside the 100-year flood zone.
19. The 90-acre site is relatively level and is traversed by Bird Creek, a seasonal drainage.
20. Based on the Discharger's Geotechnical Report, shallow soils at the site consist primarily of low-plasticity clayey silts and silty clays to a depth of approximately 20 feet below ground surface (bgs). Clayey sand and sandy clays were also found between 8 and 13 feet bgs.
21. In June 2003, the Discharger's consultant completed three exploratory soil borings near the planned wastewater ponds. Samples of soil and groundwater were obtained from each boring and subjected to analytical testing. Nitrate concentrations for soil samples obtained from five feet bgs exhibited nitrate concentrations ranging from 23 to 110 mg/Kg. Nitrate concentrations for samples obtained at fifteen feet bgs ranged from 2.9 to 43 mg/Kg.

### Groundwater Considerations

22. Analytical data for the three groundwater samples obtained from the on-site borings in June 2003 are summarized in the following table. Groundwater depths were not reported. These data serve as a pre-discharge baseline for groundwater quality beneath the wastewater ponds.

Constituent/Parameter	Analytical Result			Water Quality Limit <sup>1</sup>
	EB1	EB2	EB3	
PH	7.2	7.2	7.4	6.5 to 8.5
Total dissolved solids (mg/L)	610	770	600	450
Nitrate as NO <sub>3</sub> (mg/L)	130	69	100	45
Chromium (µg/L)	28	<10	<10	50
Copper (µg/L)	<20	<20	<20	170
Nickel (µg/L)	<40	<40	<40	12
Vanadium (µg/L)	<50	<50	<50	50
Zinc (µg/L)	<20	<20	<20	2,000

<sup>1</sup> Water quality limit translated from narrative water quality objectives specified in the Basin Plan for protection of the beneficial uses of groundwater.

23. The Regional Board regulates the discharge of domestic/industrial wastewater at the Pilot Travel Center. This facility contains unlined wastewater ponds adjacent to the Discharger’s planned wastewater ponds. Groundwater monitoring data for the Pilot Travel Center indicate that groundwater occurs at approximately 25 to 30 feet bgs. The shallow groundwater gradient at the Pilot Travel Center site is highly variable and may be influenced by supply well pumping.
24. Recent groundwater analytical results for the closest Pilot Travel Center groundwater monitoring well to the Discharger’s proposed ponds (well ATC-2) are summarized below.

Constituent/Parameter	Analytical Result	Water Quality Limit <sup>1</sup>
Total dissolved solids (mg/L)	630-710	450
Nitrate as NO <sub>3</sub> (mg/L)	22-130	45
Chromium (µg/L)	138 to 270	50
Copper (µg/L)	36 to 120	120
Nickel (µg/L)	120 to 410	12
Vanadium (µg/L)	up to 60	50
Zinc (µg/L)	60 to 160	2,000

<sup>1</sup> Water quality limit translated from narrative water quality objectives specified in the Basin Plan for protection of the beneficial uses of groundwater.

25. With the exception of certain metals, the available data indicate that shallow groundwater at the facility site is chemically similar to groundwater found in the closest Pilot Travel Center monitoring well. The total dissolved solids concentration exceeds the water quality limit for agricultural water quality (450 mg/L) and nitrate exceeds the drinking water quality limit of 45 mg/L. It has been suggested, but not verified, that the excess nitrate and salinity may have resulted from agricultural chemicals. The groundwater quality data from the Discharger’s exploratory borings and the Pilot Travel Center wells suggest that the elevated chromium, copper, nickel, and zinc in groundwater beneath the Pilot Travel Center site are not naturally occurring.

**Basin Plan and Beneficial Uses**

26. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
27. Surface water drainage is to the Sacramento River via the Colusa Basin Drain. The designated beneficial uses of the Colusa Basin Drain are agricultural supply; water contact recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

28. The designated beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, and industrial service supply, and industrial process supply.

