COMMENTS RECEIVED

FOR

CALABASAS LANDFILL

REVISED WASTE DISCHARGE REQUIREMENTS
FOR
WASTE DISPOSAL, ASSESSMENT MONITORING PROGRAM, AND
CORRECTIVE ACTION PROGRAM

1) County Sanitation Districts of Los Angeles County (comments received 3/10/2009)

2) Edward Wosika, State Water Resources Control Board (comments received 3/9/2009)

3) Edward Wosika, State Water Resources Control Board (comments received 3/25/2009)

4) Jeff Ogata, Office of Chief Counsel, State Water Resources Control Board (comments received 3/20/2009)

5) Mary Weisbrock, Save Open Space, (comments received 4/13/2009)

6) County Sanitation Districts of Los Angeles County (comments received 4/14/2009)

1)
County Sanitation Districts of Los Angeles County
(received 3/10/09)

From: "Min, Yoonkee" <YMin@lacsd.org>
To: "Rodney Nelson (E-mail)" <RNELSON@waterboards.ca.gov>, "Enrique Casas (E...
CC: "Louie, Brian" <BLouie@lacsd.org>, "Ruffell, Kristen" <KRuffell@lacsd.org>
Date: 3/10/2009 2:00 PM
Subject: Written Comments on Tentative Order R4-2009-XXXX - Waste Discharge Requirements for Calabasas Landfill
Attachments: DMS-#1220460-v5-Comments_on_Tentaive_Order_R4-2009_Revised_Waste_Discharge_Requirements_for_Calabasas_Landfill.pdf

Rod,

Attached to this electronic mail is a letter with the Districts' written comments on Tentative Order No. R4-2009-XXXX regarding Waste Discharge Requirements for Calabasas Landfill. The original wet signature letter is being sent via USPS. In accordance with the Regional Board's cover letter to the Districts transmitting the Tentative Order, written comments must be received at the Regional Board's office by 5:00 pm on March 10, 2009. This electronic mail with attached written comments should meet this requirement.

Please contact me if you have any questions.

Sincerely,
Yoonkee Min

Yoonkee Min
Project Engineer
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90601
(562) 908-4288, ext. 2441
(562) 908-9572 (FAX)

<<DMS-#1220460-v5-Comments_on_Tentaive_Order_R4-2009_Revised_Waste_Discharge_Requirements_for_Calabasas_Landfill.pdf>>

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

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STEPHEN R. MAGUN
Chief Engineer and General Manager

March 10, 2009
File: 31R-106.10A

California Regional Water Quality Control Board
Los Angeles Region
Groundwater Permitting and Landfills Unit
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Mr. Rod Nelson

Comments on Tentative Order R4-2009-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

The Sanitation Districts of Los Angeles County (Districts) appreciate the opportunity to comment on Tentative Order No. R4-2009-XXXX, dated February 17, 2009, for "*Revised Waste Discharge Requirements for Waste Disposal, Assessment Monitoring Program, and Corrective Action Program, County Sanitation Districts of Los Angeles County (Calabasas Landfill) (File No. 60-118).*" The Districts operate the Class III Calabasas Landfill (Landfill) and support the California Regional Water Quality Control Board, Los Angeles Region's (Regional Board's) effort to revise the Waste Discharge Requirements (WDRs) for the Landfill.

In addition to the comment below, the Districts have minor comments and corrections to the information contained in the Tentative Order, which are enclosed as Attachment 1. We request that the Regional Board include these comments in the administrative record and revise the Tentative Order, as discussed herein.

Comment 1: Section G.5 of the Tentative Order should be revised to allow the Districts' current practice of wastewater management until the Executive Officer can make a determination regarding the suitability of on-site use of landfill liquids.

Discussion: The Districts currently manage extracted groundwater and leachate through an on-site treatment and reuse program, whereby wastewater is air stripped to remove volatile organic compounds (VOCs) and reused for dust control within the Landfill. Since the dust control needs on-site far exceed the volume of treated wastewater available, the treated wastewater is mixed with reclaimed water and the blended water is used on-site. The treated wastewater is sampled each quarter prior to mixing with the reclaimed water and meets drinking water standards for VOCs; however metals, which are not removed by air stripping, *slightly* exceed drinking water standards. In addition, a sample of the mixed liquids is obtained each quarter. The requirements for reuse water are met in the mixture of reclaimed water and treated wastewater that is actually

ATTACHMENT 1

Minor Comments and Corrections on Tentative Order R4-2009-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

Reference	Discussion	Revision
Finding No. F on Page 3	The National Park Service (NPS) has issued Amendments Nos. 4 and 5 to the NPS Special Use Permit (SUP).	Insert reference "The NPS issued Amendments Nos. 4 and 5 to the NPS SUP on December 6, 2005 and August 28, 2007, respectively".
Finding No. 23 on Page 8	The Tentative Order references "Figure 6" regarding the location of the six subsurface barriers. Figure 6 does not show the subsurface barriers. Figure 5 shows the location of the six subsurface barriers.	Replace "Figure 6" with "Figure 5".
Finding No. 29 on Page 8	The Tentative Order indicates that the six subsurface barriers have a minimum thickness of twelve inches. The six subsurface barriers have a minimum thickness of twenty-four inches.	Replace "twelve inches" with "twenty-four inches".
Finding No. 30 on Page 9	The Tentative Order indicates that proposed landfilling will reach a maximum elevation of 1,350 feet above mean sea level. Proposed landfilling will reach a maximum elevation of 1,360 feet above mean sea level in accordance with the Report of Disposal Site Information (RDSI) for the Landfill.	Replace "1,350 feet" with "1,360 feet".
Finding No. 34 on Page 10	The Tentative Order indicates that the Landfill is enrolled under general NPDES permit WDID No. 4B196000293 to regulate surface water discharges and is subject to industrial stormwater permit No. 419S006192. The Landfill is enrolled under general NPDES permit WDID No. 4B196000293 to regulate surface water discharges and is subject to industrial stormwater permit WDID No. 4 19I006192.	Replace "WDID No. 4B196000293" with "WDID No. 4B196000293". Replace "No. 419S006192" with "WDID No. 4 19I006192".
Finding No. 41 on Page 11	Tentative Order indicates that the Discharger submitted a Report of Waste Discharge (ROWD) on March 3, 2000. The Discharger submitted a ROWD on March 13, 2000.	Replace "March 3, 2000" with "March 13, 2000".
Finding No. 51.d on Page 13	Leachate is sampled annually from the liquid collection and removal systems (LCRSs) for the 80-Acre Liner, D-Cut Liner, and combined P-Cut, 97-Cut, 99-Cut, Southeastern Cut, North Ridge Cut Liner Areas.	Replace "(Liner 2, 80-acre, D-Cut, 97-Cut, 99-Cut and SE Cut areas)" with "(80-Acre Liner, D-Cut Liner, and combined P-Cut, 97-Cut, 99-Cut, Southeastern Cut, North Ridge Cut Liner Areas)".
Finding No. 53 on Page 14	The finding appears to have some typographical errors. The constituent of concern (COC) lists for wells downgradient of Barriers 3, 4, and 6 include, from Appendix II, only those constituents that have been detected and verified in leachate. For groundwater monitoring wells downgradient of Barriers 1, 2, and 5 areas, the COC list includes all Appendix II constituents.	Replace "Barriers Nos. 1, 3, 4, 5 and 6" with "Barriers Nos. 3, 4 and 6" in the second and third sentences of the finding. Replace "Barriers No. 2 area" with "Barriers Nos. 1, 2 and 5 areas" in the last sentence of the finding.

DOCS #222687v

ATTACHMENT 1

Minor Comments and Corrections on Tentative Order R4-2009-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

Reference	Discussion	Revision
Finding No. 54 on Page 14	The first sentence of the finding appears to have some typographical errors. Leachate sampling from the LCRSs for the Subsurface Barriers Nos. 3, 4 and 6 areas also serves as a basis for narrowing the scope of VOCs which the Discharger must monitor.	Replace "Barriers Nos. 1, 3, 4, 5 and 6" with "Barriers Nos. 3, 4 and 6".
Requirement No. 14 on Page 29	The requirement appears to have a typographical error.	Delete "Main Canyon".
Item No. 7 on Page T-2 of the M&RP	The first sentence of the requirement appears to have a typographical error.	Replace "M22B" with "M22D".
Item No. 13(b) on Page T-5 of the M&RP	The second sentence of the requirement appears to have a reference error.	Replace "12(g)(ii)" with "13(g)(ii)".
Item No. 13(b)(i) on Page T-5 of the M&RP	The first sentence of the requirement appears to have a reference error.	Replace "13(b)(C)(C & D)" with "13(b)(1)(C & D)".
Item No. 14(h)(iii) on Page T-10 of the M&RP	The first sentence of the requirement appears to have a reference error.	Replace "13(a)(ii)" with "14(a)(ii)".
Item No. 17 on Page T-11 of the M&RP	The second sentence of the requirement appears to have a reference error.	Replace "12(b)(1)(A)" with "13(b)(i)(B)".
Table 1 on Page T-25 of the M&RP	Footnote 2 appears to have a typographical error.	Delete "Liner 1-, Liner 2-," in footnote 2.
Table 1 on Page T-26 of the M&RP	The table appears to repeat the information in Table 1 on Page T-25.	Replace Table 1 on Page T-26 with Attachment 1.1 enclosed herein.
Table 2 on Page T-28 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Well M02B" with "Well R02B".
Table 2 on Page T-29 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Well M22B" with "Well M22D".
Table 2 on Page T-37 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Well M07B" with "Well R07B".
Table 2 on Page T-38 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Well M08B" with "Well R08B".
Table 2 on Page T-44 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Well P69S" with "Well M15B".
Table 2 on Page T-45 of the M&RP	The table appears to have a typographical error in the table title.	Replace "Wel. P69S" with "Well M16A".

DOCS 1222659

ATTACHMENT 1.1

TABLE 1 (Cont.) - CONSTITUENTS DETECTED AND CONFIRMED DURING ANNUAL LEACHATE MONITORING (APRIL 2, 2009)

Constituent	COC Lists[1]		
	LCRS[2]	DLCS[2]	PSLC[2]
Metals			
Antimony	✔ T&S	✔ T&S	---
Arsenic	✔ T&S	✔ T&S	✔ T&S
Barium	✔ T&S	✔ T&S	✔ T&S
Cadmium	---	✔ S	✔ T
Total Chromium	✔ T&S	✔ T	✔ T&S
Cobalt	✔ T&S	---	---
Copper	✔ T&S	✔ T&S	✔ S
Mercury	---	✔ T&S	---
Nickel	✔ T&S	✔ T&S	✔ T&S
Selenium	✔ T&S	✔ T&S	✔ T&S
Thallium	✔ T&S	---	---
Vanadium	✔ T	✔ T&S	✔ T&S
Zinc	✔ T&S	✔ T&S	✔ T&S
Volatile Organic Compounds			
1,1-Dichloroethane	✔	✔	✔
1,2-Dichloroethane	✔	---	---
1,2-Dichloropropane	✔	---	---
Benzene	✔	---	✔
Chlorobenzene	✔	---	---
cis-1,2-Dichloroethylene	✔	---	✔
Freon 12 (CCL2F2)	---	---	✔
m+p-Xylene	✔	---	---
Methylene Chloride	---	✔	✔
o-Dichlorobenzene	✔	---	---
o-Xylene	✔	---	---
p-Dichlorobenzene	✔	---	✔
Tetrachloroethylene	✔	✔	✔
Toluene	✔	---	✔
Trichloroethylene	✔	---	---
Vinyl Chloride	✔	---	---

1. ✔ = On confirmed COC List; "---" = Not on COC List.
2. LCRS = 80-acre liquid collection and removal system;
   PSLC = liquids in P-, 97-, 99-, Southeastern-, and North Ridge (Phase 1 and 2) Cut Liner and LCRS collection systems;
   DLCS = liquids in the D-Cut collection systems
3. T = Total portion of constituent (Unfiltered);
   S = Soluble portion of constituent (Filtered)

DOCS#1224180

Comment 1:
Section G.5 of the Tentative Order should be revised to allow the Districts' current practice of wastewater management until the Executive Officer can make a determination regarding the suitability of on-site use of landfill liquid…
Requested Revisions: Revise Section G of the Tentative Order. Clarify the provisions to indicate that "The Discharger's current practice of removing VOCs from the wastewater sources, blending with recycled water, and applying the blended water on the Landfill for dust control is allowed until the Executive Officer can make a determination as to the suitability of each wastewater source for on-site use. Within 120 days of adoption of Order No. R4-2009-XXXX, the Discharger shall submit a technical report for approval by the Executive Officer which describes the current practices, characterizes the wastewater sources, and evaluates the suitability of each wastewater source for on-site use"

Response:
The purpose of Provision G.5 is to allow Regional Board staff an ability to assess the quality of various wastewater streams to evaluate their suitability for on-site reuse prior to mixing /diluting with recycled water. A technical report that describes current operational practices, characterizes wastewater sources, and evaluates their suitability, within a defined period of time (120 days), that must be approved by the Executive Officer, achieves this purpose while not initially disallowing the beneficial reuse of any wastewater as on-site dust control. The recommendation is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. (2)P, tentative Order:
The National Park Service (NPS) has issued Amendments Nos. 4 and 5 to the NPS Special Use Permit (SUP). Insert reference "The NPS issued Amendments Nos. 4 and 5 to the NPS SUP on December 6, 2005 and August 28, 2007, respectively".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 23, tentative Order:
The Tentative Order references "Figure 6" regarding the location of the six subsurface barriers. Figure 6 does not show the subsurface barriers. Figure 5 shows the location of the six subsurface barriers. Replace "Figure 6" with "Figure 5".

