

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2011-0076

FOR
COUNTY OF YOLO PLANNING AND PUBLIC WORKS DEPARTMENT
YOLO COUNTY CENTRAL LANDFILL, YOLO COUNTY

TO CEASE AND DESIST

FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 6 December 2007, the Central Valley Water Board adopted Waste Discharge Requirements ("WDRs") Order R5-2007-0180, prescribing waste discharge requirements and compliance schedules for the Yolo County Central Landfill. The landfill is owned and operated by Yolo County Planning and Public Works Department (hereafter Discharger). The landfill has been in operation since 1975, servicing the incorporated and unincorporated areas of Yolo County.
2. The landfill is about four miles northeast of Davis and three miles southeast of Woodland, near the intersection of Roads 28H and 104 in Yolo County. The site covers 725 acres, corresponding to Assessor's Parcel Numbers (APNs) 042-140-01, 042-140-02, and 042-140-06. The facility includes lined and unlined Class III landfills including lined bioreactor units, lined Class II surface impoundments, a construction and demolition debris processing facility, a wood and yard waste processing facility, a concrete and asphalt debris facility, a metal recovery facility, a household hazardous waste facility, and a landfill gas-to-energy plant.
3. This Order applies to four of the Class III Waste Management Units (WMUs). These WMUs cover approximately 102.8 acres and include unlined WMUs 1, 2, 4 and clay-lined WMU 5. WMUs 1, 2, 4, and 5 have not yet been brought to final grade for closure. WMU 3 received final closure during 2007.
4. On 1 June 2004, the Discharger submitted a revised Final Closure and Post-Closure Maintenance Plan for WMUs 1 through 5 that included a justification report for a proposed alternative geomembrane final cover, a justification report for year-round filling, and a revised closure schedule for WMUs 1 through 5. These changes were approved in previous WDRs and Order R5-2007-0180 includes the current schedule for closure of WMUs 1 through 5 based on the 2004 closure plan.

CLOSURE OF WMUs 1 THROUGH 5

5. Previous WDRs Order R5-2002-0118 limited filling in unlined WMUs 1 through 4 to the dry season. This requirement was intended to prevent excessive storm water infiltration into these unlined units by keeping the intermediate cover in place

during the wet season. In 2004, the Discharger submitted a *Justification Report for the Proposed Year-Round Filling of Waste Management Units 1 - 5*. The report included estimates of infiltration rate into the waste for each of these WMUs with and without wintertime filling. The report indicates that the difference in infiltration caused by removing the intermediate cover in the fill area is negligible compared to the benefit derived from reaching final grades years sooner so that the final cover could be installed. WDRs Order R5-2007-0180 allows for year-round filling in the five WMUs.

6. The Discharger submitted a revised Final Closure and Post-Closure Maintenance Plan (FCP) in 2004 for WMUs 1 through 5, which proposed phased closure beginning with WMU 3. WMU 3 received final closure during 2007. Order R5-2007-0180 incorporates the Discharger's revised Closure Plan and proposed closure dates.
7. Closure Specification E.3. of WDRs Order R5-2007-0180 states: "The closure schedule for WMUs 1 through 5 shall be as follows:

Closure Schedule for WMUs 1-5

WMUs to be Closed	Date to Complete Filling	Date to Complete Closure Construction
WMU 1/2	2011	2012
WMU 3	2006	2007
WMU 4/5	2013	2014

8. On 21 March 2011, the Discharger discovered a leachate seep on the western side slope of WMU 2 and notified Board staff. Board staff concluded that the leachate seep was evidence of insufficient cover on the WMU and requested information concerning the closure schedule of WMUs 1 and 2.
9. In a response dated 30 March 2011, the Discharger indicated that winter filling had not taken place in WMU 1 or 2 for the 2009/2010 and 2010/2011 wet seasons because there is only room for a single lift of waste and access to the landfill's soil borrow sources make it impractical to continue wet season filling of these units. The Discharger did not anticipate completion of filling WMU 1 and 2 in accordance with the schedule in the WDRs. The Discharger estimated that filling of WMU 1 and 2 would be completed by 2013 and final construction of the closure cover would be 2014, in violation of the WDRs.
10. In a letter dated 19 May 2011, Board staff requested that the Discharger complete filling and closure construction of WMU 1 and 2 in accordance with the closure schedule in the WDRs. Board staff also requested a schedule by 15 June 2011 showing tasks needed to complete filling of these units and to complete closure construction in accordance with the WDRs.