### **Groundwater Degradation**

29. State Water Resources Control Board (State Board) Resolution No. 68-16 (“Policy with Respect to Maintaining High Quality Waters of the State”) (hereafter Resolution No. 68-16) requires a regional board in regulating the discharge of waste to maintain high quality waters of the state (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than as described in plans and policies. The discharge is required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and highest water quality consistent with maximum benefit to the people will be maintained.
30. The Board has considered antidegradation pursuant to State Board Resolution No. 68-16, and finds that the Discharger has not provided the required demonstration to be allowed to cause groundwater degradation, and therefore none is authorized.
31. The Discharger’s WWTF provides treatment and control of the discharge that incorporates:
- a. Geosynthetic-lined evaporation ponds constructed in accordance with a detailed Construction Quality Assurance (CQA) Plan
  - b. An electrical leak detection system;
  - c. A liner inspection and replacement plan to ensure that leaks are promptly detected and repaired and the entire pond liner is replaced as needed;
  - d. An operation and maintenance (O&M) manual; and
  - e. Staffing to assure proper operation and maintenance.
32. The WWTF utilizes lined evaporation ponds as the sole means of wastewater disposal. Although geosynthetic-lined ponds can provide superior groundwater protection, that protection relies on the integrity of the liner material before, during, and after installation. Because of the constant evapoconcentration of the wastewater and the shallow water table, there is little potential for constituent attenuation in the vadose zone and a relatively small leak could pose a threat to groundwater quality. Therefore, it is appropriate to require groundwater monitoring, regular pond liner inspections, and periodic replacement of the liner systems to ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.

### **Other**

33. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the wastewater treatment facility is exempt from Title 27, the data analysis methods of Title 27 may be

appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

34. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells, as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to CWC Section 13801, apply to all monitoring wells.
35. On 4 February 2003, in accordance with the California Environmental Quality Act (CCR, Title 14, Section 15261 et. seq.), the Yolo County Board of Supervisors certified a Mitigated Negative Declaration for auction facility. Mitigation Measure No. 16 required that the applicant conduct soil and groundwater sampling to establish baseline groundwater quality beneath the ponds. The Discharger completed that work and submitted the report with the RWD. The Mitigation Measures are not adequate to protect groundwater quality; however, the Discharger's proposed liner and leak detection system provide protection that should reduce the impact to a less than significant level.
36. The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger will discharge storm water from the equipment staging and storage area to surface waters, and is therefore required to obtain coverage under General Permit No. CAS000001 or submit documentation certifying that such coverage is not required.
37. Section 13267(b) of the California Water Code provides that: "*In conducting an investigation specified in subdivision (a), the regional 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 regional 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 the reports. In requiring those reports, the regional 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*".

The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2004-0037" are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

38. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq., (hereafter Title 27). The exemption pursuant to Section 20090(a), is based on the following:

- a. The waste consists primarily of domestic sewage and treated effluent;,
  - b. The waste discharge requirements are consistent with water quality objectives, and
  - c. The treatment and storage facilities described herein are associated with a domestic wastewater treatment facility.
39. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

### **Public Notice**

40. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
41. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
42. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that, pursuant to Sections 13263 and 13267 of the California Water Code, Ritchie Brothers Properties, Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

*[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]*

#### **A. Discharge Prohibitions**

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of waste is prohibited.
3. Discharge of waste classified as 'hazardous' under Section 2521, Chapter 15 of Title 23 or 'designated', as defined in Section 13173 of California Water Code is prohibited.
4. Discharge of wastewater in a manner different than described in Finding Nos. 5 through 8 is prohibited, and there shall be no discharge until the Executive Officer has approved the technical report described in Provision E.1.c.
5. The discharge of industrial wastewater to the pond system is prohibited.

## **B. Discharge Specifications**

1. The monthly average flow to the evaporation ponds shall not exceed 1,600 gpd.
2. Wastewater storage and disposal shall not cause pollution or a nuisance as defined by Section 13050 of the California Water Code (CWC).
3. Public contact with wastewater shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
4. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
5. Objectionable odors originating at the facility shall not be perceivable beyond the limits of the property owned by the Discharger.
6. As a means of discerning compliance with Discharge Specification No. 5, the dissolved oxygen content in the upper one foot of any wastewater storage pond shall not be less than 1.0 mg/l.
7. All storage and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
8. Wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - a. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
  - b. Dead algae, vegetation, and debris shall not accumulate on the water surface.
9. The facility shall have sufficient storage and disposal capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter months. Design seasonal precipitation shall be based on the total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
10. Freeboard in any pond shall never be less than two feet as measured from the water surface to the lowest point of overflow.
11. On or about **15 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications B.9 and B.10.

## **C. Solids Disposal Specifications**

Sludge, as used in this document, means the solid, semisolid, and liquid residues that accumulate in the wastewater evaporation ponds.