Response:
The corrected Figure number is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 23, tentative Order:
The Tentative Order indicates that the six subsurface barriers have a minimum thickness of twelve inches. The six subsurface barriers have a minimum thickness of twenty-four inches. Replace "twelve inches" with "twenty-four inches".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 30, tentative Order:
The Tentative Order indicates that proposed landfilling will reach a maximum elevation of 1,350 feet above mean sea level. Proposed landfilling will reach a maximum elevation of 1,360 feet above mean sea level in accordance with the Report of Disposal Site Information (RDSI) for the Landfill. Replace "1,350 feet" with "1,360 feet".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 34, tentative Order:
The Tentative Order indicates that the Landfill is enrolled under general NPDES permit WDID No. 4B196000293 to regulate surface water discharges and is subject to industrial stormwater permit No. 419S006192. The Landfill is enrolled under general NPDES permit WDID No. 4B196000294 to regulate surface water discharges and is subject to industrial stormwater permit WDID No. 4 19I006192. Replace "WDID No. 4B196000293" with "WDID No. 4B196000294". Replace "No. 419S006192" with "WDID No. 4 19I006192".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 41, tentative Order:
Tentative Order indicates that the Discharger submitted a Report of Waste Discharge (ROWD) on March 3, 2000. The Discharger submitted a ROWD on March 13, 2000. Replace "March 3, 2000" with "March 13, 2000".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 51.d, tentative Order:
Leachate is sampled annually from the liquid collection and removal systems (LCRSs) for the 80-Acre Liner, D-Cut Liner, and combined P-Cut, 97-Cut, 99-Cut, Southeastern Cut, North Ridge Cut Liner Areas. Replace "(Liner 2, 80-acre, D-Cut, 97-Cut, 99-Cut and SE Cut areas)" with "(80-Acre Liner, D-Cut Liner, and combined P-Cut, 97-Cut, 99-Cut, Southeastern Cut, North Ridge Cut Liner Areas)".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 53, tentative Order:
The finding appears to have some typographical errors. The constituent of concern (COC) lists for areas downgradient of Barriers 3, 4, and 6 include, from Appendix II, only those constituents that have been detected and verified in leachate. For groundwater monitoring wells downgradient of Barriers 1, 2, and 5 areas, the COC list includes all Appendix II constituents. Replace "Barriers Nos. 1, 3, 4, 5 and 6" with "Barriers Nos. 3, 4 and 6" in the second and third sentences of the finding. Replace "Barriers No. 2 area" with "Barriers Nos. 1, 2 and 5 areas" in the last sentence of the finding.

Response:
The finding seeks to describe the COCs applicable to areas of the Landfill where a groundwater release has been detected versus the COCs for areas where no release has been detected in the context of the subsurface barriers where downgradient groundwater monitoring is conducted. The finding incorrectly lists Barrier Nos. 1 and 5 as areas where no release has been detected. The suggested edit is appropriate and the tentative Order has been modified accordingly.

Comment, Finding No. 54, tentative Order:
The first sentence of the finding appears to have some typographical errors. Leachate sampling from the LCRSs for the Subsurface Barriers Nos. 3, 4 and 6 areas also serves as a basis for narrowing the scope of

VOCs which the Discharger must monitor. Replace "Barriers Nos. 1, 3, 4, 5 and 6" with "Barriers Nos. 3, 4 and 6".

Response:
See Comment, Finding No. 53, tentative Order, above. The reference is intended for areas where a groundwater release has not been detected. The suggested edit is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 14, tentative Order:
The requirement appears to have a typographical error. Delete "Main Canyon".

Response:
The specification makes an erroneous reference, as there is no "Main Canyon" area at the Landfill. The suggested edit is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 14, tentative Order:
The first sentence of the requirement appears to have a typographical error. Replace "M22B" with "M22D".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 13(b), tentative Monitoring and Reporting Program:
The second sentence of the requirement appears to have a reference error. Replace "12(g)(ii)" with "13(g)(ii)".

Response:
The reference to the cited specifications is incorrect. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 13(b)(i), tentative Monitoring and Reporting Program:
The first sentence of the requirement appears to have a reference error. Replace "13(b)(i)(C & D)" with "13(b)(i)(B & C)".

Response:
The reference to the cited specifications is incorrect. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 14(b)(iii), tentative Monitoring and Reporting Program:
The first sentence of the requirement appears to have a reference error. Replace "13(a)(ii)" with "14(a)(ii)".

Response:
The reference to the cited specifications is incorrect. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Specification No. 17, tentative Monitoring and Reporting Program:
The second sentence of the requirement appears to have a reference error. Replace "13(b)(i)(A)" with "13(b)(i)(B)".

Response:
The reference to the cited specifications is incorrect. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 1, page T-25, tentative Monitoring and Reporting Program:
Footnote 2 appears to have a typographical error. Delete "Liner 1-, Liner 2-," in Footnote 2.

Response:
The Liner-1 and Liner-2 areas of the Landfill are not part of the PLSC leachate collection and removal systems. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 1, page T-26, tentative Monitoring and Reporting Program:
The table appears to repeat the information in Table 1 on Page T-25. Replace Table 1 on Page T-26 with Attachment 1.1 enclosed herein.

Response:
The attached Table inadvertently repeats page 1 of the table as page 2. The referenced attachment is page 2 of the table. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-28, tentative Monitoring and Reporting Program:
The table appears to have a typographical error in the table title. Replace "Well M02B" with "Well R02B".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-29, tentative Monitoring and Reporting Program:
The table appears to have a typographical error in the table title. Replace "Well M22B" with "Well M22D".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-37, tentative Monitoring and Reporting Program:
The table appears to have a typographical error in the table title. Replace "Well M07B" with "Well R07B".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-38, tentative Monitoring and Reporting Program:
The table appears to have a typographical error in the table title. Replace "Well M08B" with "Well R08B".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-44, tentative Monitoring and Reporting Program:

The table appears to have a typographical error in the table title. Replace "Well P69S" with "Well M15B".

Response:
The referenced table is incorrectly labeled. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment, Table 2, page T-45, tentative Monitoring and Reporting Program:
The table appears to have a typographical error in the table title. Replace "Well P69S" with "Well M16A".

Response:
The referenced table is incorrectly labeled. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

2)
Edward Wosika
State Water Resources Control Board
(received 3/10/09)

From: Ed Wosika
To: Casas, Enrique; Graves, Leslie; Nelson, Rodney
Date: 3/9/2009 4:29 PM
Subject: Re: Emailing: Calabasas tentative WDRs
Attachments: Calabasas_tentWDRs_EW.pdf

Dear Enrique:
We have had back-to-back petitions running our lives here for the last six months or so, but I managed to just squeak by getting the Calabasas WDRs reviewed. You are a VERY careful listener, sir, regarding the all-day hammer-session T27 WDRs class from last year! However, you'll find many suggested changes in the attached mark-up anyway. The idea is to set your group up with a set of "platen" (model) WDRs that you can use for propagating subsequent changes to other landfill WDRs. As such, I went through it extra carefully. You have some very good new ideas in there too, which I have noted. If you have a question regarding any proposed change just let me know. I have taken the time to include suggested re-wording, in most cases, to help save you time and to prevent playing the "guessing game," whereby one tries to create wording that will meet the commentor's input (I hate it when that happens!).

Rod, consider changing to a semi-annual Reporting Period for those landfills that get this "new approach." It will cut their monitoring cost almost in half but will also give you far more reliable monitoring program results. That cost savings will tend to salve over the Discharger's reaction to the many more things they are required to do and report. This longer Reporting Period is needed to accommodate the improved pass-1-of-3 retesting approach and the quarterly time-between-successive-samples approach (for data to be used for statistical tests), so that ALL retesting can be completed in a single Reporting Period in spite of the greater time period (to give sample independence) between successive retests. As you may have guessed already, my flavorite Italian dish is, indeed, Squid Pro Quo.

Leslie: I saved a copy of this on the S: drive [S:\bLAND DISPOSAL_Program\EW\WDREVU_EW\R4_some] in case you want Roger, Ember, or any new hire to look through it.
Regards, Zeek

Landfill to comply with Chapter 15 and later 27 CCR requirements. The Landfill groundwater monitoring program incorporated monitoring points that are upgradient, sidegradient, and/or downgradient of the Landfill. All existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figure 11 (attached).

26. In August 1995, in response to requirements of Order 93-062 to implement groundwater monitoring programs compliant with federal Subtitle-D requirements, the Discharger developed the report "*Calabasas Landfill Water Quality Monitoring System Report for Compliance with RWQCB Order No. 93-062*". The Discharger proposed to refine CAP and detection monitoring program (DMP) monitoring networks and to implement intra-well statistical analyses methods to comply with federal Subtitle-D requirements. The proposed modifications to the monitoring programs for the Landfill were approved by Regional Board staff during a June 6, 1995 meeting with the Discharger. The resulting compliance monitoring network 1ocus on monitoring in alluvial canyon areas (as shown in Figures 12-14, attached).

27. Pursuant to 27 CCR section 21769 the Discharger is required to implement an unsaturated zone monitoring program at the Landfill. The intent of an unsaturated zone monitoring program is to monitor unsaturated soils/bedrock between the waste management unit and groundwater to potentially provide an early indication of groundwater quality degradation. The Discharger installed an unsaturated zone monitoring system in 1988 consisting of eleven suction lysimeters. Between 1988 to the present, the unsaturated zone monitoring system proved ineffective in supplementing water quality monitoring because collection of water samples was problematic, the lysimeters consistently failed to yield an adequate volume of water to allow analysis. 3ecause monitoring of shallow alluvial groundwater should allow for early detection of any contaminant release, unsaturated zone monitoring has been discontinued.

28. Landfill gas migration monitoring probes are located along the boundary of the Landfill (see Figure 15, attached). These probes are currently monitored on a monthly basis pursuant to requirements of the Waste Board and their LEA.

29. The Discharger will expand the Landfill gas recovery system to include the proposed waste management facility expansion. Gas is collected through extraction wells and rock-lined trenches, designed in accordance with 27 CCR requirements. The gas is combusted to reduce odor. Electricity is generated from this combusted gas. Excess gas is flared.

30. Proposed landfilling will reach a maximum elevation of 1,350 feet above mean sea level (see Figure 16, attached). Proposed landfilling will slope down-canyon to the surrounding property. The permitted rate of waste disposal is 3,500 tons per day.

31. The Discharger uses recycled water for irrigation and dust control purposes at the Landfill. These uses are in conformance with the goals of the Basin Plan and State statutes and

Page: 9 comments and responses

Sequence number: 1
This should be singular ("The . . . network focuses on . . . .").

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
1) Because it is an introductory prepositionsl phrase, there must be a comma after the section number; 2) 21769 is about the CPCMPlan, not monitoring. The correct reference here is 20415(d), which address UZ monitoring.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
By whom? Under what authority? The passive voice, here, makes the meaning unclear. Instead, why not say that your Board has grated an exemption to further unsaturated zone monitoring, pursuant to 27 CCR 20415(d)(5)?

Response:
Comment noted. The specification has been modified to make clear that this Regional Board grants is granting an exemption from continued unsaturated zone monitoring.

regulations pertaining to the use of recycled water in California that can be found in the CWC, CCR, and the health and safety code (HSC). State policy promotes the use of recycled water to the maximum extent in order to supplement existing surface and groundwater supplies to help meet water needs (CWC section 13510 to 13512).

32. The Waste Board has approved the Discharger's proposal to use shredded greenwaste as alternative daily cover materials for use at the Landfill. The Discharger may evaluate the use of other materials as alternative cover materials in the future.

REGULATORY REQUIREMENTS

33. The United States Environmental Protection Agency (USEPA) under title 40 of the code of federal regulations (40 CFR) section 257 and section 258 (Subtitle D) revised existing regulations for municipal solid waste disposal facilities in response to the 1984 Hazardous and Solid Waste Amendments of the Resources Conservation and Recovery Act and added new detailed requirements addressing the issues of location restriction, facility operation and design criteria, groundwater monitoring and corrective action, closure and postclosure maintenance, and financial assurance. USEPA delegated the responsibility for implementing these regulations to states with a fully approved landfill regulatory program. As responsible agencies for an approved state, the State Board and the Regional Board [1]dopted the federal Subtitle D regulatory requirements (State Board Resolution No. 93-62 and Regional Board Order No. 93-62, respectively). Regional Board Order No. 93-062 was adopted September 27, 1993.

34. The Discharger is subject to State Board Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, "*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*". The Landfill is enrolled under general NPDES permit WDID No. 4B196000293 to regulate surface water discharges and is subject to industrial stormwater permit No. 419S006192.

CORRECTIVE ACTION PROGRAM

35. Order No. 89-053, provision C.6, requires the Discharger to institute a CAP if representative analyses of the groundwater shows a statistically significant [2]ncrease in any water quality protection standard (WQPS), which are concentration limits for constituents of concern based upon established site-specific background concentrations. In addition, all refuse fill areas are subject to the requirements of [3]egional Board Order No. 93-062, which implements the provisions of federal Subtitle D requirements, as contained in 40 CFR section 258, as well as state landfilling regulations contained in 27 CCR. These regulations specify that the [4]/QPS for a CAP will not exceed background concentrations, unless the Regional Board finds that it is technologically or economically infeasible to achieve background concentrations.

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Sequence number: 1
Not true. Please change to ". . . adopted a WDR revision, for each MSW landfill in the Region, that implement the . . . .".