11. The Discharger submitted a schedule dated 15 June 2011 to complete closure construction of WMUs 1 and 2 by 2014. However, the Discharger stated there was *“insufficient waste currently being received at the YCCL to complete filling of WMUs 1 and 2 to final fill configuration by December 31, 2011.”* County waste tonnage, which is the majority of waste disposed at County Landfill, has declined about 20 percent since 2006 and continues to decline. However, the submitted schedule assumes that the current waste tonnage and waste compaction rates will continue through closure of WMUs 4 and 5 in 2017.
12. The Discharger has proposed to fill WMUs 1 and 2 year-round until final grades are achieved. In addition, the Discharger has proposed to partially close approximately 28 to 34 acres of WMU 2 during the summer of 2012, with the remaining portion of WMU 2 and all of WMU 1 to be closed in 2014. Attachment A to this Order depicts the Discharger’s proposed schedule for filling based on the current available airspace and current rate at which the facility has been receiving waste. This Order incorporates the Discharger’s schedule.
13. In the 15 June 2011 submittal, the Discharger stated that extending the closure schedule for WMUs 1 and 2 will also extend the closure schedule of WMUs 4 and 5. The Discharger has proposed filling WMUs 4 and 5 year-round after achieving final grade of WMUs 1 and 2, and estimated that two years of capacity exist in WMUs 4 and 5, based on current available airspace and the current rate at which the facility has been receiving waste. Therefore, filling activities for WMUs 4 and 5 will extend to 2016 with closure construction in 2017. The County is actively looking for additional waste to reduce the waste filling timeline, and is currently in negotiations for waste disposal contracts, in addition to the existing contracts from outside of Yolo County that were signed in 2008.
14. The Discharger is unable to fill and close WMUs 1, 2, 4 and 5 in accordance with the schedule in WDRs R5-2007-0180, which would be considered a violation of the WDRs. This Order provides a revised schedule for the Discharger to fill WMUs 1 and 2 to achieve final grades, and to conduct partial closure of approximately 28 to 34 acres of WMU 2 during the summer 2012, with the remaining portion of WMU 2 and all of WMU 1 to be closed in 2014. The revised schedule also requires closure of WMUs 4 and 5 by 2017, based on the current available airspace and the current rate at which the facility has been receiving waste.

GROUNDWATER CONDITIONS

15. The natural gradient for shallow groundwater in the area is to the south and southeast. However, groundwater flow beneath the site is controlled by the Discharger’s extraction well system as indicated by the potentiometric maps provided in the 2010 Annual Monitoring Report. Groundwater flows northward toward the extraction system at a gradient of 0.0025 to 0.0050 feet per foot according to the 4th quarter 2010 measurements.

16. The extraction well system includes 16 groundwater extraction wells along the northern portion of the site to lower groundwater elevations and to capture VOCs released from the WMUs. A slurry wall was also installed along the northern boundary of WMUs 4, 5 and 6 to help facilitate groundwater extraction and lowering of the water table.
17. The groundwater monitoring system for WMUs 1 through 5 consists of corrective action wells OW-1, OW-4 through OW-7, OW-17, OW-18, OW-21, OW-24, OW-26, OW-27, EW-2, EW-7, DW-2, and DW-6 through DW-8. Background wells OW-7 and OW-24 are the only two monitoring wells located north of the slurry wall. All other monitoring points surrounding WMUs 1 through 5 and extraction wells are located south (upgradient) of the slurry wall.
18. During the second semester 2010 monitoring event, VOCs were not detected in the shallow wells monitoring WMUs 1 through 5 with the exception of wells EW-2 and OW-27. Well EW-2 is located in the vicinity of the northwest corner (downgradient) of WMUs 3, 4 and 5, and contained five VOCs. OW-27 is located in the vicinity of the southeastern boundary of WMU 3 and contained two VOCs. Compounds detected in wells EW-2 and OW-27 are summarized below.