1. Sludge shall be removed from the ponds as needed to ensure optimal operation and compliance with this Order.

2. Any on-site drying or storage of sludge shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
3. Sludge shall be disposed of in a manner consistent with Title 27 and approved by the Executive Officer. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.

#### **D. Groundwater Limitations**

Release of waste constituents from any system component associated with the wastewater treatment facility shall not cause groundwater under and beyond that system component (as determined by an approved well monitoring network) to contain any constituents in concentrations greater than ambient background conditions, and shall not cause or contribute to the violation of any Basin Plan narrative or numeric water quality objective.

#### **E. Provisions**

1. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described by Provision E.2.
  - a. **By 30 March 2004**, the Discharger shall submit to the Regional Board either a Notice of Non-Applicability, an application for a No Exposure Certification, or a Notice of Intent to comply with State Board Water Quality Order No. 97-03-DWQ for discharges of storm water from the facility.
  - b. **At least 30 days prior to liner installation**, the Discharger shall submit a *Pond Liner Design Report*. The report shall present contract drawings that specifically depict liner anchorage and pipe boot details, and construction specifications that detail subgrade preparation requirements, liner material specifications, liner placement requirements, and liner seaming specifications.
  - c. **At least 30 days prior to liner installation**, the Discharger shall submit a *Pond Liner System Construction Quality Assurance (CQA) Plan*. The CQA Plan shall set forth a detailed program of inspection and testing to ensure that the liner system is constructed as designed and is free from defects whether the result of manufacture or damage during installation. At a minimum, the CQA Plan shall include the following:
    1. Procedures for review of the liner manufacturer's quality control data to determine acceptance of the material;
    2. Procedures for verifying and documenting appropriate shipping, handling, and storage requirements to ensure protection of the liner material prior to installation;

3. Procedures for inspection and documentation of final subgrade preparation and acceptance prior to liner installation;
  4. Procedures for installation of the electrical leak imaging and monitoring system;
  5. Procedures for inspection and documentation of liner placement, anchorage, and seaming, including trial seams;
  6. Procedures for testing and documentation of nondestructive testing of all liner seams and penetrations;
  7. Procedures for identifying and repairing faulty seams and construction damage and documenting the repairs;
  8. Procedures for testing and documentation of testing of all liner repairs;
  9. Inspection forms to be used for documenting all of the above and the final inspection for acceptance of the liner system.
- d. **At least 30 days prior to planned WWTF start-up**, the Discharger shall submit a *Construction Quality Assurance (CQA) Report* prepared by a qualified third party who has directly observed and documented installation of the leak detection and liner systems (i.e., a registered professional not in the employ of the general contractor or the lining system installer). The CQA Report shall document full implementation of the CQA Plan in narrative form and shall provide signed and dated inspection forms for all elements of the CQA program. It shall include stamped, as-built drawings of the pond and liner system, and shall include results of the post-construction leak testing program. The CQA Report shall also contain a statement certifying that the closed loop wastewater management system for the refurbishing building has been completed and is operational.
- Discharge of waste shall not commence unless and until the Executive Officer has approved the CQA Report in writing.
- e. **At least 30 days prior to planned WWTF start-up**, the Discharger shall submit an *Operation and Maintenance (O&M) Plan* for the wastewater treatment facility. The O&M Plan shall instruct personnel on performing day-to-day discharge operations to comply with the terms and conditions of this Order and how to maintain the ponds to preclude nuisance conditions and protect the liner system. It shall also include a nuisance condition troubleshooting flowchart and a description of notification requirements. A copy of the O&M Plan shall be kept at the facility for reference by operating personnel. Key personnel shall be familiar with its contents.
- f. **By 30 June 2004**, the Discharger shall submit a *Groundwater Monitoring Well Installation Workplan*. The workplan shall describe the proposed installation of at least three groundwater monitoring wells around the wastewater ponds to allow evaluation of the groundwater quality upgradient and downgradient of the ponds. Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost aquifer and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment C, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"



Discharger cannot comply with Resolution No. 68-16, then within **120 days** of request by the Executive Officer, it shall submit a workplan and timeline detailing the facility modifications that shall be implemented such that it complies with the Groundwater Limitations of this Order.