Response:
Comment noted. The tentative Order has been modified accordingly to incorporate the more specific language suggested.

Sequence number: 2
This is a common error. Under Title 27, the entire landfill has only one WQPS. Please correct this by substituting, ". . . increase, relative to the applicable Concentration Limit (background data reference data set) for any Constituent of Concern named in the landfill's water qulaity proteciton standard (WQPS)."

Response:
The suggested language makes a more definitive statement that the Landfill's water quality protection standard is the applicable concentration limit (based on the background reference data set) for any constituent of concern. The tentative Order has been modified accordingly to incorporate the more specific language suggested.

Sequence number: 3
This is your region's "Super Order." All it does is implement the missing portions of a federal detection monitoring program (258.54). It does NOT include a CAP or the ongoing AMP (under 258.55) that would be ongoing at a landfill running a CAP. Your order must include ALL things from this prior RWQCB order that is appropriate plus all new requirements for a releasing landfill (under 258.55, 258.56, 258.57, and 258.58) that are over-and-above what would be required under Title 27, for a landfill in corrective action. The current draft wording will not EVEN get this done. Use the "Sub-D Checklist" to identify those federal standards that are missing from the current draft and then INCLUDE them using specific wording (not incorporation by reference). This is a serious problem.

Response:
Comment noted. The general reference to the "Super Order" in the tentative Order, was intended as a fail safe to cover any inadvertent omissions of federal requirements for a Landfill corrective action program. The development of Regional Board 00-077 incorporated all federal requirements for a releasing landfill (under title 40 of the code of federal regulations sections 258.55, 258.56, 258.57, and 258.58) are incorporated into the revised tentative Order and general references to the "Super Order" have been omitted (see for example specification no. I.8 and I.26).

Sequence number: 4
Surely you mean "Concentration Limits" instead.

Response:
See comment page 10, comment 2 above. The clarified language defines the Landfill's water quality protection standard as the applicable concentration limit (based on the background reference data set) for any constituent of concern. The tentative Order has been modified accordingly to incorporate the corrected language.

which proposed a CAP that continues source control through operation of existing Subsurface Barrier Nos. 1, 2 and 5 groundwater extraction systems, enhanced landfill gas control, and allows for natural attenuation to dissipate VOCs in off-site areas. The CAP was adopted the Regional Board on June 29, 2000 (Order No. 00-077). Groundwater monitoring continues to be used to measure the effectiveness of the CAP. In addition, the Discharger performs semi-annual trend analyses on data obtained from key groundwater monitoring wells.

42. Pursuant to 17 CCR, section 21730(c), the Discharger discussed the findings of the final EMP report, the EFS, and the proposed CAP at a public workshop held on April 11, 2000.

43. On May 16 2000, the Discharger submitted a final ROWD and CAP proposal, which incorporated comments received at the public workshop, as well as responses to comments. As stated above, on June 29, 2000, the Regional Board adopted waste discharge requirements (Order No. 00-077) to implement the corrective action response to documented releases to groundwater from the Landfill.

44. The Discharger continues to notify all persons who own the land or reside on the land that directly overlies any part of the contaminant plume about the status of contaminants that have migrated off-site pursuant to 40 CFR section 258.55(g)(1)(iii) requirements.

45. This Order is in conformance with State Board Resolution No. 93-62 because it requires a CAP, for known and any future releases, that implements all applicable 27 CCR CAP requirements and all additional federal requirements under 40 CFR section 258.58, including section 258.58(a)(1)(i-iii), which requires the Discharger to implement an assessment monitoring program (AMP) pursuant to 40 CFR section 258.55 in conjunction with the CAP. 2

46. This Order places the entire Landfill into a CAP while implementing corrective measures for the known releases meeting applicable state and federal requirements. This approach eliminates needless complexity associated with applying concurrent programs (i.e., running unaffected portions of the Landfill under a DMP and the portions affected by the release under either an EMP or a CAP, or both). The Regional Board chooses to implement this approach by documenting and responding to the compliance status of each monitoring parameter (Mpar) individually at each compliance well separately (i.e., the 3 Discharger will track the compliance status of each such "well/MPar pair" separately).

47. Since landfill gas is the principal source of the release from the Subsurface Barrier Nos. 1, 2 and 5 areas of the Landfill, the Discharger has installed/improved landfill gas collection and extraction systems as interim corrective action measures (interim CAMs). Operation of enhanced landfill gas collection and extraction systems in these areas commenced in approximately January 1999.

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Sequence number: 1
1) Get rid of the comma after CCR; and 2) Add in the federal sections, unless you want to do the CAP adoption all over again: 40 CFR 258.56(d) and 258.57. If your Board did not implement those federal sections when adopting the CAP, then you have a state CAP and have failed to implement the federal CAP (not good!!!). That is the sort of blunder that using the Sub-D Checklist will help you to avoid.

Response:
1) The editorial comment is appropriate and the tentative Order has been modified accordingly.
2) See page 10, comment 3, above. The revised tentative Order incorporates all federal requirements for a releasing landfill (under title 40 of the code of federal regulations sections 258.55, 258.56, 258.57, and 258.58) and omits general references to the "Super Order".

Sequence number: 2
The federal rule also requires the RWQCB to develop and adopt the CAP pursuant to the steps/studies/hearings/findings listed in 258.56 and 258.57. If your Board DID that, then please say so. Otherwise, the RWQCB will need to make a VERY careful check of 258.56 and 258.57 to see what it missed doing. Given anything missing, you'll need to re-adopt the CAP under those new considerations. THAT is WHY using the Sub-D Checklist is so important. You can download it from http://waternet.epanet.ca.gov/
dwq/pubs/html/training_ld_regs.html (it is ~ one screen down from the top).

Response:
Comment noted. See page 10, comment 3, above. The development of Regional Board 00-077 incorporated all federal requirements for a releasing landfill. The finding language has been modified accordingly to more definitively state that the corrective action program requirements of the tentative Order comply with state and federal regulations.

Sequence number: 3
Excellent move!

Response:
Comment noted. No modification of the tentative Order is necessary.

b. Cause the occurrence of objectionable tastes or odors in waters pumped from a groundwater basin;

c. Cause waters pumped from a groundwater basin to foam;

d. Cause the presence of toxic materials in waters pumped from a groundwater basin;

e. Cause the pH of waters pumped from a groundwater basin to fall below 6.0, or rise above 9.0;

f. Cause the Regional Board's objectives for the groundwaters or surface waters as established in the Basin Plan to be exceeded; and

g. Cause pollution, contamination, or nuisance, as defined in CWC [1]ection 13050, or adversely affect beneficial uses of groundwaters or surface waters as established in the Basin Plan.

3. Odors, vectors, and other nuisances of waste origin beyond the limits of the Landfill are prohibited.

4. The discharge of waste to surface drainage courses or to usable groundwater is prohibited.

5. [2]asin Plan prohibitions shall not be violated.

6. All federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land shall be complied with in the operation and maintenance of the Landfill.

B. REQUIREMENTS FOR ACCEPTABLE MATERIALS

1. The Discharger shall only accept waste for disposal at the Landfill as deemed acceptable for a municipal solid waste facility by the Regional Board through orders or regulations.

2. [3]astes disposed of at the Landfill shall be limited to certain non-hazardous solid wastes (as described in section 20220(a) of 27 CCR), inert solid wastes (as described in section 20230 of 27 CCR), water treatment sludge, and treated wood waste (TWW).

3. Non-hazardous solid waste means all putrescible and non-putrescible solid, semi-solid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes,

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Sequence number: 1
The words "CWC" and "section" and "13050" are part of a formal name, so there should be no line break intruding. Here is a neat trick, in Word, for eliminating such unwelcome line breaks: Backspace out each of the two spaces between these three words and then insert a non-breaking space (hold down both the Ctrl and Shift keys and then hit the Space bar while keeping them held down) to replace each deleted space. If you remember to do this when creating the document, then you'll never have to worry about having a formal noun ripped apart by a rude line break. It is a REALLY neat trick. Likewise, for a non-breaking dash between two words (as in "SWRCB Resolution 63-62"), hold down the Ctrl and Shift keys and hit the NON-NUMBER-PAD dash (the number-pad dash, in this context, can cause a software fault, so DO NOT DOOOOO that). It LOOKS like a regular dash, but will NOT allow a line-break.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
The Basin Plan does not apply to the discharger except as interpreted and specified in the WDRs. So, the paragraph needs to be more specific. How about rewording to something like: "The Discharger shall conduct site operations such that there is no release from the landfill that causes any Basin Plan Objective to be exceeded at any location under, or in the vicinity of, the landfill. At the least, no Constituent of Concern (COC) shall exhibit a measurably significant increase over its respective Concentration Limit (background data set) at any well, as indicated by an approved statistical or nonstatistical data analysis method (including that method's retesting approach)."

Response:
Comment noted. Staff concurs with the need to be as specific as possible with all WDR specifications. The proposed language is consistent conceptually with water quality protection standards discussed in comment 2, page 10, above. Hence, the tentative Order has been modified accordingly.

Sequence number: 3
Please consider adding "municipal solid waste (MSW)" to this list, given that the landfill WILL be receiving MSW and MSW contains some portions that are designated waste and hazardous waste. Therefore, the current wording would preclude the landfill from accepting MSW. Not good!

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

permitted to blow, fall, or otherwise migrate off-site, or to enter off-site water drainage facilities or watercourses.

4. The periodic load-checking program shall continue to be implemented to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable wastes.

5. Waste material shall not be discharged on any ground surface that is less than five feet above the highest anticipated groundwater level, including capillary rise.

6. The Discharger shall comply with notification procedures contained in section 13271 of the CWC with regard to the discharge of hazardous wastes. The Discharger shall remove and relocate to a legal point of disposal, any wastes that are discharged at the Landfill in violation of these requirements. The Regional Board shall be informed via semi-annual monitoring reports when relocation of wastes is necessary. The source and final disposition (and location) of the wastes, as well as methods undertaken to prevent future recurrence of such disposal shall also be reported.

7. All wastes shall be covered at least once during each 24-hour period in accordance with section 20680 and section 20705 of 27 CCR. Intermediate cover over wastes discharged to the Landfill shall be designed and constructed to minimize percolation of precipitation through wastes and contact with materials deposited.

8. Alternative daily cover at the Landfill may be used consistent with section 20690 of 27 CCR.

9. The migration of gases from the Landfill shall be controlled as necessary to prevent water pollution, nuisance, or health hazards. The discharge of wastes or waste by-products (i.e., leachate or gas condensate) to off-site surface drainage courses or to groundwater is prohibited.

10. No surface water or stormwater shall leave the Landfill except as permitted by a NPDES permit issued in accordance with the federal CWA and the CCR. The Discharger shall maintain and modify, as necessary, the SWPPP developed for the Landfill.

11. [1]as condensate gathered from the gas monitoring and collection system at the Landfill shall not be returned to the Landfill unless approved by the Executive Officer. Any proposed modifications or expansions to this system shall be designed to allow the collection, testing and treatment, or disposal by approved methods, of all gas condensate produced at the Landfill.

12. The Discharger shall intercept and remove any liquid detected in all LCRSs at the

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Sequence number: 1
That will not meet 40CFR 258.28(a)(2), which applies at this landfill. Consider adding to the end of the sentence, ". . . Officer, and the condensate is discharged to a composite-lined portion of the landfill."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Landfill to a legal point of disposal and leachate shall not be returned back to the Landfill unless it meets the requirements of this Order for onsite reuse as described in Section G, below and satisfies leachate handling requirements contained in 27 CCR section 20340(g). Any leachate determined to be hazardous shall be transported by a licensed hazardous waste hauler to an approved treatment or disposal facility.

13. In any area within the Landfill where a natural spring or seep is observed, provisions shall be made and/or facilities shall be provided to ensure that this water will not come in contact with decomposable refuse. The locations of all springs and seeps found prior to, during, or after placement of waste material that could affect the Landfill shall be reported to the Regional Board

14. The Discharger shall develop/maintain permanent survey monuments at the Landfill throughout the development, closure and postclosure maintenance periods. Benchmarks shall be established and maintained in sufficient numbers to enable reference to key elevations and to permit control of critical grading and compaction operations.

15. The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, and adequate laboratory and process controls including appropriate quality assurance procedures.

16. The Discharger shall report any noncompliance or any incident resulting from Landfill operations that are in violation of this Order. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within fourteen days of the time that the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, or prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

E. REQUIREMENTS FOR CONTAINMENT SYSTEMS

1. The Discharger shall install containment structures that are capable of preventing degradation of the waters of the state. Construction standards for containment structures shall comply with 27 CCR requirements. Design specifications are

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Sequence number: 1

Response:
No comment. A response is not necessary.

Sequence number: 2
This T27 paragraph can only apply to the extent that the landfill meets 40 CFR section 258.28. Thus BOTH apply, rather than just the one. Consider adding here, ". . . 20340(g), and 40 CFR section 258.28."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly. Also, see page 10, comment 3 above regarding federal post release monitoring requirements.

Sequence number: 3
This wording allows the discharger to ignore hints of prior high-groundwater (soil mottling). Please consider rewording as, ". . . a natural spring or seep or subsurface soil mottling is observed."

Response:
Expansion of indications of high groundwater that could impact refuse in unlined portions of the Landfill to include soil mottling is appropriate. The referenced specification in the tentative Order has been modified accordingly.

Sequence number: 4
Add here, "and areas exhibiting mottled subsurface soil conditions".

Response:
See comment page 20, comment 3, above.

subject to review and approval by the Executive Officer prior to any construction.