VOCs in Shallow Zone Monitoring Wells

(Concentrations in micrograms per liter, ug/L)

CONSTITUENT	CONCENTRATION LIMIT	EW-2*	OW-27*	OW-27FD**
1,1 Dichloroethane	0.5	0.55tr	ND	ND
cis-1,2-Dichloroethene	0.5	1.5	2.4	2.8
Trichloroethene (TCE)	0.5	1.4	0.40tr	0.34tr
Tetrachloroethene (PCE)	0.5	0.67tr	ND	ND
Vinyl Chloride	0.5	1.1	ND	ND

*= point of compliance well

**=Field Duplicate

tr = The reported value was obtained from a reading that was less than the practical quantitation limit (PQL) but greater than or equal to the Method Detection Limit (MDL).

ND = not detected

19. The deep groundwater monitoring wells did not contain detectable VOCs during the third quarter 2010 monitoring event. However, deep well DW-2 located downgradient of WMU 2 is considered impacted due to past detections of VOCs.
20. Several inorganic constituents detected in the wells monitoring WMUs 1 through 5 have increasing and decreasing trends. Water quality beneath the landfill is variable and observed trends reported are not indicative of whether groundwater impacts are related to landfill impacts or natural variation in groundwater. Central Landfill is surrounded by active agricultural fields and it is unclear whether those impacts are due to applications to the surrounding fields. The potentiometric maps

provided in the 2010 Annual Report indicate groundwater beneath the landfill is under the influence of the groundwater extraction system and is likely capturing groundwater from the surrounding offsite fields, which is influencing groundwater quality beneath the landfill.

21. Based upon the analytical results discussed above, groundwater wells in the vicinity of WMUs 1 and 2 do not appear to be impacted by VOCs. Historical analytical results indicates that VOCs have not been detected in wells OW-1, OW-4, OW-5, OW-17, OW-18, or OW-21 since 2006, and that current VOC detections are being reported from wells EW-2 (WMUs 3, 4 and 5) and OW-27 (WMU 3). The likely source of VOCs impacting groundwater in the vicinity of these wells is the closed WMU 3, which is under the influence of the groundwater extraction wells.
22. Since groundwater separation from WMUs 4, 5 and 6 is required by the WDRs, the Discharger has plans to maintain the separation of groundwater from waste in the future by continuing to upgrade extraction well pumps and control systems, and by default, capture impacted groundwater.
23. The groundwater extraction system and slurry wall at Central Landfill appears to be capturing groundwater impacts and controlling the groundwater flow regime beneath the site, and additional corrective action at this time does not appear warranted.

REGULATORY CONSIDERATIONS

24. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (hereafter "Basin Plan"), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
25. The designated beneficial uses of underlying groundwater, as stated in the Basin Plan, are domestic and municipal supply, agricultural supply, industrial service supply, and industrial process supply.
26. Surface water runoff from the site drains to the north and south. The southern part of the site is drained by the Willow Slough Bypass and an unnamed canal drains the northern part of the site. The Willow Slough and the unnamed canal empty into the Yolo Bypass to the east, which drains to the Sacramento San Joaquin Delta.
27. As described in the Basin Plan, the beneficial uses of the Sacramento San Joaquin Delta are municipal and domestic supply; agricultural supply, industrial supply, industrial process supply, water contact recreation, non-contact water recreation, warm fresh water habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, wildlife habitat, and navigation.