6. As described in the Standard Provisions, the Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
7. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the Discharger shall take any necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:
  - a. Interception and rerouting of sewage flows around the sewage line failure;
  - b. Vacuum truck recovery of sanitary sewer overflows and wash down water;
  - c. Use of portable aerators where complete recovery of the sanitary sewer overflows are not practicable and where severe oxygen depletion is expected in surface waters; and
  - d. Cleanup of sewage-related debris at the overflow site.
10. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
11. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
12. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.
13. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
14. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.

15. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
16. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, 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 Regional Board, Central Valley Region, on 19 March 2004.

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THOMAS R. PINKOS, Executive Officer

ALO:4/19/2004

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2004-0037

FOR  
RITCHIE BROTHERS PROPERTIES, INC.  
DUNNIGAN AUCTION YARD WASTEWATER TREATMENT FACILITY  
YOLO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring domestic wastewater ponds, groundwater, sludge, and the domestic water supply. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

**WASTEWATER MONITORING**

Wastewater samples of equal volume shall be collected from each pond at the end of the pond opposite the inlet and composited to form one sample representative of the impounded wastewater. If any pond is dry or substantially dry, then it need not be sampled; however, the monitoring report shall note that the pond was dry. At a minimum, the Discharger shall perform wastewater monitoring as follows:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
BOD <sup>1</sup>	mg/L	Composite	Monthly	Monthly
Total dissolved solids	mg/L	Composite	Monthly	Monthly
Electrical conductivity	µmhos/cm	Composite	Monthly	Monthly
Nitrate nitrogen	mg/L	Composite	Monthly	Monthly
Total Kjeldahl nitrogen	mg/L	Composite	Monthly	Monthly
pH	standard	Composite	Monthly	Monthly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total coliform organisms	MPN/100 ml	Composite	Monthly	Monthly
Standard minerals <sup>2</sup>	mg/L	Composite	Annually	Annually
Title 22 metals <sup>3,4</sup>	µg/L	Composite	Annually	Annually

<sup>1</sup> 5-day Biochemical Oxygen Demand.

<sup>2</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: Boron, Calcium, Chloride, Magnesium, Potassium, Sodium, Sulfate, Total Alkalinity (including alkalinity series), and Total Hardness as CaCO<sub>3</sub>.

<sup>3</sup> At a minimum, the following metals shall be included: antimony, arsenic, total chromium, hexavalent chromium, copper, lead, molybdenum, nickel, silver, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

<sup>4</sup> Samples shall be filtered through a 0.45-micron filter prior to preservation.

### POND MONITORING

Each of the wastewater evaporation ponds shall be monitored as specified below:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Total flow	gallons	Meter	Weekly	Monthly
Flow to each pond	gallons	Meter	Weekly	Monthly
Dissolved Oxygen <sup>1</sup>	mg/L	Grab	Weekly	Monthly
Freeboard <sup>2</sup>	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Liner condition <sup>3</sup>	--	Observation	Weekly	Monthly

<sup>1</sup> Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

<sup>2</sup> For any pond that contains an insignificant amount of water, the result may be reported as "dry".

<sup>3</sup> Exposed portions of the pond liners shall be examined for signs of wear or tearing, and any site conditions that could cause or promote liner leakage.

### GROUNDWATER MONITORING

Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below. The first sampling event for the new wells installed in 2004 shall be no later than the third quarter of 2004.

Prior to sampling, the groundwater elevation shall be measured in each well, and the wells shall be purged at least three casing volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency</u>
Depth to groundwater	0.01 feet	Measurement	Quarterly
Groundwater elevation <sup>1</sup>	0.01 feet	Calculated	Quarterly
Gradient	feet/feet	Calculated	Quarterly
Gradient direction	Degrees	Calculated	Quarterly
Total dissolved solids	mg/L	Grab	Quarterly
Electrical conductivity	µmhos/cm	Grab	Quarterly
Nitrate nitrogen	mg/L	Grab	Quarterly
Total Kjeldahl nitrogen	mg/L	Grab	Quarterly
pH	standard	Grab	Quarterly
Total Coliform organisms	MPN/100 ml	Grab	Quarterly
Title 22 metals <sup>2,3</sup>	µg/L	Grab	Annually
Standard minerals <sup>4</sup>	mg/L	Grab	Annually

<sup>1</sup> Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

<sup>2</sup> At a minimum, the following metals shall be included: antimony, arsenic, total chromium, hexavalent chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

<sup>3</sup> Samples shall be filtered through a 0.45-micron filter prior to preservation.