2. All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as [1]heeting the prescriptive standards and/or performance goals of 27 CCR.

3. The Discharger shall submit detailed preliminary plans, specifications, and descriptions for all proposed containment structures and construction features for Executive Officer approval at least 60 days prior to construction. The preliminary plans shall contain detailed quality assurance/quality control for the proposed construction. No disposal shall occur in a new area until the corresponding construction is completed and certified. The Discharger shall also submit a description of, and location data for, ancillary facilities, including roads, waste handling areas, buildings, and equipment cleaning facilities. As-built plans shall be submitted within 60 days after the completion of construction. If the as-builts are virtually identical to the approved preliminary plans and specifications, only change sheets need be submitted in lieu of complete as-built plans. Along with the change sheets or as-builts, the Discharger shall submit a program that will provide for the annual testing of the LCRS to demonstrate its operating efficiency.[2]

4. Cut and subgrade slopes, fill slopes, refuse cells and visual berms shall be designed and excavated or constructed in a manner that will resist settlement and remain stable during the design earthquake event specific to the Landfill in accordance with section 20370 of 27 CCR.

F. REQUIREMENTS FOR GROUNDWATER MONITORING

1. The Discharger shall implement the attached M&RP No. CI-4992 which is incorporated herein by reference and revisions thereto in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Landfill or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the Landfill and to continue the CAP for areas of the Landfill where releases to groundwater have occurred. M&RP No. CI-4992 is designed to satisfy both federal and state regulatory monitoring requirements.

2. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to M&RP No. CI-4992. The Discharger shall implement any changes to the revised M&RP approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.

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Sequence number: 1
The (or) in this wording will let them use a prescriptive approach that does not meet the performance goal. Consider rewording as, ". . . meeting the applicable prescriptive and performance standards of 27 CCR [or, for an engineered alternative design under 20080(b & c) meeting its applicable performance standards therein]."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Save yourself a LOT of trouble, here, by adding something like the following, ", including a proposed and substantiated triggering concentration-or-condition, for that annual test, that will indicate that the LCRS can no longer handle at least twice the maximum expected annual leachate flow rate [see 27 CCR 20340(b, c, & d)]."

Response:
The suggested edit is appropriate to clarify requirements by requiring a proposed and substantiated triggering concentration/condition for annual LCRS system testing. The tentative Order has been modified accordingly.

3. The Discharger shall furnish, under penalty of perjury, technical or monitoring program reports in accordance with CWC section 13267. Failure or refusal to furnish these reports or falsifying any information provided therein renders the Discharger guilty of a misdemeanor and subject to the penalties stated in CWC section 13268. Monitoring reports shall be submitted in accordance with the provisions contained in the attached M&RP No. CI-4992, as directed by the Executive Officer.

4. The effectiveness of all monitoring wells, monitoring devices, and leachate and gas collection systems shall be maintained throughout the Landfill's operational, closure, and postclosure maintenance periods in accordance with acceptable industry standards. The Discharger shall maintain a monitoring well preventative maintenance program (MWPMP) approved by the Executive Officer. Elements of the program should include a minimum of periodic visual inspections of well integrity, pump removal and inspection, and appropriate inspection frequencies. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed in writing within seven days after such discovery, and this notification shall contain a time schedule for returning the well or piezometer to operating order. Changes to the existing program shall be submitted for Executive Officer approval at least 30 days prior to implementing the change(s).

5. If a well or piezometer is proposed to replace an inoperative well or piezometer identified in the MWPMP, the Discharger shall not delay replacement while waiting for Executive Officer approval. However, a technical report describing the location and construction details shall be submitted to the Executive Officer within 30 days.

6. The Discharger shall provide for proper handling and disposal of water purged from monitoring wells at the Landfill during sampling. Water purged from a monitoring well shall not be returned to that well (or any other Landfill well).

7. Any abandoned wells or bore holes under the control of the Discharger, and situated within the Landfill boundaries, must be located and properly modified or sealed to prevent mixing of any waters between adjacent water-bearing zones. A notice of intent to decommission a well must be filed with the appropriate regulatory agencies prior to decommissioning. Procedures used to decommission these wells, or to modify wells still in use, must conform to the specifications of the local health department or other appropriate agencies.

8. For any monitoring wells installed at the Landfill in the future, the Discharger shall submit technical reports for approval by the Executive Officer prior to installation. These technical reports shall be submitted at least 60 days prior to the anticipated date of installation of the wells. These reports shall be accompanied

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Sequence number: 1
This is the word's possessive form, so there should be an apostrophe inserted between the "s" and the "l" (Landfill's).

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
This is a REALLY GOOD IDEA! Please consider asking Rodney to share this paragraph with the other Land Disposal Program folks at the next Round Table.

Response:
Comment noted. No modification of the tentative Order is necessary.

by:

a. Maps and cross sections showing the locations of the monitoring points; and

b. Drawings and data showing construction details of the monitoring points. These data shall include:

i. casing and test hole diameter;
ii. casing materials;
iii. depth of each hole;
iv. the means by which the size and position of perforations shall be determined, or verified, if in the field;
v. method of joining sections of casing;
vi. nature of filter materials;
vii. depth and composition of soils; and
viii. method and length of time of well development.

9. [1]he compliance point(s) where WQPSs apply shall be located along downgradient edges of waste management facilities at the Landfill or an alternate location approved by the Executive Officer.

10. The compliance monitoring wells at the Landfill shall consist of those wells listed in Item No. 7 of M&RP No. CI-4992. All monitoring wells shall be monitored pursuant to this Order and as directed by the Executive Officer through future revisions of M&RP No. CI-4992.

11. The [2]WQPars and COCs for compliance monitoring wells at the Landfill shall be those described in Item Nos. 10 and 11 of M&RP No. CI-4992.

12. The compliance period [4]or which WQPSs are applicable shall be [3]the entire active life of a waste management facility[5] and during the closure and postclosure maintenance periods.

13. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with M&RP No. CI-4992, as adopted or as revised by the Executive Officer.

14. The [6]WQPS for the on-going CAP at Subsurface Barrier Nos. 1, 2 and 5 of the Main Canyon landfill-gas related VOCs will be the Minimum Levels (ML) as defined in Attachment [illegible]ing USEPA method 8260, or an equivalent method approved by the Executive Officer.

15. The Discharger shall submit semi-annual reports to the Regional Board that

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Sequence number: 1
For a given landfill, there is only one Point of Compliance, along the Unit's downgradient boundary [see T27 20390 and 20405] and only one WQPS [see T27 20390]. There should be at least some of the landfill's wells placed along the surface trace of the Point of Compliance (to meet federal requirements), but wells located elsewhere are just as important. As a component of the landfill's WQPS, the Point of Compliance must either be described in the WDRs or (more likely) its surface trace can be shown on a map in the WDRs. The federal rule allows the POC to be located up to 150 meters downgradient of the landfill, but T27 20405(a) allows it to be placed ONLY along the downgradient boundary of the landfill. Therefore, the only alternative would be as an engineered alternative under 20080(b & c). The WDRs are not complete unless they SHOW or DESCRIBE the POC. It cannot be something to turn in at a future date, as indicated here. SUGGESTION: Draw in the POC on the site map and revise this paragraph to read something like: "9. The Point of Compliance is located along the landfill's downgradient boundary, as shown on [refer here to the map number]."

Response:
The clarifying information is appropriate and the tentative Order has been modified accordingly. See Figure 8 of the revised tentative requirements for a site map showing the Landfill point of compliance.

Sequence number: 2
The MPars are a subset of the landfill's COCs, so this paragraph, as drafted, introduces a needless complexity by not allowing you to refer, succinctly, to those COCs that are not MPars. Suggestion: replace "MPars and COCs" with just "COCs" (in this paragraph) and then modify M&RP General Items 10 and 11 to implement the idea that the COCs, at any given time, consist of the MPar List plus the UCOC List (Uninvolved COCs) for each group of wells (e.g., the wells monitoring the unlined portion will have more COCs). That way you have a nice "handle" both for those COCs that are subject to regular monitoring (the MPars) and those COCs that are subject only to periodic every-five-years checks (UCOCs). This approached is not addressed in the regulations, but should have been (My bayad! My bayad!). Doing it
causes no regulation violation.

Response:
The intent of the monitoring and reporting program is establish a set of monitoring parameters (Mpars), as defined in Attachment I of the tentative Order, that is the subset of the Constituents of Concern that is subject to testing for a measurably significant increase, in detection mode, at all compliance wells. The suggested use of “uninvolved” COCs better defines those constituents that are not Mpars / indicator parameters. The clarifying information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Add here, "the total number of years of"

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
Please delete this phrase because it adds an incorrect meaning to the sentence.

describe the effectiveness of the CAP, according to the schedule outlined in revised M&RP No. CI- 4992.

16. If the Discharger determines that the CAP does not satisfy the provisions of 27 CCR, section 20430(i), the Discharger shall, within 90 days of making the determination, submit an amended ROWD to make appropriate changes to the CAP.

17. Groundwater monitoring results from monitoring well EMP11, downgradient of Subsurface Barrier No. 2, routinely indicate the presence of VOCs. In 1995, The Discharger completed an isotopic analysis on methane detected in the headspace of well EMP11. The analysis determined that the methane was related to naturally occurring petroleum hydrocarbon compounds (methane, benzene, toluene, ethyl benzene, and xylenes) present in the underlying Topanga Formation bedrock. To assure that VOC detections in well EMP11 are not related to a Landfill release, within 60-day from the adoption of this Order, the Discharger submit a technical report containing updated isotopic monitoring well EMP11.

G. REQUIREMENTS FOR ON-SITE USE OF WATER

1. No water shall be routinely applied to refuse fill areas except for landscape irrigation, surface dust control, winter deck construction, road construction, final cover construction or non-emergency uses approved by the Executive Officer. Any water used at the Landfill, except for potable water, recycled water, and any other water allowed by the Executive Officer, shall be subject to these WDRs. Water used for these purposes shall be applied only on completed lifts, in quantities not to exceed that necessary to reduce immediate dust hazards, support plant life, or to achieve desired compaction. Overflow or runoff caused by the over-application or improper management of irrigation or dust control water are prohibited.

2. No wastewater shall leave the Landfill except as permitted by an NPDES permit issued in accordance with the federal Clean Water Act (CWA) and CWC. The Discharger shall maintain and modify, as necessary, the NPDES Storm Water Pollution Prevention Plan developed for the Landfill.

3. Wastewater produced at the Landfill shall not be subject to these WDRs, pursuant to Provision No. G.2 above, if it meets applicable requirements of the CWC, CCR, and HSC for recycled water. In order for wastewater to not be subject to WDRs it shall comply with regulatory criteria promulgated by the DHS, currently set forth in title 22, division 4, section 60301 et seq., CCR, which includes specified approved uses of recycled water, numerical limitations and requirements, treatment method requirements and performance standards to be considered equivalent to recycled water. Because the DHS is statutorily required (CWC section 13521) to establish

The phrase “the total number of years of the entire active life of a waste management facility” encompasses the cited closure and postclosure maintenance periods, thus the clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 5
Not true. Please meet T27 20410 by replacing this phrase with, "plus the estimated duration of the closure period. The landfill's estimated compliance period duration is {add here the estimated number of years}." You, of course, insert the estimated number of years in the quoted phrase. T27 section 20410 requires that the WDRs state the duration of the compliance period, so the WDRs will be incomplete without that estimate. The landfill can only have a for-certain Compliance Period duration after it completes closure. Until then, an estimate must do. By the way, the compliance period is a totally worthless thing the USEPA forced us to include, given that, under our rules, the post-closure maintenance period extends for as long as the waste poses a threat, which is FAR longer than the silly federal end-of-post-closure (30 years duration, unless changed for that landfill). So, we guess at the compliance period's duration, stick it into the WDRs, and call it good.

Response:
The suggested revision that defines the compliance period duration based on an estimated duration of the Landfill closure period is appropriate. The tentative Order has been modified accordingly.

Sequence number: 6
Wrong term. Please substitute "Concentration Limits".

Response:
The suggested term is more appropriate, see page 10, comment 2, above. The tentative Order has been modified accordingly.

Sequence number: 7
Replace with "their respective".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 8
Need a comma here, for clarity, given that Attachment 1 does not use USEPA method 8260.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

maintenance activities, for approval by the Executive Officer, which could alter existing surface drainage patterns or change existing slope configurations. These activities may include, but not be limited to, significant grading activities, the importation of fill material, the design and installation of soil borings, groundwater monitoring wells and other devices for Landfill investigation purposes.

2. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

3. If the Discharger becomes aware that [2] failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information within seven days of its discovery of the omission.

4. The Regional Board shall be notified of any incident resulting from Landfill operations that may endanger the environment, by telephone within 24 hours, and in writing within fourteen days. The written notification shall fully describe the incident including what occurred, when it occurred, the duration of the incident, when correction occurred (or when correction will occur if it is a continuing incident), and the steps taken or planned to reduce, eliminate, and/or prevent recurrence. All instances of noncompliance with this Order shall also be reported to the Regional Board in the same manner as stated [3] bove.

5. The Discharger shall notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage between the Discharger and a new owner of the Landfill. Any transfer agreement between the Discharger and a new owner or operator shall include an acknowledgement that the Discharger is liable for violations up to the transfer date and that the new owner is liable from the transfer date on. The agreement shall include an acknowledgement that the new owners accept responsibility for compliance with this Order.

6. The Discharger shall notify the Regional Board in writing within seven days, if fluid is detected in a previously dry LCRS.

