

State of California
California Regional Water Quality Control Board
Santa Ana Region

Cleanup & Abatement Order No. R8-2007-0077

for
American Golf Corporation
Rancho San Joaquin Golf Course
Formerly Lane Road Landfill
Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board), finds that:

1. American Golf Corporation (hereinafter AGC) operates the Rancho San Joaquin Golf Course (hereinafter RSJGC) in the City of Irvine, Orange County. The RSJGC, approximately 70 percent of which overlies the former Lane Road Landfill (LRLF), is located on the southeast corner of Michelson Road and Harvard Avenue, as shown on **Attachment 1**, which is hereby made a part of this order.
2. From 1961 to 1964, the Orange County Integrated Waste Management Department (hereinafter OCIWMD) operated the 106-acre unlined LRLF at this location. The former LRLF received approximately 584,000 tons of municipal solid waste over its operational period and was closed with a three-foot-thick cover in 1964. Following the closure of the LRLF, the RSJGC was constructed at the site and has since been operated as a recreational golf course by AGC. National Golf Properties (NGP) Realty Sub, LLC is the current owner of the golf course property.
3. The discharge of municipal solid waste (MSW) at landfills is regulated under Division 2 of Title 27, California Code of Regulations (27 CCR). Pursuant to 27 CCR, §20950, all such landfills are subject to closure and postclosure maintenance requirements. The goal of post-closure maintenance at a closed landfill is to assure that the final cover continues to minimize water infiltration into the waste, thereby minimizing the production of leachate and gas.
4. All MSW landfills are subject to 27 CCR, §20365, which requires that all drainage facilities must be designed, constructed, and maintained to limit ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping from precipitation resulting from a 100-year, 24-hour frequency storm event.
5. In December 2001, Board staff conducted a post-storm inspection of the RSJGC to evaluate the condition and performance of the drainage and erosion control systems at the site. During the inspection, the following areas of concern were noted:

- a. Significant volumes of soil were being added to the surface of the former landfill in the northern portion of the site to rebuild low lying areas created by settlement. Board staff was not informed of the cover improvement activities and a workplan was not available for review. The soil that was added to the surface of the former landfill had not been tested to determine if it was contaminant-free.
 - b. Soil from cover improvement activities in the western portion of the site had eroded to fill a concrete drainage channel midway along Harvard Avenue. Soil was present at the entrance to a storm drain as well.
 - c. There was evidence of water ponding throughout the site. Ponding at the site was caused by differential settlement and excessive irrigation.
6. Landfill cover conditions as noted by Board staff in December 2001 did not comply with 27 CCR, §20950. Subsequently, in February 2002, Board staff directed AGC to investigate site settlement and to conduct a landfill gas study to determine any impacts on groundwater. The April 2003 Landfill Settlement Investigation Report revealed significant differential settlement and landfill gas issues at the site. Differential settlement has resulted in an uneven surface, surface cracking, inadequate drainage, and ponding, which promoted water infiltration through the cover and into the waste, and exacerbated landfill gas production. In June 2003, Board staff required AGC to submit a landfill cover maintenance plan (LCMP) for the site.
7. In May 2004, Board staff approved the LCMP for the RSJGC. Under the LCMP, AGC committed to:
- a. Inspect and maintain the landfill cover for settlement, ponding, cracks and erosion;
 - b. Inspect and maintain surface and subsurface drainage and conveyance systems for proper drainage;
 - c. Inspect the irrigation system for excessive watering and modify the system as needed;
 - d. Maintain a logbook for all landfill cover inspection and maintenance activities;
 - e. Submit a workplan for areas of one acre or greater that required regrading; and
 - f. Submit semi-annual LCMP reports to the Board.
8. On October 27, 2004, Board staff conducted a post-storm compliance inspection at the golf course to assess the effectiveness of the drainage control system in diverting stormwater off the landfill cover, and to evaluate the facility's compliance with the LCMP. The October 2004 inspection identified numerous areas of ponding caused by inadequate drainage and maintenance of the site drainage control system, which violated the LCMP. AGC was subsequently required to submit a corrective action workplan (CAP) to provide corrective measures with an implementation time schedule. Board staff approved the CAP in October 2005.

9. The CAP includes a list of existing and new corrective measures for eight areas of concern (Areas 1 through 8) to address settlement and drainage issues with target dates for implementation and completion. AGC has been updating Board staff regarding its compliance with the CAP in the semi-annual LCMP reports that are due on April 30 and October 31 of each year.
10. Board staff's review of the October 2006 and April 2007 semi-annual LCMP reports for the golf course indicated the following:

- a. The asphalt-paved parking lot between the chipping green and the driving range (Area 1) was not regraded and repaved as scheduled.