<sup>4</sup> Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

### SLUDGE MONITORING

When sludge (biosolids) is removed from the ponds, at least one composite sample of biosolids shall be collected in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for cadmium, copper, nickel, chromium, lead, and zinc

Sludge sampling and analysis records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

## REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

### A. Monthly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1<sup>st</sup> day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of wastewater and pond monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

### B. Quarterly Monitoring Reports

Beginning no later than the third quarter 2004, the Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Regional Board by the **1<sup>st</sup> day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1<sup>st</sup>) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring and all other quarterly sampling activities;

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
8. Copies of laboratory analytical report(s) for groundwater monitoring.

### **C. Annual Report**

Beginning in **February 2005**, an Annual Report shall be prepared and submitted to the Regional Board by **1 February** each year. The Annual Report shall include all monitoring data required in the monthly/quarterly schedule. In addition, the Annual Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last sampling event of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. An evaluation of the groundwater quality beneath the wastewater ponds;
4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
6. The results for analyses that are performed annually (as set forth above);

7. A summary of information on the management and disposal of sludge;
8. The results from any analytical testing performed to characterize the sludge prior to off-site disposal; and
9. A forecast of influent flows for the coming year, as described in Standard Provision No. E.4.
10. Results of a thorough pond liner inspection performed once yearly when the water level is lowest. Describe all problems found, repairs made, repairs needed, and scheduled repair/replacement dates.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by:

\_\_\_\_\_  
THOMAS R. PINKOS, Executive Officer

\_\_\_\_\_  
19 March 2004

(Date)

ALO:4/19/2004

## INFORMATION SHEET

ORDER NO. R5-2004-0037

RITCHIE BROTHERS PROPERTIES, INC.

DUNNIGAN AUCTION YARD WASTEWATER TREATMENT FACILITY

YOLO COUNTY

The Discharger is in the process of constructing a heavy equipment auction facility in Dunnigan, which it will own and operate. The auction facility will be used to stage and store heavy equipment such as construction and farm equipment for sale at auctions that will occur approximately four times per year. The auction facility includes approximately 50 acres of gravel-paved equipment storage/staging areas, an office building, seating for 900 auction customers, an equipment refurbishing building, bathrooms, and a commercial kitchen.

Industrial wastewater from pressure washing equipment in the refurbishing building will flow to an oil/water separator and will be recycled through a closed-loop water recycling system. All floor drains in the equipment refurbishing building are connected to the industrial wastewater recycling system. This Order prohibits the discharge of industrial wastewater into the domestic wastewater collection/disposal system. Domestic wastewater will be conveyed by gravity sewers to a lift station that will pump the wastewater into one of two lined evaporation ponds. The design monthly average influent flow rate is 1,600 gpd (including infiltration and inflow). The ponds will only provide passive treatment of the wastewater.

The wastewater evaporation ponds will cover a total area of approximately two acres and provide a total storage capacity of 1.7 million gallons (with two feet of freeboard). Each pond will be lined with a 30-mil polyvinyl chloride (PVC) geomembrane liner, and will be constructed in accordance with an approved Construction Quality Assurance (CQA) Plan. When the liner is no longer serviceable, it will be removed along with any accumulated sludge and replaced with a new liner.

### ***Technical Reports Required by the Provisions***

The WWTF utilizes lined evaporation ponds as the sole means of wastewater disposal. Although geosynthetic-lined ponds can provide superior groundwater protection, that protection depends on the integrity of the liner material before, during, and after installation. Because of the constant evapoconcentration of the wastewater and the shallow water table, there is little potential for constituent attenuation in the vadose zone and a relatively small leak could pose a threat to groundwater quality. Therefore, this Order requires rigorous construction quality assurance for the pond liner systems, groundwater monitoring, regular pond liner inspections, and periodic replacement of the liner systems to ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.