7. The Discharger shall submit or update an existing "Operations Plan" for the Landfill within 90 days after adoption of this Order, to be approved by the Executive Officer, describing Landfill operations which shall include:

   a. A description of proposed treatment, storage, and disposal methods.

Page: 24 comments and responses

Sequence number: 1
Consider broadening the scope, and correct the intent, by rewording as, "If the Discharger or Executive Officer determines that the CAP either fails to contain the release or fails to provide effective remediation for those portions of the aquifer already affected by the release, pursuant to 27 CCR, paragraphs 20430(i or j) respectively, ..."

Response:
Broadening the scope and intent of an appropriate response to a groundwater release from the Landfill as subject to a determination by the Executive Officer is appropriate. The tentative Order has been modified accordingly.

Sequence number: 2
This says that the Discharger can make any changes that they want to. If that is not what you meant, then consider adding something like the following to the end of the sentence, ", subject to approval by (delegated) Regional Board staff."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

maintenance activities, for approval by the Executive Officer, which could alter existing surface drainage patterns or change existing slope configurations. These activities may include, but not be limited to, significant grading activities, the importation of fill material, the design and installation of soil borings, groundwater monitoring wells and other devices for Landfill investigation purposes.

2. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

3. If the Discharger becomes aware that 2 failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information within seven days of its discovery of the omission.

4. The Regional Board shall be notified of any incident resulting from Landfill operations that may endanger the environment, by telephone within 24 hours, and in writing within fourteen days. The written notification shall fully describe the incident including what occurred, when it occurred, the duration of the incident, when correction occurred (or when correction will occur if it is a continuing incident), and the steps taken or planned to reduce, eliminate, and/or prevent recurrence. All instances of noncompliance with this Order shall also be reported to the Regional Board in the same manner as stated 3bove.

5. The Discharger shall notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage between the Discharger and a new owner of the Landfill. Any transfer agreement between the Discharger and a new owner or operator shall include an acknowledgement that the Discharger is liable for violations up to the transfer date and that the new owner is liable from the transfer date on. The agreement shall include an acknowledgement that the new owners accept responsibility for compliance with this Order.

6. The Discharger shall notify the Regional Board in writing within seven days, if fluid is detected in a previously dry LCRS.

7. The Discharger shall submit or update an existing "Operations Plan" for the Landfill within 90 days after adoption of this Order, to be approved by the Executive Officer, describing Landfill operations which shall include:

   a. A description of proposed treatment, storage, and disposal methods.

Page: 26 comments and responses

Sequence number: 1
This pronoun might be appropriate if the landfill were owned and operated by, for example, a duck. Suggestion: replace either with "he has" or with "the Discharger has".

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2

Response:
No comment. A response is not necessary.

Sequence number: 3
Consider adding to the end of this sentence, ", and shall also be included in the next scheduled monitoring report." That way, such occurrences will not escape being noticed by any interested party monitoring the landfill's M&RP reports, using GeoTracker.

Response:
Expanding the notification requirements for any noncompliance with the tentative Order shall to improve interested party review is appropriate. The tentative Order has been modified accordingly.

with overall responsibility for environmental matters in that branch of the military.

b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph [a] of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

i. The authorization is made in writing by a person described in paragraph [a] of this provision;

ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

iii. The written authorization is submitted to the Executive Officer.

c. Any person signing a document under this section 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 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."

I. GENERAL PROVISIONS

1. This Order does not authorize violation of any federal, state, or local laws or regulations.

2. Beneficial uses of surface waters in the canyons/streams at the Landfill are not specifically designated in the Basin Plan. However, since these canyon/streams are tributary to the Las Virgenes and Lindero Hydrologic Subareas of the Malibu Creek Hydrologic Area of the Malibu Hydrologic Unit, the Regional Board finds that the beneficial uses designated in the Basin Plan for the Las Virgenes and Lindero Hydrologic Subareas apply to these tributary canyons/streams.

3. The Discharger shall comply with all the other applicable provisions, requirements, and procedures contained in the most recent version of 27 CCR and any future amendments.

TENTATIVE

Page: 28 comments and responses

Sequence number: 1
This is a bogus requirement, given that it is the Regional Board's job to include site-specific interpretations of all relevant T27 requirements in the WDRs/M&RP. Essentially, this tasks the Discharger with doing the Regional Board's job. Consider replacing with something like, "Any time the Discharger becomes aware of a requirement in 27 CCR, or 40 CFR Part 258, that should be addressed in this order, the Discharger shall so notify the Regional Board within seven days."

Response:
The intent of the specification is not to task the Discharger with environmental compliance oversight. Replacing the specification with a more specific requirement for notifying the Regional Board any time the Discharger becomes aware of a noncompliance concern is appropriate. The tentative Order has been modified accordingly.

4. The Discharger has a continuing responsibility for correcting any problems which may arise in the future as a result of waste discharged at the Landfill, and from gases and leachate that may be caused by infiltration or precipitation of drainage waters into the waste disposal units, or by infiltration of water applied to this property during subsequent use of the land or other purposes.

5. The Discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

   a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

   b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Order;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

   d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the CWC, any substances or parameters at this location.

6. The Discharger shall maintain a copy of this Order at the Landfill so as to be available at all times to Landfill operating personnel.

7. These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes.

8. This Order includes the attached "*Standard Provisions Applicable to Waste Discharge Requirements*", adopted November 7, 1990 (Attachment 2) which is incorporated herein by reference. The Landfill continues to be subject to Regional Board Order No. 93-062 incorporating federal Resource Conservation and Recovery Act (42 USC section 6901, et seq.) regulations, which are also incorporated herein by reference. If there is any conflict between provisions stated herein and the standard provisions, Regional Board Order No. 93-062, or federal regulations, the provisions stated herein will prevail.

9. The requirements adopted herein [1]o not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities

Page: 29 comments and responses

Sequence number: 1
A "do not . . . nor" sequence is nonstandard and, therefore, lacks clarity. Consider replacing "do not" with "neither", thereby creating the standard-usage "neither . . . nor" sequence.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

under federal, state, or local laws.

10. The filing of a request by the Discharger for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any condition, provision, or requirements of this Order.

11. This Order does not convey any property rights of any sort, or any exclusive privilege.

12. The Discharger is the responsible party for these WDRs and any M&RP for the Landfill. The Discharger shall comply with all conditions of these WDRs. Violations may result in enforcement actions, including regional board orders, or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these WDRs by the Regional Board.

13. The Discharger shall within 48 hours of a significant earthquake event, provide an initial verbal assessment to the Regional Board of any earthquake damage at the Landfill. A detailed post-earthquake report describing any physical damages to the containment features, groundwater monitoring and/or leachate control facilities and a corrective action plan to be implemented at the Landfill shall be submitted to the Regional Board with thirty days of the earthquake event. A significant earthquake is herein defined as an earthquake event above Richter Magnitude 5.0 within a 100 kilometer radius of the property boundaries of the Landfill site, or as measured as a VI on the Modified Mercalli Scale.

14. The Discharger shall immediately notify the Regional Board of any flooding, slope failure or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.

15. The Discharger shall submit to the Regional Board and to the Waste Board evidence of financial assurance for postclosure maintenance, pursuant to 27 CCR, division 2, chapter 6. The postclosure period shall be at least 30 years. However, the postclosure shall extend as long as wastes pose a threat to water quality.

16. Within 90 days of the adoption of this Order, the Discharger shall submit to the Waste Board, in accordance with 27 CCR section 22222, assurance of financial responsibility in an amount acceptable to the Executive Officer for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill.

17. The Discharger shall comply with all conditions of this Order and any additional conditions prescribed by the Regional Board in addenda thereto. Noncompliance

TENTATIVE

Page: 30 comments and responses

Sequence number: 1
Now THAT is a REALLY cool paragraph!

Response:
Comment noted. No modification of the tentative Order is necessary.

Sequence number: 2
This phraseology distinguishes between the WDRs and the M&RP in a way that is confusing (the M&RP are a PART OF the WDRs, given that the M&RP is incorporated by reference therein). Please consider replacing with something like, "for these WDRs, including any M&RP or other body of requirements incorporated by reference therein."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Such a requirement is unenforceable unless you add, here, a date certain by which it must be in place, after the "coverage" is approved by your EO and the "instrument" is approved by the CIWMB's Financial Assurance Group.

Response:
Clarification is required to make the requirement more enforceable. The specification has been edited to expand the discussion of required assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill and to include a date certain submittal date (within 90 days of the adoption of this Order).

Sequence number: 4
Unless this landfill is completely closed already, you'll need a new paragraph, similar to this one, that requires the establishment of closure financial assurance, acceptable to the EO, by a date certain. If they already have that in place, then, instead, recognize it and require them to maintain it.

Response:
See page 30, comment 3, above. The specification has been edited to expand the discussion of required assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill that includes an requirement to maintain the financial assurance.

with this Order constitutes a violation of the CWC and is grounds for:

a. enforcement action;

b. termination, revocation and reissuance, or modification of this Order; or

c. denial of a ROWD in application for new or revised WDRs.

18. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

19. This Order is not transferable to any person except after notice to the Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWC. The Discharger shall submit notice of any proposed transfer of this Order's responsibility and coverage as described under Provision No. H.5 of this Order.

20. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to supercision or modification. All discharges of waste into the waters of the state are privileges, not rights.

21. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

22. This Order becomes effective on the date of adoption by the Regional Board.

23. This Order may be terminated or modified for cause, including, but not limited to:

a. Violation of any term or condition contained in this Order;

b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized waste discharge.

24. This Order in no way limits the authority of the Regional Board, as contained in the CWC, to require additional investigations and cleanups pertinent to this project.

Page: 31 comments and responses

Sequence number: 1
Consider substituting the word, "delineated" for clarity.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

This Order may be revised by the Executive Officer as additional information from the project becomes available.

25. Failure to comply with the terms and conditions of this Order may result in imposition of civil liability against the Discharger by the Regional Board, either by the Regional Board or judicially by the Superior Court, in accordance with CWC section 13350 et. seq. and/or referral to the Attorney General of the State of California for such legal action as may be deemed appropriate.

26. Except for violation enforcement purposes, Regional Board Order No. 89-053, adopted May 22, 1989, and Order No. 00-077, adopted May 30, 2000, are hereby superseded. Because Order No. 93-062 also applies to other municipal waste landfills in the region, incorporating federal regulations, it is not superceded.

I, Tracy J. Egoscue, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 2, 2009.

_____
Tracy J. Egoscue
Executive Officer

TENTATIVE

Page: 32 comments and responses

Sequence number: 1
You know, "the idea" behind the Super Order of 1993 was to act as a stop-gap measure until its federal-detection-monitoringprogram-only (DMP-only) requirements could be folded into the next subsequent WDR revision, including any revision that replaced the DMP-only requirements by applying a federal assessment monitoring program and, later, a federal corrective action program. The Super Order (implemented via your Board's Order No. 93-062) cannot function in such an everlasting fashion as implied here and cannot apply unless the landfill is only under a DMP. To figure what federal requirements apply in addition to the known-applicable T27 requirements, just fill out a copy of the Subtitle D Checklist for the landfill. Any question in the Checklist whose answer falls in the rightmost column thereof is missing from the WDRs, so needs to be applied. Other than that, all that applies from SWRCB Order No. 93-62 are the over-and-above composite liner requirements in the body of that order. The way these WDRs/M&RP read to me, if you make the changes suggested, you will be applying all applicable state and federal requirements, but best double-check by running the Sub-D Checklist.

Response:
See page 10, comment 3, above. The revised tentative Order incorporates all federal requirements for a releasing landfill (under title 40 of the code of federal regulations sections 258.55, 258.56, 258.57, and 258.58) and omits general references to the "Super Order".

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-4992
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(CALABASAS LANDFILL)

(File No. 60-118)

TENTATIVE

General

1. Monitoring responsibilities of the Sanitation Districts of Los Angeles County (Discharger) for the Calabasas Landfill (Landfill) are specified in California Water Code (CWC) section 13225(a), section 13267(b) and section 13387(b), and State Water Resources Control Board (SWRCB) Resolution No. 93-62. This self-monitoring program is issued pursuant to California Regional Water Quality Control Board, Los Angeles Region (Regional Board) Order No. R4-2009-XXXX. The principal purposes of a self-monitoring program by a waste discharger are:

   a. To document compliance with discharge requirements and prohibitions established by the Regional Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; and

   c. To prepare water quality analyses.

2. The Discharger shall implement this monitoring and reporting program (M&RP), as described in section F (Requirements for Groundwater Monitoring) of Regional Board Order No. R4-2009-XXXX. The Discharger shall implement this M&RP during the first monitoring period immediately following adoption of this Order.

3. The Discharger shall submit any reports required by this Order electronically, in accordance with section 3890 et. seq. of the 23 CCR, division 3. In addition, complete paper copies of any Joint Technical Document (or addenda thereto), Closure/Post-Closure Plan, Final Design Report or Construction Quality Assurance Report, shall be submitted to this Regional Board office by the required electronic submittal date.

4. The Discharger shall comply with the requirements of 27 CCR section 20415 for any water quality monitoring program developed to satisfy 27 CCR section 20420, section 20425, or section 20430 and the requirements of this Order.

   a. Groundwater monitoring shall meet the requirements of 27 CCR section 20415(b) and 40 CFR section 258.51 (a, c, and d)

Page: T-1 comments and responses

Sequence number: 1
It is the Regional Board's job to do this by including a site-specific interpretation of EVERY applicable standard in the WDRs/M&RP. Don't tell the Discharger to do the Regional Board's job for it! Therefore, consider rewording this phrase to read, ". . . 20430, as interpreted in this Order."