Area 1 was constructed over refuse. Over the years, significant differential settlement in this area has resulted in surface cracking and ponding throughout the parking lot. Surface cracks were slurry-sealed in October 2005, as scheduled. Regrading and repaving of this area was originally targeted for completion in November 2005; however, it was later rescheduled to August 2006, then March 2007. In April 2007, SCS Engineers, AGC's consultants, informed Board staff that regrading and repaving in Area 1 would be postponed indefinitely because the slurry seal has an estimated lifespan of up to seven years.

- b. Subsurface drainage system design details for areas subject to ponding (Areas 2, 4, 5, and 6) were not submitted for review and approval by Board staff prior to installation.

Section 3.0 of the CAP requires AGC to submit additional information, such as a grading plan and structural design details, 30 days prior to proposed regrading and drainage control system construction activities for review and approval by Board staff. Board staff did not receive any proposed design details for the approximately 3,500 feet of subsurface drainage piping installed in May 2006 for Areas 2, 4, 5, and 6 as required by the CAP. Further, Board staff was unaware of the completion of the drainage system piping installation until November 2006, after reviewing the October 2006 LCMP.

- c. As-built drawings for the existing and newly installed drainage control system (Area 8) were not developed and submitted as required by the CAP.

As-built details for the existing site subsurface drainage system do not exist. Further, Board staff has been informed that the existing subdrain system consists of perforated pipe, which readily allows infiltration of water into the refuse. Section 3.17 of the CAP requires AGC to conduct a reconnaissance survey and develop as-built details of the system in order to assure appropriate maintenance care. AGC committed to development of as-built drawings for the existing drainage system whenever a problem area of the existing system is targeted for repair or upgrade. In spite of the drainage improvements performed thus far, the LCMP reports do not discuss the progress in developing

the as-built details for the existing subsurface drainage system, nor did AGC, despite repeated requests by Board staff, provide any as-built details for the new subsurface drainage system.

11. On August 7, 2007, Board staff conducted a joint inspection with the Orange County Local Enforcement Agency at the golf course. One of the purposes of the facility inspection was to verify the implementation of the corrective measures listed in the CAP. An inspection of the parking lot (Area 1) indicated that some of the surface cracks were slurry-sealed; however, many surface cracks were not repaired or have re-opened and no effort was made to slurry seal these cracks. In order to alleviate differential settlement and ponding, and to effectively limit water infiltration into the refuse, the parking lot must be regraded and repaved without further delay. Board staff has communicated, both verbally and in writing, with AGC and its representatives regarding its noncompliance with 27 CCR, the LCMP, and the CAP.
12. Groundwater monitoring at the golf course has identified the presence of volatile organic compounds in the groundwater beneath the site. A functioning drainage control system and final cover are essential to minimize the threat of a pollution or nuisance caused by infiltrating water, which can increase the production of leachate and landfill gas.
13. Surface drainage from the facility is tributary to San Diego Creek, Reach 2, the beneficial uses (intermittent) of which include:
 - a. Groundwater recharge,
 - b. Water contact recreation,
 - c. Non-contact water recreation,
 - d. Warm freshwater habitat, and
 - e. Wildlife habitat.
14. Subsurface drainage from the facility is tributary to Irvine Groundwater Management Zone, the beneficial uses of which include:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Industrial service supply, and
 - d. Industrial process supply.
15. AGC, by failing to implement corrective measures as required in the CAP, has created or threatens to create a condition of pollution or nuisance. It is therefore appropriate to order AGC to take necessary remedial actions in a timely manner.
16. This enforcement action is being taken for the protection of the environment and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100 et seq.) in accordance with Section 15321, Title 14, California Code of Regulations.