Although background groundwater quality has not been established, available data indicate that shallow groundwater at the facility site contains total dissolved solids in excess of the water quality limit for agricultural water quality (450 mg/L) and nitrate in excess of the drinking water quality limit of 45 mg/L. The excess nitrate and salinity may have resulted from agricultural chemicals. The Discharger has not provided any documentation showing that it should be allowed to degrade groundwater consistent with State Board Resolution No. 68-16, and therefore no groundwater degradation is allowed. This Order requires the installation of groundwater monitoring wells around the evaporation ponds, as well as quarterly groundwater monitoring, to determine whether the discharge causes degradation. If degradation

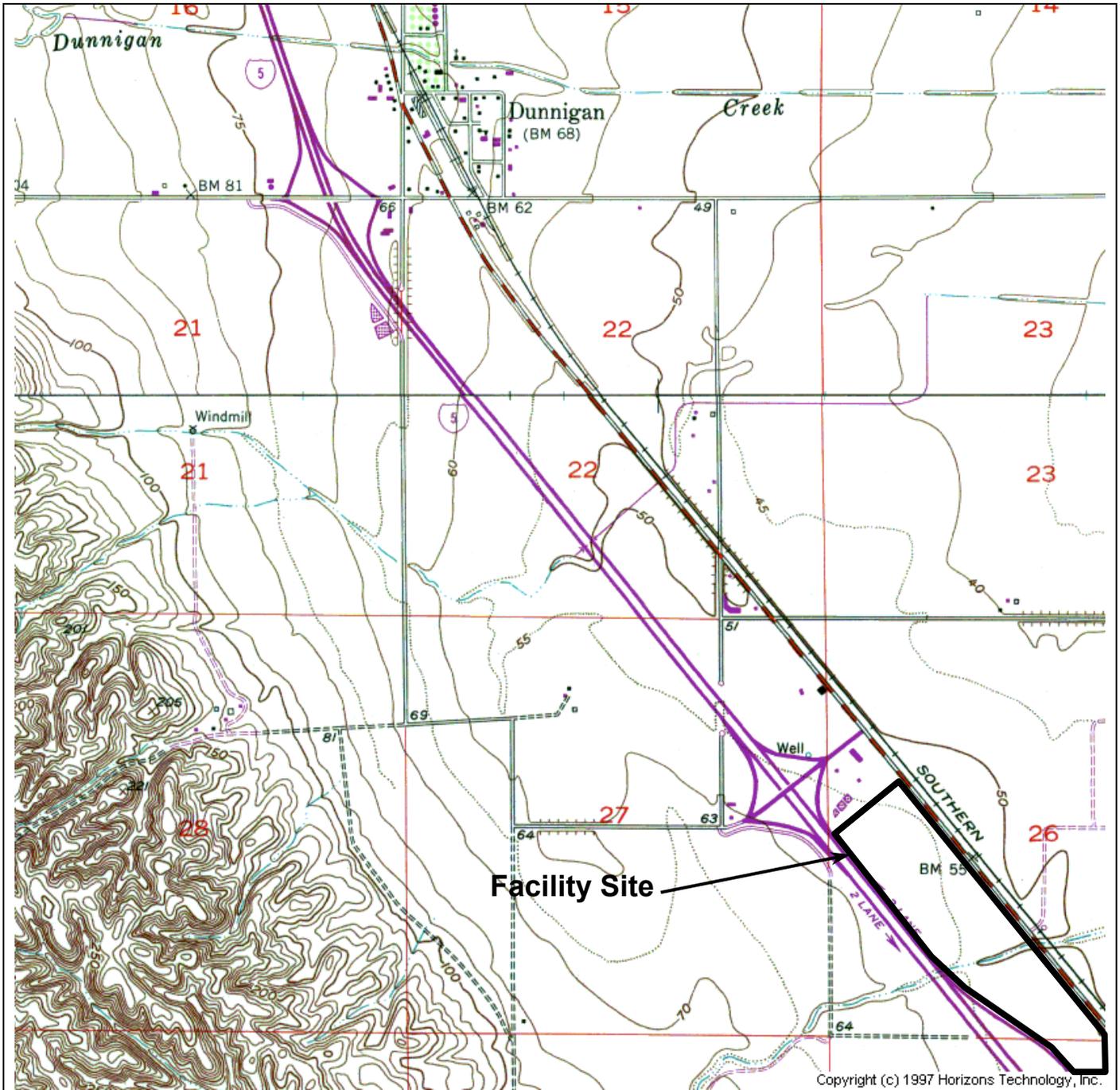
ORDER NO. R5-2004-0037  
INFORMATION SHEET  
RITCHIE BROTHERS PROPERTIES, INC.  
DUNNIGAN AUCTION YARD WASTEWATER TREATMENT FACILITY  
YOLO COUNTY

- 2 -

is detected, then the Discharger must either show that it complies with Resolution No. 68-16 or propose facility improvements to prevent such degradation.