Response:
The intent of the specification is not to task the Discharger with environmental compliance oversight. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Please add here, ", as interpreted in this Order."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

b. Surface water monitoring shall meet the requirements of 27 CCR section 20415(c) and shall be conducted in accordance with Item No. 16(b) of this M&RP. In addition, whenever possible, the Discharger shall measure volumetric flow or, at a minimum, visually estimate the flow rate for all surface water monitoring points with flowing water (i.e. any flowing seeps or springs that develop during the development or operation of the Landfill);

c. An unsaturated zone monitoring program is required by 27 CCR section 21769. However, as described in Finding No. 27 of Order No. R4-2009-XXXX, unsaturated zone monitoring attempted at the Landfill has proved ineffective. Through adoption of this Order the Regional Board approves that an unsaturated zone monitoring program is not required for continued operation of the Landfill.

Monitoring Program

5. For the purposes of this monitoring program the terms "monitoring well", "extraction well", "observation well", "piezometer", and "sump" are synonymous.

6. Annual Appendix II Leachate Scan - Pursuant to 40 CFR section 258.55(b), the Discharger shall sample leachate in October from the LCRSs from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners and shall analyze the samples for all constituents of 40 CFR Appendix II (Appendix II) that have not, to date, been detected in the Landfill's leachate and verified by re-sampling as well as any other constituent directed by the Regional Board's Executive Officer (Executive Officer). If the October leachate testing identifies any previously undetected Appendix II constituent(s), the Discharger shall obtain a single leachate retest sample the following April and analyze it for all such new constituents. Any constituents verified in the April retest shall become part of the COC list for corresponding downgradient monitoring wells. The Discharger shall include a prominent notification of these new COCs in the next scheduled monitoring report. The current COC list compiled from annual leachate monitoring from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners LCRSs are indicated in Table 1 of this M&RP.

7. The existing compliance groundwater monitoring system at the Landfill (see Figure 1, attached) includes three monitoring wells (R02A, R02B, M22B) for the Barrier 1 area, four monitoring wells (R06A, R06B, EMP10, EMP11) for the Barrier 2 area, one monitoring well (M18D) for the Barrier 3 area, one monitoring well (M19R) for the Barrier 4 area , eight monitoring wells (R07A, R07B, R08B, M20S, P64S, P67S, P68S, P69S) for the Barrier 5 area, and two monitoring wells (M15B, M16A) for the Barrier 6 area. Because the Discharger has established ranges of background groundwater quality at the Landfill and documented the heterogeneous nature of the groundwater quality at the Landfill, the Executive Officer finds that no concurrent background groundwater monitoring point are likely representative of any single downgradient monitoring well.

TENTATIVE

Page: T-2 comments and responses

Sequence number: 1
Please replace this phrase with, " and NPDES requirements, as interpreted in this M&RP and the landfill's NPDES permit."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Please add here, ", at-or-above the constituent's respective PQL concentration,".
WHY: it will have to be at least that strong to have any chance of being detected in a release, at-or-above its MDL concentration. Therefore, in order to avoid adding in a bunch of constituents you'd never be able to detected (given a release), this meaning for "detected" is handy for leachate testing.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Suggestion: in order to keep the COC list perpetually updated, and to prepare each new COC for if/when it becomes an MPar, consider adding here something like, "During any year when one or more constituents is added to the landfill's COC list, the Discharger shall proclaim the new COCs prominently in the annual monitoring report and shall include the revised COC list in an appendix to that report, which revised list shall take the place of COC list included herein. For any newly-added COC, the Discharger shall begin immediately collecting samples quarterly from each compliance and background well for 2.5 years (10 data points per well, for each new COC) and shall include, in the next monitoring report following collection of this data, a proposed Concentration Limit for that new COC at each compliance well respectively (i.e., list the 10 data points from the chosen background source, and name that source whether it is a given background well {interwell background} or is the compliance well in question {intrawell background}) together with a viable substantiation for using that background data source for that well/COC pair. If the new COC is a VOC, then it shall become a monitoring parameter (MPar) as of the next reporting period following the establishment of its Concentration Limit. If the new COC is not a VOC, then it shall go onto the landfill's UCOC list (i.e., those COCs that are not MPars) immediately following the establishment of its Concentration Limit." Remember, if you STATE this stuff in the M&RP, then you don't have to respond to it by "shooting from the hip" every time the issue comes up.

Response:
An express intent of the monitoring and reporting program is that the COC list perpetually updated, and to prepare each new COC for if/when it becomes an MPar. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
Insert a space here.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Therefore, inter-well background water quality monitoring for this M&RP are not required unless directed by the Executive Officer. Monitoring elements include the validating of intra-well background data sets (Item No. 13, below); detection of man-made constituents in background wells (Item No. 17); and ongoing background well testing (Item No. 18).

8. Existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figures 2-4 (attached).

Sampling and Analytical Methods

9. Groundwater monitoring shall be conducted on a quarterly basis as shown in the following schedule:

Period	Sampling Period
January – March	February
April - June	May
July – September	August
October – December	November

10. MPar List - At any given time, the MPar list for the Landfill shall include all constituents listed for the compliance monitoring wells in Table 2 of this M&RP. The attached list is the MPar list as of the effective date of Order No. R4-2009-XXXX. Any time a new constituent is added to the MPar list, as discussed below, the Discharger shall provide the Regional Board with an updated list of this table. MPars vary for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) of the Landfill the MPars consist of general organic and inorganic indicators of concern, all Appendix I VOCs, any anthropogenic Appendix II constituents detected in groundwater, and any COCs detected and verified in groundwater samples obtained as part of the five-year scans under Item No. 12(b) of this M&RP. For lined areas (Barriers 3, 4, and 6) the MPars consist of general organic and inorganic indicators of concern, any anthropogenic Appendix II constituents previously detected in groundwater, and any COCs detected and verified in the five-year scans under Item No. 12(b) of this M&RP.

11. COC List - As of the effective date of Order No. R4-2009-XXXX, the list of potential COCs consists of those constituents listed in Table 3 of this M&RP. As above, COCs vary for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) the COCs include all Appendix II constituents not identified as Mpars as well as any other constituent directed by the Executive Officer. For lined areas (Subsurface Barriers 3, 4, and 6), the COC list includes all Appendix II constituents detected and verified in the annual leachate testing under Item No. 6 of this M&RP as well as any other constituent directed by the Executive Officer. Subsequently, the Discharger shall note prominently the constituent(s) added to the COC list in the next scheduled monitoring report.

TENTATIVE

Page: T-3 comments and responses

Sequence number: 1
This word should really be changed to the phrase, "The MPar List and, therefore, the COC List (= MPar List + UCOC List), varies . . . ."

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
For simplicity, consider adding at the end of this sentence, ", shall identify this move (from the UCOC List to the MPar list, for that portion of the landfill) prominently in the next scheduled monitoring report, and shall exhibit a revised COC List (showing the revised MPar and UCOC Lists for that portion of the landfill) as an appendix in the next annual summary monitoring report, which revised COC List shall replace the prior COC list (e.g., the one in this M&RP)."

Response:
Because an express intent of the monitoring and reporting program is that the COC list perpetually updated, and to prepare each new COC for if/when it becomes an MPar it is imperative that there be adequate notification and reporting on the status the Landfill COCs and Mpars. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Whoa!! You REEEALLLY need to add here, " every Appendix I VOC that have ever shown up in a leachate sample and been verified by retest, and . . . ."

Response:
The suggested correction is consistent with the definition for an MPar, as discussed in Attachment 1 to the WDRs. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
To complete the picture, use this wording to check yours in Item 11, "UCOC List - Likewise, the UCOCs and, therefore, the COCs (= MPar List + UCOC List), vary for unlined versus lined portions of the Landfill. For the unlined areas described above, the UCOC List includes all Appendix II constituents that have never been identified as being in groundwater pursuant to the five-year scans under Item No. 12(a, b, or c), plus any constituents added by the Executive Officer. For lined areas described above, the UCOC List includes only those Appendix II constituents that have been detected and verified (by retest) to be present in leachate at-or-above their respective PQL concentration under Item No. 6 of this M&RP, and that have not become an MPAR pursuant to the five-year scans under Item No. 12(a, b, or c), plus any constituents added by the Executive Officer.
See? I told you it would be both simple and a most succulent model of brevity!

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 5

Given the way you break up the MPar and UCOC lists, in 10 & 11, be SURE that you assign the compliance and background wells to each group having a unique MPar list. Otherwise, the discharger will not know which MPar list to use for a given well. That should not be left up to chance.

Response:
See Table 2 (Mpars for Montoring Program Wells) include in M&RP CI-4992 that specifically includes the MPar list for each compliance monitoring well as suggested in the comment.

12. This Order recognizes that there has been a release from the Barriers 1, 2, and 5 areas of the Landfill. Therefore, the Discharger shall continue to comply with a federal AMP and state CAP requirements for the known releases by incorporating the following monitoring and analysis requirements.

    a. COC scans for the releases have previously been completed.

    b. Five-Yearly COC Scan - Every five years, the Discharger shall analyze a sample from each compliance groundwater monitoring point known to be within the release ["affected well," as described in Item No. 12(c) of this M&RP] for the detectable presence (including trace determinations) of all COCs that are not yet on the MPar list. This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR section 258.55(b-d).

        i. During each such COC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each required well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting a COC that is not yet on the MPar list, the Discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

        ii. Any COC detected in samples collected from a groundwater monitoring well, and verified by a retest, automatically becomes part of the MPar list for the Landfill. The Discharger shall notify Regional Board staff of any such change immediately via phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall note prominently the constituent(s) added to the MPar list in the next scheduled monitoring report, along with a listing of which well(s) were involved in this detection and verification. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR section 258.55(d)(2).

    c. Five-Year COC Scans only at Affected Point of Compliance (POC) Wells - Pursuant to 40 CFR section 258.55(b), the Regional Board hereby limits the scope of five-yearly COC list scans, under Item No. 12(b) of this M&RP, to "affected wells" (those groundwater monitoring points that are within the plume, as indicated by their having at least one MPar that is in tracking mode (see Item No. 13(f)(ii)) that are along the Landfill's POC. Nevertheless, the Executive Officer can, at any time, increase the scope of the affected wells that shall be subject to COC scanning to include selected groundwater monitoring points, whether or not they are located along the POC, that provide a strong indication of a release.

13. Statistical Data Analysis Methodology

TENTATIVE

Page: T-4 comments and responses

Sequence number: 1
General comment: this would be a good place to make clear that the ENTIRE landfill is included in the state-and-federal CAP (no "concurrent programs" approach). If you don't make that issue very clear, the reader has to guess ~~~> not eeeeven good!

Response:
A clarifying statement has been added to the tentative monitoring and reporting program, as suggested, indicating that the tentative Order places the entire Landfill into a CAP while implementing corrective measures for the known releases meeting applicable state and federal requirements.

Sequence number: 2
This should be "UCOC".

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
UCOC

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
Better as, " . . . of all UCOCs applicable to that well."

Response:
See page 23, comment 2, above. The suggested use of “uninvolved” COCs better defines those constituents that are not Mpars / indicator parameters. The clarifying information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 5
The annual UCOC scans you describe in 12.b.i-&-ii completely blow away the need to have the more ineffective five-yearly statistical UCOC testing Title 27 requires, and that you misidentify in 12.c. So, blow 12.c. away and add here something like, "In addition, this approach is imposed, pursuant to Section 20080(a)(1) of Title 27, as a replacement for the less-stringent-and-effective five-yearly statistical testing of UCOCs normally applied under Title 27."

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 6
UCOC

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 7
Shouldn't this word be "affected", as described under 12.b?

Response:
No comment. A response is not necessary.

Sequence number: 8

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 9
UCOC

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 10
Please change to "UCOC (COC that is not yet on the MPar List applicable to that well),".

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 11
UCOC

Response:
See page 23, comment 2, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 12
Try, instead, "moves automatically from the UCOC List applicable to that well to its MPar List."

Response:
An express intent of the monitoring and reporting program is that the COC list perpetually updated, and to prepare each new COC for if/when it becomes an MPar, see Page T2, comment 3, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 13
For completeness, add to this sentence, ", and shall include an updated COC List (showing the revised MPar and UCOC Lists applicable to that group of wells) as an appendix to the annual monitoring report, which revised COC List shall supercede the previously applicable COC List for the wells to which it applies (named at the top of the list)."

Response:
See Page T4, comment 13, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 14
So, as described in the note at the end of 12.b, above, this paragraph is no longer needed (blow it away).