28. Water Code section 13301 states in part,

When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302.

29. As a result of the events and activities described in this Order, the Central Valley Water Board finds that the discharge of waste is threatening to take place in violation of WDRs Order R5-2007-0180. This Order requires the Discharger to take appropriate remedial action and to comply in accordance with the time schedule set forth below.

30. Water Code section 13267(b)(1) states 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... 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.

31. The Discharger owns and operates the facility subject to this Order. The technical reports required by this Order are necessary to determine compliance with the facility's WDRs and this Order.

32. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to California Code of Regulations, title 14, section 15321(a)(2).

33. On 13 October 2011, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

SUMMARY OF ACTIONS REQUIRED BY THIS ORDER

34. As described and defined in detail below, this Order requires compliance with the WDRs by compelling the Discharger to fill WMUs 1, 2, 4, and 5 as proposed in its 15 June 2011 letter:
- a. Continue filling WMUs 1 and 2 during the summer of 2011, within the areas labeled A and C of Attachment A to this Order.
 - b. Conduct winter time filling activities (anticipated October 2011 through April 2012) in area B (see Attachment A).
 - c. Remove existing access ramp in area A in the spring of 2012, and fill any remaining areas to finished grade.
 - d. Complete partial closure design of WMU 2, and submit to the Board for review by 15 October 2011.
 - e. Conduct partial closure construction of WMU 2 area A (approximately 28 acres) through 2012 construction season. Continue filling in remaining portion of WMU 2 and all of WMU 1 through December 2013, and if necessary, through the spring of 2014.
 - f. Complete remaining closure design of WMU 2 and all of WMU 1 and submit to Central Valley Water Board by September 2013.
 - g. Complete remaining closure construction of WMU 1 and WMU 2 during 2014 construction season.
 - h. Fill WMUs 4 and 5 and bring to closure grade by 2016. Complete final closure of WMUs 4 and 5 by end of construction season 2017.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, the County of Yolo Planning and Public Works Department, its agents, successors, and assigns shall, in accordance with the following tasks and time schedule, implement the following closure schedule and activities to ensure compliance with WDRs Order R5-2007-0180.

Each report submitted to the Central Valley Water Board shall be included in the Discharger's Operating Record. Furthermore, any person signing a document submitted under this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my

knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

1. Unless extreme weather conditions, such as high winds, lightning, hail, etc. make the current fill areas too dangerous for waste placement operations in these WMUs, all Class III waste disposed at the landfill shall be placed into WMUs 1, 2, 4, and 5 year-round, until final grade is reached. If extreme weather does not allow for filling in these units, the Discharger must immediately notify staff and describe steps to be performed to get back into compliance.
2. The Discharger shall comply with the filling and closure schedule proposed in its 15 June 2011 letter, and summarized in Finding 34, above.
3. By **15 October 2011**, the Discharger shall submit a partial Final Closure Design (“FCD”) for WMU 2, Area A, which is approximately 28 acres (as shown in Attachment A). This partial FCD will encompass the closure design as described in WDRs R5-2007-0180, Findings 72 through 77.
4. By **15 March 2012**, the Discharger shall submit a Construction Quality Assurance (“CQA”) Plan in accordance with California Code of Regulations, title 27 (“Title 27”), section 20323 for the partial closure of WMU 2, Area A, during the 2012 construction season. The CQA Plan shall comply with Title 27, section 20324 (b)(1) and (2). Closure construction performed during the 2012 season shall be complete by 15 October 2012.
5. By **2 January 2013**, the Discharger shall submit a Final CQA Report in accordance with Title 27, section 20324 for the partial closure construction of WMU 2, Area A (approximately 28 acres).
6. By **15 September 2013**, the Discharger shall submit the FCD for the remaining closure of WMU 2, Area B, and all of WMU 1 as described in WDRs Order R5-2007-0180. This report should include a CQA Plan as required in Item 4 of this section.
7. By **15 October 2014**, the Discharger shall complete the final closure construction of WMU 1 and 2 in accordance with Findings 72 through 77 of WDRs Order R5-2007-0180.
8. By **2 January 2015**, the Discharger shall submit a Final CQA Report for WMUs 1 and 2, Area B, in accordance with Title 27, section 20324.
9. By **15 October 2015**, the Discharger shall submit a FCD and CQA Plan for WMUs 4 and 5.