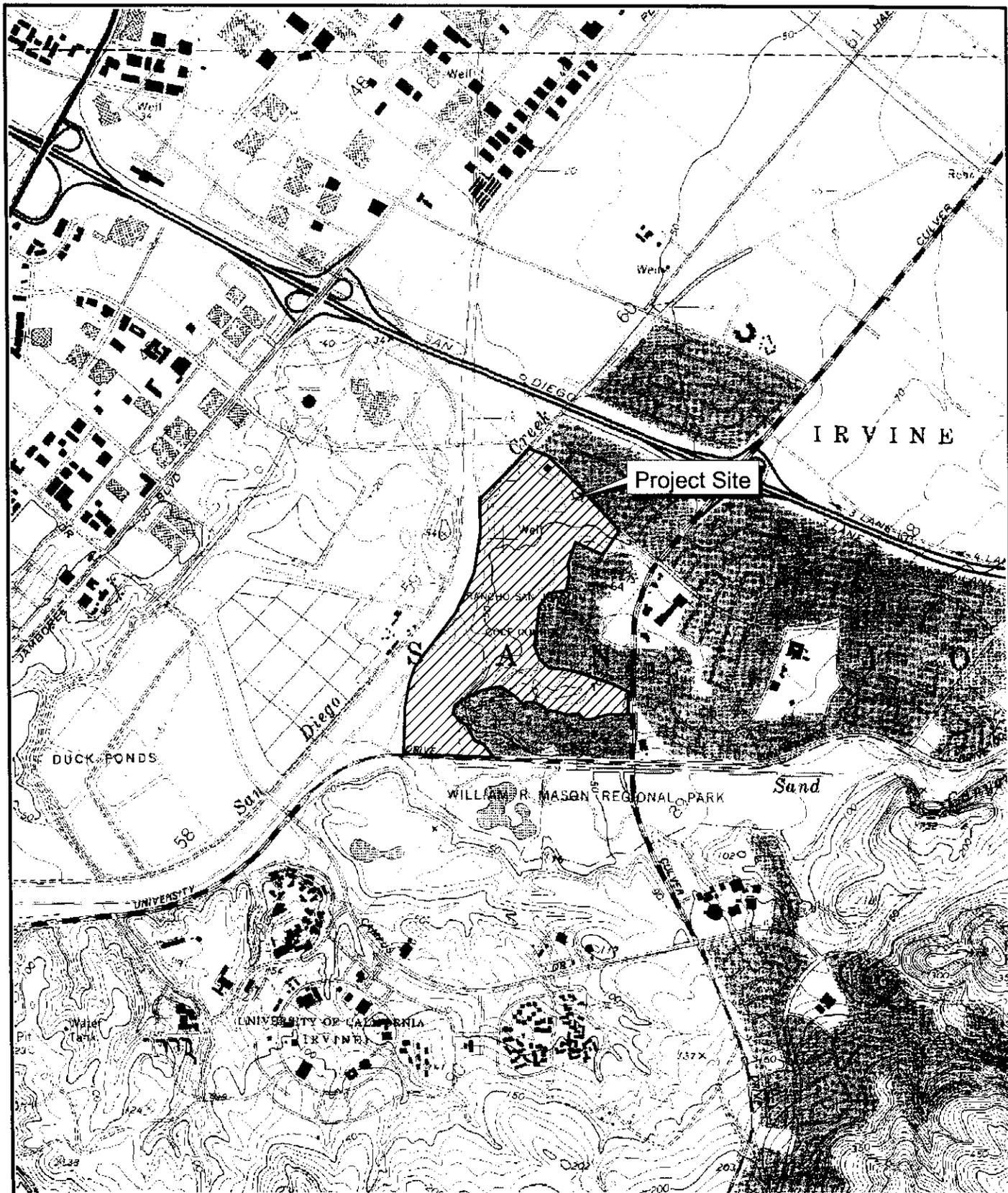
IT IS HEREBY ORDERED that, in accordance with Section 13304 of the California Water Code, AGC shall:

1. By **October 31, 2007**, submit a workplan for regrading and repaving the parking lot as identified as Area 1 in the CAP. AGC shall complete regrading and repaving the parking lot by **December 31, 2007**. AGC shall submit a final report with documentation of the completed work within sixty days after the completion of this project.
2. By **October 31, 2007**, submit a workplan with a proposed time schedule to develop as-built details for the existing and new subsurface drainage control system, and to demonstrate, with calculations, compliance of the site drainage control system design to divert stormwater runoff as required under 27 CCR, §20365. If the existing system is not adequate to convey stormwater resulting from the specified 100-year, 24-hour frequency storm, AGC shall propose an alternative plan with a time schedule to achieve compliance with this requirement. The workplan must also address replacement of all existing perforated pipe.
3. Immediately comply with the LCMP, CAP, and time schedules approved by the Executive Officer of the Board for plan submittal, implementation, and completion. Any violations of the LCMP, CAP, and approved plans and time schedules will be considered a violation of this order.

If, in the opinion of the Executive Officer, AGC fails to comply with this order in a reasonable or timely manner, this matter will be referred to the Board for imposition of civil liability, as provided by law.

Date: 9/25/07

K. J. Thibeault
for Gerard J. Thibeault
Executive Officer



1:24000

0.5 0 0.5 Miles

California- Santa Ana West
 USGS Topographic Map 7.5 Minute Series
 Tustin Quadrangle- 1981

Rancho San Joaquin Golf Course Site Map