Response:
See Page T4, comment 5, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

a. For the purposes of this M&RP, Minimum Level (ML) and Reporting Limit (RL), as described in Attachment 1, are functionally equivalent to method detection limit (MDL) and practical quantitation limit (PQL) with regard to reporting and statistical evaluation requirements. For this purpose, MLs and RLs shall be derived by the laboratory for each analytical procedure, according to the SWRCB's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy or SIP) and the State of California's laboratory accreditation procedures. Sample results greater than or equal to the ML/RL shall be reported "as measured" by the laboratory. Sample results less than the ML/RL shall be reported as less than the numeric values of the ML/RL. Nominal ML and RL values shall be reported with all data. Correspondingly, any reference to "detections at or above the trace level" shall be substituted with "detections at or above the Minimum Level"

b. Intra-Well Comparisons are Standard - The Mpars for each compliance well that are subject to routine data analysis are indicated in the attached Table 2. Except as otherwise provided in Item Nos. 13(b)(i)(B & C) and 12(g)(ii) of this M&RP, intra-well comparison methods shall be used at all compliance wells for all MPars that are subject to data analysis under this Order and shall be used to test individual "background" (e.g., upgradient) wells regarding unexpected increases in man-made constituents (e.g., VOCs), as follows:

i. Pre-Detection Background Data Set - Initially, except as otherwise provided in Item Nos. 13(b)(i)(C & D) or 17, for each given MPar at a given downgradient monitoring well (well/MPar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, from the previous five-year period. Every two years, following the adoption of this Order, as part of the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP), the Discharger shall add the newer data to the background data set for each well/MPar pair after validating (via a method approved by the Executive Officer) that the new data does not contain data indicating an increase over the existing background data. At that time, the Discharger shall also retire the oldest two years of background data for the well/MPar, thereby producing a data set covering the then-previous five years. The Discharger shall validate the proposed intra-well background data set as follows for each MPar at each well (initially) or, subsequently, at a new well or for a new MPar at an existing well. The Discharger shall report the validated or updated background data set, for each affected well/MPar pair, in the next scheduled monitoring report. Initial background data validation shall be as follows:

T E N T A T I V E

Page: T-5 comments and responses

Sequence number: 1
There IS no such Item Number, given that Item 12 ends with 12.c (after eliminating that from the draft, it will end in 12.b.ii). Please fix.

Response:
See the response to the Sanitation Districts 3/10/2009 Comment, Specification No. 13(b), tentative Monitoring and Reporting Program. The reference to the cited specifications is incorrect and has been corrected in the tentative Order.

A. Accelerated Background Data Procurement - if there are less than ten post-1997 data points available, for a given MPar at any background or compliance well, the Discharger shall implement the accelerated data procurement effort described in Item No. 15 of this M&RP to achieve a minimum background sample size. [1] minimum background sample size of 10 data points per well shall be acquired prior to initiating the intra-well background data set validation procedure described below unless the Discharger makes a technical submittal that is approved by the Executive Officer for a smaller minimum background sample size;

B. Validate Upgradient Data for Man-Made MPars - for any MPar that is a non-metallic Appendix II constituent (i.e., that is man-made), the initial intra-well data validation under Item No. 13(b)(i)(C) shall utilize only data from those upgradient (or sidegradient) background wells whose data from the previous five years, for that constituent, exceeds the constituent's MDL in less than 10% of the well's data. Such man-made constituents should not be detectable at background wells except in error (around 1% of the time) or because the constituent comes either from the Landfill or from another source. Therefore, for any background well rejected pursuant to this item, for a given MPar, if the Discharger has not already explained the constituent's presence at that well to the satisfaction of the Executive Officer, the Discharger shall conduct an investigation under Item No. 17 of this M&RP. If there are one or more non-rejected background wells, the Discharger shall use their data to validate each well/MPar pair's proposed intra-well background data set, under Item No. 13(b)(i)(C); and

C. Intra-Well Background Validation for New Well/MPar Pairs - for all compliance wells initially and, subsequently, for new wells or a new MPar at an existing well, to determine whether the existing data for that MPar at that well can be used as its intra-well comparison background data set:

[2]

1. Commonly Quantified Constituents - for any MPar that, absent the existence of the Landfill, would usually be detected in groundwater at concentrations exceeding the constituent's PQL, the Discharger shall validate the proposed intra-well background data at each compliance well by comparing it to a pooled box-and-whiskers plot, for that MPar, from all "background" (upgradient or sidegradient background) wells completed in the same

TENTATIVE

Page: T-6 comments and responses

Sequence number: 1
You may know this already, but you can defend this minimum sample size, if necessary, by having ready-to-hand (at the adoption meeting or a prior hearing) Anita Singh's many references to the need for at least 8 to 10 data points (see her manuals for Pro-UCL, which are in the Technical e-Library under the DATA ANALYSIS topic listing).

Response:
Comment noted. No modification of the tentative Order is necessary.

Sequence number: 2
Good thinking on this (and its underlying subparagraphs). I like it. Of course, you have to take into account that fact that I am a bit warped but it is good thinking nevertheless.

Response:
Comment noted. No modification of the tentative Order is necessary.

groundwater body. If any such constituent's median concentration (for a downgradient well) exceeds the pooled background plot's 75th percentile (upper boundary of the box, in a box-and-whisker plot), then that compliance well's existing data cannot be used as the intra-well comparison background data set for that well/MPar pair. Such a well/MPar pair shall be tested, beginning no later than the next scheduled reporting period, using an inter-well comparison data analysis method (against the applicable background well(s)) that the Executive Officer agrees meets the requirements of 27 CCR section 20415(e)(9). Otherwise (i.e., for a well/MPar pair whose existing data's median is less than the pooled background plot's 75th percentile), that existing data shall be used as the initial background data set for intra-well comparisons for that well/MPar pair; or

2. Rarely Quantified Constituents - for an MPar that, absent the existence of the Landfill, would seldom be detected in groundwater (e.g., non-metallic Appendix II constituents), the Discharger shall identify the highest value from the pooled data set from all background wells that have passed validation under Item No. 13(b)(i)(B) or, in a case where all applicable upgradient well data is non-detect, the MDL. The Discharger shall use this value as a basis of comparison to validate the data points in the proposed intra-well background data set. The initial intra-well background data set for that downgradient well shall consist of all data points in the proposed intra-well background data set that are less than this value.

ii. Post-Detection Background Data Set - For any constituent that is in "tracking mode" (see Item No. 13(f)(ii) of this M&RP), at a given well, its background data set shall be the background data set that was in effect when the well/MPar pair exhibited a measurably significant increase.

c. Performance Standards - All data analysis methods (statistical or non-statistical) shall meet the requirements of 27 CCR section 20415(e)(9).

d. Retest is Part of the Method - In the event that an approved data analysis method provides a preliminary indication that a given MPar has exhibited a measurably significant increase at a given well, the Discharger shall conduct a verification procedure in the form of a discrete retest, in accordance with 27 CCR section 20415(e)(8)(E). The retest is part of the data analysis method; therefore, a

Page: T-7 comments and responses

Sequence number: 1

Response:
No comment. A response is not necessary.

Sequence number: 2
Consider rewording such that the Discharger is not in the catbird seat and it addresses related issues too: "For each well/MPar pair, the discharger shall use a data analysis method approved, for that well/MPar pair, by delegated Regional Board staff (e.g., Executive Officer), that the Discharger has demonstrated meets all applicable requirements under 27 CCR 20415 (e)(9). For the purposes of this paragraph, pursuant to authority under 27 CCR 20080(a)(1), the error rate restrictions of 27 CCR subparagraph 20415(e)(9)(B) does not apply to any statistical method that (including its retesting approach {e.g., a pass-1-of-3 approach) meets or exceeds the USEPA's Reference Power Curve.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Insert here "either" and do the next change too, to open up options.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
To complete the broading-of-options, consider inserting here, ", or, pursuant to 27 CCR 20080(a)(1), any of the better-performing resting options (e.g., the pass-1-of-3 approach) in which the triggering concentration is lowered to counter the adverse effect that retesting would otherwise have on the data analysis method's false-negative rate (compared with a no-retest pass-1-of-1 approach). Nevertheless, any approved nonstatistical method used for data analysis shall use a pass-1-of-2 retesting approach."

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 5
This comma should be a semi-colon.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

measurably significant increase exists only if either or both of the retest samples validates the preliminary indication. The Discharger has the discretion to accept that the preliminary indication confirms a measurably significant increase at a given monitoring well and forgo verification retesting procedures.

e. Limited Retest Scope - For any given groundwater monitoring point, the Discharger shall perform the verification procedure only for those MPars that have shown a preliminary indication at that well during that reporting period. At any time, the Discharger may demonstrate, in accordance with 27 CCR section 20420(k)(7), that a source other than the Landfill caused an MPar to produce a measurably significant increase at a given well or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the ground water.

f. Water Quality Monitoring Approach - The monitoring approach used for each well/MPar pair shall be controlled by whether that MPar has exhibited a measurably significant increase at that well. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows:

i. Detection Mode - For an MPar that has not produced a measurably significant increase at that well, the purpose of monitoring, for that well/MPar pair, is to watch for the MPar arrival at that well at a concentration strong enough to trigger a measurably significant indication using an appropriate statistical or non-statistical data analysis method; or

ii. Tracking Mode - For an MPar that has produced a measurably significant increase at a given well, the purpose of the monitoring, for that well/MPar pair, is to verify the suitability and effectiveness of the existing or proposed corrective measures by tracking changes in the MPar concentration at that location via an evolving concentration-versus-time plot.

g. Detection Mode Data Analyses - The following applies to all detection mode data analyses (i.e., this provision does not apply to the scans under Item Nos. 12(b) or 6 of this M&RP, or to well/MPar pairs that are in tracking mode):

i. MPars Readily Detectable in Background - At any given groundwater monitoring point, the Discharger shall apply an approved statistical analysis method for each detection mode MPar that exceeds its respective MDL in 10% or more of the applicable background data set. For each well/MPar pair (separately), an approved statistical analysis is a method, other than analysis of variance (ANOVA), that is either validated and analyzed by the SANITAS® water quality data analysis software (distributed by Intelligent Decisions Technology, Inc., 203 South Main

TENTATIVE

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Sequence number: 1
Given the broader scope of acceptable options, consider rewording it something like, ". . . exists only if the retesting does not countermand the preliminary indication, according to the retesting formula (e.g., under a pass-1-of-3 approach, the preliminary indication stands if neither of the retests countermands it)."

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Good thinking, here, and clearly written! That is far easier to note than to accomplish.

Response:
Comment noted. No modification of the tentative Order is necessary.

Sequence number: 3
IDT's new name and address is
Sanitas Technologies22052 W 66th StreetSuite 133Shawnee, KS 66226
technical support: (719) 742-3661
statistical support / sales: (913) 829-1470

Response:
The contact information for Sanitas Technologies has been corrected accordingly.

Street, Longmont, CO 80501, Tel: 303-774-9120) or that the Executive Officer agrees meets the performance standards of 27 CCR section 20415(e)(9). If using SANITAS®, the Discharger shall use the "CA Standards" and "CA Retest" settings (under the "Options" pull-down menu). Otherwise:

A. For any such well/MPar pair that, as of the effective date of this Order, does not have an approved statistical analysis method, the Discharger shall propose and substantiate an appropriate statistical method within 90 days of the adoption of this Order;

B. After the adoption of this Order, for any new MPar that qualifies for statistical analysis by meeting the above 10% rule at a given well, the Discharger shall propose and substantiate an appropriate statistical method for that well/MPar pair as part of the background data validation under Item No. 13(b)(i)(C).

ii. MPars not Readily Detectable in Background - For any monitoring point at which one or more detection mode MPars exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these MPars via the California Non-statistical Data Analysis Method (CNSDAM) test described in Item No. 14 of this M&RP.

14. California Non-statistical Data Analysis Method

a. Non-Statistical Method for Detection Mode for MPars Seldom Found in Background - For any given compliance (downgradient) well, regardless of the monitoring program (Detection Monitoring Program [DMP], Evaluation Monitoring Program [EMP], Assessment Monitoring Program [AMP], or Corrective Action Program [CAP]), the Discharger shall use this data analysis method, jointly, for all constituents on the "scope list" of Item No. 14(a)(i) of this M&RP (or, for each retest sample, the modified scope list of Item No. 14(b)(ii)).

i. Scope List – Within 90 days of the effective date of this Order, the Discharger shall create a current "scope list" showing each detection mode MPar, at that well, that exceeds its MDL in less than 10% of its background data.

ii. Two Triggers - From the scope list made under Item No. 14(a)(i), above, for an initial test (or, for a retest, the modified scope list under Item No. 14(b) below), the Discharger shall identify each MPar in the current sample from that well that exceeds either its respective MDL or PQL. The Discharger shall conclude that these exceeding MPars provide a

TENTATIVE

Page: T-9 comments and responses

Sequence number: 1
Best add, here, "once its Concentration Limit (under Item No. 6) has been established at each compliance well," . (This assumes that you made the change I suggested at the end of Item No. 6.)

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

preliminary indication (or, for a retest, provide a measurably significant indication) of a change in the nature or extent of the release, at that well, if either:

A. Two or more of the MPars on a monitoring well's scope list exceed their respective MDL; or

B. At least one of the MPars on a monitoring well's scope list equals or exceeds its respective PQL.

b. Discrete Retest:

i. In the event that the Discharger concludes (pursuant to Item No. 14(a)(ii) above) that there is a preliminary indication, then the Discharger shall immediately notify Regional Board staff by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 30 days of such indication, collect two new (retest) samples from the indicating compliance well.

ii. For any given compliance well, the Discharger shall analyze the retest sample only for those constituents indicated in that well's original test, under Item No. 14(a)(ii) of this M&RP, and these indicated constituents shall comprise the well's "modified scope list." As soon as the retest data are available, the Discharger shall apply the same test (under Item No. 14(a)(ii) above, but using this modified scope list) to separately analyze each of the two suites of retest data at that compliance well.

iii. If either (or both) of the retest samples trip either (or both) of the triggers under Item No. 13(a)(ii), then the Discharger shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample(s). Furthermore, thereafter, the Discharger shall monitor the indicated constituent(s) in tracking mode (instead of detection mode; see Item No. 13(f)(ii) of this M&RP) at that well, shall remove the constituent(s) from the scope list created (under Item No. 14(a)(i) of this M&RP) for that well, notify the Regional Board by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall highlight this conclusion and these changes in the next scheduled monitoring report.

c. The Discharger may propose alternative non-statistical methods for MPars seldom found in background to be approved by the Executive Officer.