ALO:19-Apr-04

ATTACHMENT A

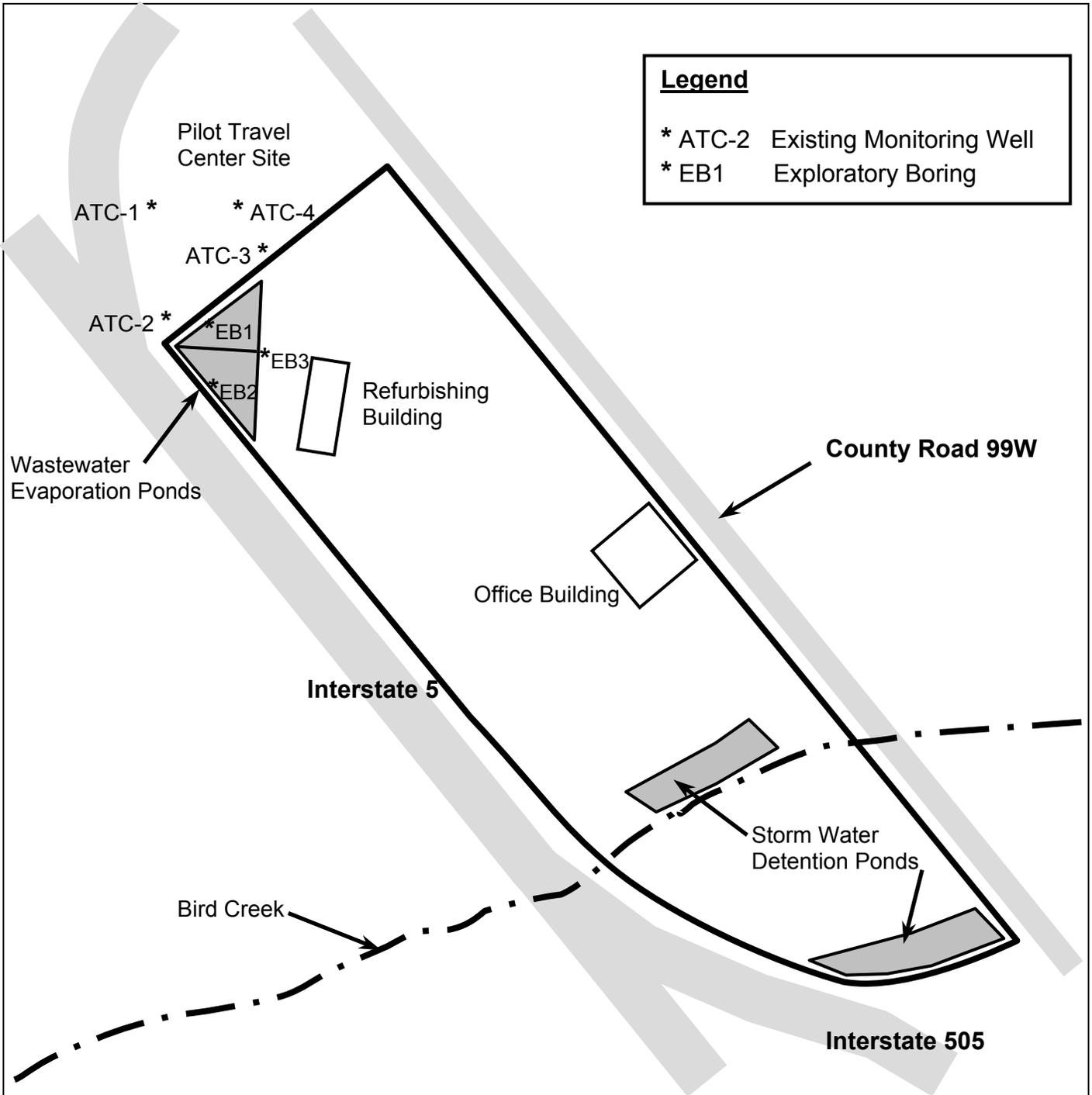


Drawing Reference:  
U.S.G.S TOPOGRAPHIC MAP  
7.5 MINUTE QUADRANGLE  
DUNNIGAN

**SITE LOCATION MAP**  
RITCHIE BROS. PROPERTIES, INC.  
DUNNIGAN AUCTION YARD  
YOLO COUNTY  
  
ORDER NO. R5-2004-0037

A north arrow is shown with the cardinal directions N, S, E, and W. Below the arrow, the scale is given as 'Approx. scale 1 in. = 2,000 ft.'