10. By **15 October 2017**, the Discharger shall complete final closure construction of WMUs 4 and 5 in accordance Findings 72 through 77 of WDRs Order R5-2007-0180.
11. By **2 January 2018**, the Discharger shall submit a Final CQA Report in accordance with Title 27, section 20324.
12. Beginning with the fourth quarter of 2011, the Discharger shall submit quarterly progress reports describing the work completed to date to comply with each of the requirements above. In addition, the reports shall clearly show the volume of Class III waste accepted for disposal and estimated total airspace used by the landfill during the quarter, and the volume of that waste placed and estimated airspace remaining in WMUs 1, 2, 4, or 5. The quarterly progress reports shall be submitted by the **15th day of the month following the end of the quarter** (i.e., by 15 January, 15 April, 15 July, and 15 October).

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

The Executive Officer may extend the deadlines contained in this Order if the Discharger demonstrates that circumstances beyond the Discharger's control have created delays, provided that the Discharger continues to undertake all appropriate measures to meet the deadlines. The Discharger shall make any deadline extension request in writing at least 30 days prior to the deadline. The Discharger must obtain written approval from the Assistant Executive Officer for any departure from the time schedule shown above. Failure to obtain written approval for any departures may result in enforcement action.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality
or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 13 October 2011.

original signed by

PAMELA C. CREEDON, Executive Officer

Attachment A: Site Map

TAD/SER/WSW: 8/02/2011

M:\Operations\Unit 2-1\Pre-Construction\Design\Drawings\partialial closure plan fig 1 AND 2.dwg

PROJECT		SHEET NUMBER	TOTAL SHEETS
YOLO COUNTY CENTRAL LANDFILL UNIT 1&2 FILL PLAN			
REGISTERED CIVIL ENGINEER	DATE		
DEPARTMENT APPROVAL	DATE		

WARNING: THE ORIGINAL DOCUMENTS CONTAIN A RED COLORED PROFESSIONAL SEAL AND A BLACK COLORED SIGNATURE

DESIGN BY JK	06/09/11	REVISIONS
DRAWN BY JK	06/09/11	
CHECK BY LS	06/09/11	
SCALE: 1" = 100'		
YOLO COUNTY PLANNING AND PUBLIC WORKS DIVISION OF INTEGRATED WASTE MANAGEMENT 44000 COUNTY RD. 28E WOODLAND, CA 95776 Phone: (530) 868-8888 FAX: (530) 868-8883		