ATTACHMENT B



**Legend**

- \* ATC-2 Existing Monitoring Well
- \* EB1 Exploratory Boring

Drawing Reference:  
Improvement Plans, Laugenour  
and Meikle Engineers,  
Woodland, August 2003

**FACILITY MAP**  
RITCHIE BROS. PROPERTIES, INC.  
DUNNIGAN AUCTION YARD  
YOLO COUNTY  
  
ORDER NO. R5-2004-0037

No Scale

## ATTACHMENT C

ORDER NO. R5-2004-0037

MONITORING WELL WORKPLAN AND MONITORING WELL  
INSTALLATION REPORT GUIDANCE  
RITCHIE BROTHERS PROPERTIES, INC.  
DUNNIGAN AUCTION YARD WASTEWATER TREATMENT FACILITY  
YOLO COUNTY

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing at least the information listed below. Following installation of the monitoring wells, the Discharger shall submit a report of results, as described below. All workplans and reports must be prepared under the direct supervision of, and signed by, a geologist registered by the State of California.

### **SECTION 1 - Monitoring Well Installation Workplan**

- A. General Information:
  - Proposed monitoring well locations, purpose of each well, and rationale for location selection
  - Equipment decontamination procedures
  - Topographic map showing any existing monitoring wells, proposed wells, waste handling facilities, drainage features, utilities, and other major physical and man-made features.
  
- B. Drilling Details: describe proposed drilling and logging methods
  
- C. Monitoring Well Design:
  - Casing diameter
  - Borehole diameter
  - Depth of surface seal
  - Well construction materials
  - Diagram of well construction
  - Type of well cap
  - Size of perforations and rationale
  - Grain size of sand pack and rationale
  - Thickness and position of bentonite seal and sand pack
  - Depth of well, length and position of perforated interval
  
- D. Well Development:
  - Method of development to be used
  - Method of determining when development is complete
  - Method of development water disposal
  
- E. Surveying Plan: discuss how each well will be surveyed to a common reference point.

F. Water Level Measurement:

The elevation reference point at each monitoring well shall be within 0.01 foot.  
Ground surface elevation at each monitoring well shall be within 0.1 foot.  
The method and time of water level measurement shall be specified.

G. Proposed time schedule for well installation and development.

**SECTION 2 – Groundwater Sampling and Analysis Plan**

A. General Information:

Site Location  
Monitoring well locations  
Monitoring well construction details including elevation, well depth, casing material and size, and screen interval  
Equipment decontamination procedures  
Topographic map showing any existing wells, proposed wells, waste handling facilities, utilities, and other major physical and man-made features.

B. Water Level Measurement:

Ground surface elevation at each monitoring well shall be within 0.01 foot.  
Method and time of water level measurement shall be specified  
Water level in well shall be allowed to equilibrate prior to measuring the depth to water

C. Well Sampling:

Well purging method and amount of purge water  
Sample containers, collection method, and preservation method  
Table describing sample volumes, sample containers, preservation agents, and hold times  
Identification of analytical laboratory  
Chain of custody procedures  
QA/QC procedures

**SECTION 3 - Monitoring Well Installation Report**

A. Well Construction:

Number and depth of wells drilled  
Date(s) wells drilled  
Description of drilling and construction  
Locations relative to facility site(s)  
A well construction diagram for each well must be included in the report, and shall contain the following details:  
Total depth drilled  
Depth of open hole (same as total depth drilled if no caving occurs)  
Footage of hole collapsed  
Length of slotted casing installed

- Depth of bottom of casing
- Depth to top of sand pack
- Thickness of sand pack
- Depth to top of bentonite seal
- Thickness of bentonite seal
- Thickness of concrete grout
- Boring diameter
- Casing diameter
- Casing material
- Size of perforations
- Well elevation at top of casing
- Depth to ground water
- Date of water level measurement
- Monitoring well number
- Date drilled
- Location

B. Well Development:

- Date(s) of development of each well
- Method of development
- Volume of water purged from well
- How well development completion was determined
- Method of effluent disposal
- Field notes from well development

C. Well Survey:

- Identify the coordinate system or reference points
- Survey the well casing with the cap removed (horizontal and vertical coordinates)
- Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix
- Describe the measuring points (i.e. ground surface, top of casing, etc.)
- Present the well survey report data in a table

D. Explanation of any deviation from the approved workplan