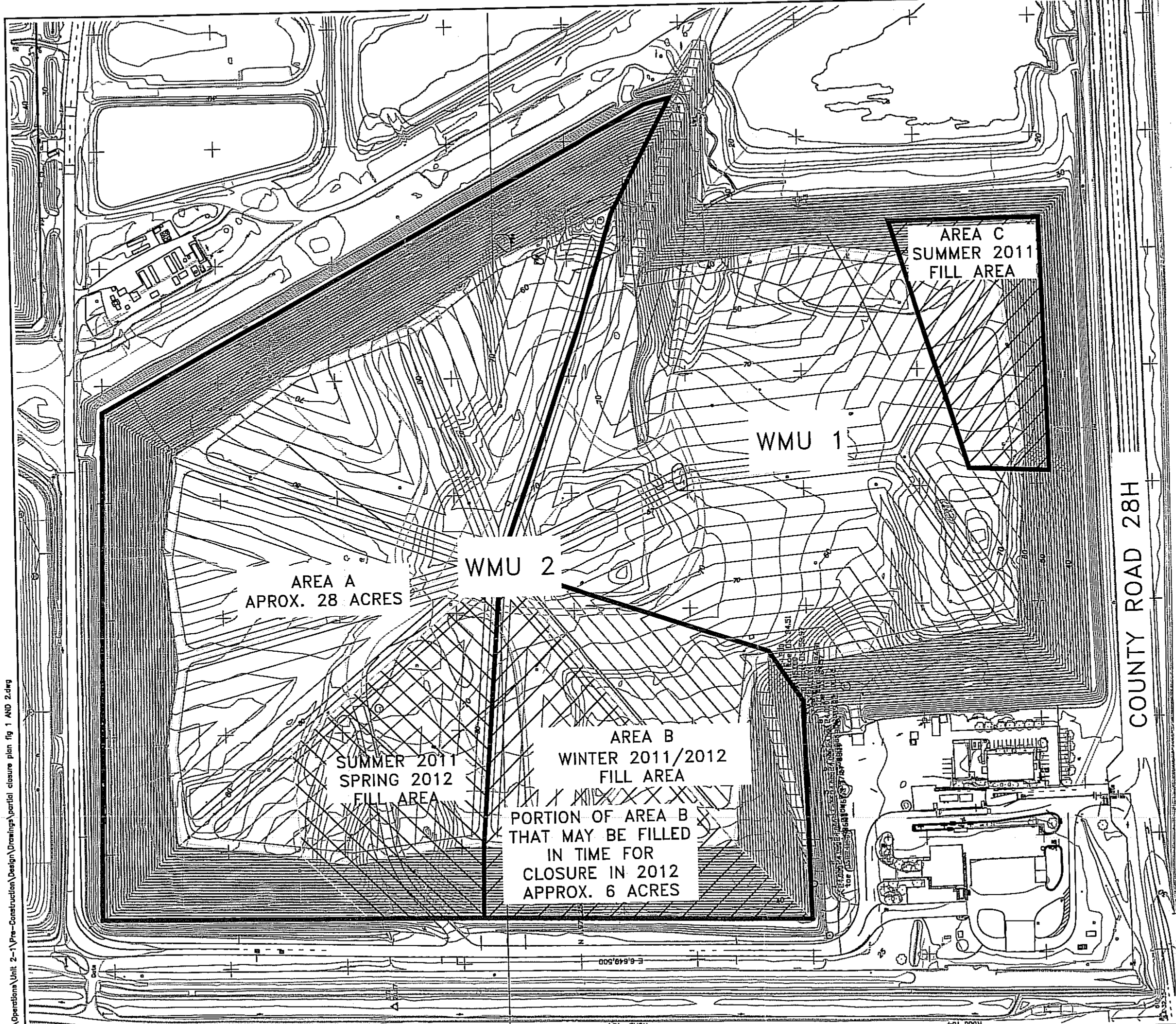
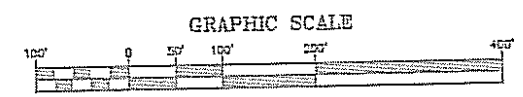
LEGEND

- EXISTING 10 FT. CONTOURS
- EXISTING 2 FT. CONTOURS
- EXISTING GAS COLLECTION PIPES
- EXISTING ACCESS ROADS
- EXISTING PERIMETER DRAINAGE
- EXISTING FENCE
- EXISTING CULVERT
- EXISTING PAVED ROAD
- VERTICAL GAS WELL HEAD
- HORIZONTAL GAS WELL HEAD
- PROPOSED GAS COLLECTION PIPE

ATTACHMENT A

CDO R5-2011-XXXX

Yolo County Central Landfill
Yolo County Site Map
WMU 1 & 2



YOLO COUNTY CENTRAL LANDFILL
WASTE MANAGEMENT UNITS 1&2
2011/2012 PROPOSED FILL PLAN