TENTATIVE

Page: T-10 comments and responses

Sequence number: 1
If the landfill has at least six VOC MPars (i.e., that have been detected in leachate or LFG), consider halving that number, rounding down (if the quotient is not an integer) and substituting here. For example, if there are seven KNOWN VOCs, then replace this phrase with "Three or more". In any REAL release, most VOCs will move in LFG released and will be detected at wells in water touched by that LFG, so replacing this "hair trigger" with one requiring a firmer pull will not miss any real releases and will help prevent false-positive indications.
You are likely to have MORE VOC species from the no-leachate unlined portion, so this approach (that is based on what is in leachate in the lined portions) remains conservative.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
This test has evolved since the version you used to create this. The changes (here and below) will update the test.
Consider rewording as "Single Retest (pass-1-of-2 approach):" , given that the phrase "discrete retest" means a pass-2-of-3 approach, to most folks, and that would be inappropriate for a nonstatistical test that cannot have its triggering concentration adjusted downward to counter the retesting effect.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
This phrase should be "one new (retest sample" because nonstatistical methods: 1) are not subject to the requirements of 20415(e)(8)(E)1 ; and the NSDAM cannot have its triggering concentrations lowered to counter the adverse effects of doing a retest. Yet retesting is still important. So, the trick is to allow only one retest (pass-1-of-2 approach).

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
Delete the "s"

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 5
Delete phrase.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 6
Rephrase as, "If the retest sample trips".

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 7
You are starting a "shall" list here, so insert a colon after Discharger.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 8
Rephrase as, "in both the original and in the retest sample (i.e., not including constituents triggering in only one of the two samples)."
This way the test "indicates" only for those initially-indicating constituents that have been validated by retest, which is how one would proceed if one were running ANY data analysis test on a single constituent.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 9
Change comma to a semi-colon.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 10
Rephrase as "mode (see".

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 11
Replace with, "move that constituent to Tracking Mode, at that well, thereby eliminating it from the "scope list" [under Item No. 14(a) (i) of this M&RP] for that well during future runs of this nonstatistical method; shall ".

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 12

Sequence number: 13
Add here, "; shall note this change prominently in the body of the forthcoming monitoring report and in that report's summary; and shall list the revised MPar and UCOC lists, for that group of wells, in an

appendix to that year's annual summary monitoring report, with the wells to which it applies noted at the top of that listing." Now THAT is a complete list, leaving no turn unstoned.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 14
Delete, given that it is included in the TO DO list that follows the inserted colon.

Response:
The clarifying edit is appropriate and the tentative Order has been modified accordingly.

Sequence number: 15
To avoid being pestered by Bozo Boy proposals, consider adding to the end of this sentence: ", together with a technical discussion showing how the proposed method performs at least as well as the one described above at achieving the goal of providing the earliest possible detection and measurement of a release for any given rarely-detected constituent at any given well."

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

15. Establishing Initial COC Data:

For any COC that does not have the minimum background sample size required at any given background and compliance well, the Discharger shall establish the prevailing concentration of that constituent at each such data-deficient well by taking and analyzing one sample [1]monthly at each data-deficient background and downgradient monitoring point until each such well has at least ten data points, or fewer if approved by the Executive Officer. For any background or compliance well installed after the effective date of this Order, the Discharger shall establish the prevailing concentration for each COC by using this accelerated sampling schedule [2]or up to ten months. These data shall be used, as described in Item No. 13(b)(i)(A-C) of this Order, in the event that the COC becomes an MPar. For any constituent for which [3]monthly sampling would be too frequent to obtain reasonably independent data, even using the post-sampling purge approach described in 27 CCR section 20415(e)(12)(B), the Discharger shall include, for approval by the Executive Officer, a proposed date for completion of data procurement and a well-specific and constituent-specific technical validation for any wait of more than one month between successive sampling dates.

16. Other Monitoring

a. Unsaturated zone monitoring is not required at the Landfill.

b. The Discharger shall satisfy all stormwater monitoring requirements pursuant Order No. R4-2009-XXXX regulating surface water discharges. Specifically, the Discharger shall satisfy requirements of NPDES permit WDID No. 4B196000294, industrial stormwater permit WDID No. 4 19I006192, and any revisions to the permit.

17. Frequent Detection of a Man-Made Constituent in a Background Well - Any time a (upgradient or sidegradient) background well exhibits an excessive frequency or proportion of trace-level or numerical concentration data for any MPar (under Items Nos. 13 or 18) or COC (under Item Nos. 15 or 18) that is a non-metallic Appendix II constituent, the Discharger shall conduct an investigation under this paragraph. For such a constituent: an "excessive proportion" constitutes a condition, under Item No. 13(b)(i)(A), where 10% or more of the data from that background well exceeds the MPar MDL; and an "excessive frequency" constitutes a condition, under Item No. 18, in which new data at that background well exceeds the constituent's MDL for two successive samples. Given either condition, the Discharger shall notify the Regional Board immediately by phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 180 days thereafter, submit a report, acceptable to the Executive Officer, that examines the possibility that this constituent originated from the Landfill (e.g., using a concentration gradient analysis) and that proposes appropriate changes to the monitoring program. If, after reviewing this report, the Executive Officer:

[4]

TENTATIVE

Page: T-11 comments and responses

Sequence number: 1
Many aquifers will not provide sample independence reliably, when sampled this frequently. Consider changing this to "quarterly" and, if the Discharger gives you grief, make them do an aquifer-specific determination of the time between successive samples needed to avoid serial correlation effects, then change it to that period-between-samples (for a given constituent at any given well).

If you DO get data having serial correlation, all statistical test results will be garbage, a fact the Discharger can demonstrate rather easily any time the data analysis conclusion proves inconvenient.

FYI: note that the draft changes for the NSDAM retest leave in the usual "within 30 days" time-span for grabbing the retest sample (after the initial indication). THAT is because the NSDAM test does not require sample independence.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Given the change to quarterly sampling, this would be, "for up to 2.5 years."

Response:
See Page T-11, comment 1, above. The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3
Change to "quarterly" or (better yet) remove the entire sentence, given that the above changes to this paragraph make this sentence no longer necessary.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 4
These two triggers are a darn good idea. Bravo!

Response:
Comment noted. No modification of the tentative Order is necessary.

a. Concludes that the evidence indicates the man-made constituent originated from a source other than the Landfill, then the Executive Officer will make appropriate changes to the monitoring program, including switching to an appropriate statistical inter-well comparison procedure, for that constituent, for all detection-mode analyses at the Landfill, using a suite of background data that reflects the expected concentration for that constituent; or

b. Is unable to conclude that the evidence indicates the detected man-made constituent came from a source other than the Landfill, then the Discharger shall:

i. List this constituent as an MPar, if it is not already so listed, in the next scheduled monitoring report and shall note this change prominently in the report's synopsis;

ii. Shall include this background well as part of the release, for that MPar and, thereafter, shall address this well/MPar pair in tracking mode (i.e., as part of the release), in spite of the well's being a background well, beginning with the next scheduled monitoring report; and

iii. If there is not at least one other background well unaffected by this constituent, shall, within 90 days, install a new upgradient or sidegradient background well in a portion of the aquifer that will provide data representative of background conditions for the Landfill's compliance wells, and shall carry out an accelerated sampling schedule, for that constituent, under Item No. 15, to provide representative background data for validating the use of intra-well comparison testing under Item No. 13 above.

18. Ongoing Background Well Testing - Even though most data analysis will be via intra-well comparisons, the Discharger shall continue to monitor background wells, for each MPar and COC, each time that MPar or COC is monitored at downgradient wells. Each year in which there is new background well data for a constituent (i.e., quarterly for MPars and every five years for non-MPar COCs), the Discharger shall include the new data in the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP) as a time-versus-concentration plot for that background well and constituent. Any time such a plot (for a given well and constituent) shows two successive data points in excess of the MDL for any non-metallic Appendix II constituent that has not already been investigated at that well, under Item No. 17, the Discharger shall notify the Regional Board immediately by phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall initiate an investigation under Item No. 17 within 30 days of noting this condition.

Page: T-12 comments and responses

Sequence number: 1
Replace with a comma (to accommodate new phrase at the end of i).

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
For consistency, consider adding here, "and shall include the revised MPar and UCOC lists for that group of wells in an appendix to the annual summary monitoring report, with the background well added to the list of wells to which the lists apply, and, in parentheses after the background well's name, the MPar(s) for which that background well now functions as a compliance well."

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

19. Monitoring Data Information - For each MPar addressed during a given reporting period, the Discharger shall include in the monitoring report a listing of the prevailing MDL and PQL for that MPar, together with an indication as to whether the MDL, PQL, or both have changed since the prior reporting period. The Discharger shall require the analytical laboratory to report all applicable censored data (trace level and non-detect determinations). In the event that an MDL and/or PQL for an Mpar changes, the Discharger shall highlight that change in the report's summary and the report shall include an explanation for the change that is approved by the owner/director of the analytical laboratory.

20. WQPS - Under this Order, pursuant to 27 CCR section 20415(e)(7), the Landfill is in violation of its WQPS any time a given detection mode well/MPar pair exhibits a measurably significant increase over the applicable background data set (and changes to tracking mode), as determined by an appropriate statistical or non-statistical data analysis method. All well/MPar pairs in tracking mode remain in violation of the WQPS until completion of a successful proof period that ends the CAP (see 27 CCR section 20430(g) and 40 CFR section 258.58(e)). Pursuant to 27 CCR section 20390, the WQPS for groundwater at the Landfill consists of the following components:

    a. COCs (see 27 CCR section 20395) - At any given time, the COCs are those listed in Table 3 of this M&RP, including any updates made pursuant to Item No. 11 of this M&RP. Nevertheless, under this Order, statistical and non-statistical data analysis is limited to those COCs that are on the current MPar list by virtue of their being present in detectable levels either in groundwater or in that portion of the groundwater that is affected by the release;

    b. Concentration Limits - At any given time, the concentration limit of a given well/MPar pair is its applicable background data set, as determined or updated pursuant to Item Nos. 13(b) or 17 of this M&RP (see 27 CCR section 20400(b)(2)). Nevertheless, during a CAP, the concentration limits may also include, for a given MPar, a numerical concentration limit greater than background adopted by the Regional Board pursuant to 27 CCR section 20400(b)(3)-(d) for application only to those monitoring points that are within the plume;

    c. POC and Monitoring Wells - The POC consists of an imaginary vertical surface that is located, in map view, along the hydraulically downgradient limit of waste placement at the Landfill and that extends downward through the uppermost aquifer underlying the Landfill (i.e. the line indicated as "Landfill Area" in Figure 4, attached). At the Landfill [1]here are no POC monitoring wells at this time so that for the purposes of this M&RP POC monitoring points shall consist of the current compliance monitoring wells listed in Item No. 7.

    d. Compliance Period - The compliance period for the Landfill is [3]X years (see 27

[2]

T E N T A T I V E

Page: T-13 comments and responses

Sequence number: 1
This conflicts with the later portion of the sentence. Consider rewording as, "there are no monitoring wells located exactly on the POC at this time, ".

Also, add a comma after "so that" and another after "this M&RP", given that the wording in between is a parenthetical expression (always set off by commas). ("Better parenthetical than parenpathetical!", I always say.)

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
This period is supposed be be equal to the number of years from when it opened until completion of final closure. Are you SURE it is only six year? Fix if appropriate (guessing for future event timing is okay).

Response:
See page 23, comment 5, above. The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 3

Response:
No comment. A response is not necessary.

CCR section 20410). Each time the standard is not met (i.e. releases discovered), the Landfill shall begin a compliance period on the date the Regional Board directs the Discharger to begin an EMP. If the CAP has not achieved compliance with the standard by the scheduled end of the compliance period, the compliance period is automatically extended until the Landfill has been in continuous compliance for at least three consecutive years.

21. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the DHS. All analyses shall be conducted in accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the USEPA (or equivalent standard methods as approved by the Executive Officer) and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or standard methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. For any analyses performed for which no procedures are specified in the EPA guidelines or in this M&RP, the constituent or parameter analyzed, and the method or procedure used, must be specified in the corresponding monitoring report. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall approve all reports of such work submitted to the Regional Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples meet the following restrictions:

a. The methods and analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e. "trace" or "ND") in data from background monitoring points for that medium, the analytical methods having the lowest facility-specific MDL shall be selected from among those methods which would provide valid results in light of any matrix effects involved.

b. Trace results falling between the MDL and the facility-specific practical quantitation limit (PQL), shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituent's concentration.

c. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to 2

Page: T-14 comments and responses

Sequence number: 1
Consider eliminating the phrase "a change in," given that it is the matrix effect, rather than a change therein, that makes the MDL differ from that obtained using laboratory-pure water dosed with only the analyte.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2

Response:
No comment. A response is not necessary.

hange in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved.

d. All quality assurance / quality control (QA/QC) data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation (corrective action) of any QA/QC measure that is outside the laboratory control limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.

e. Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given reporting period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any sample shall be reported and flagged for easy reference by Regional Board staff.

f. Within 90 days of the adoption of Order No. R4-2009-XXXX, the discharger shall submit a technical report for approval by the Executive Officer for an analytical methodology to report unknown chromatographic peaks, along with an estimate of the concentration of the unknown analyte.

g. In cases where contaminants are detected in QA/QC samples (i.e. field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.

22. Proper chain of custody procedures shall be used.

23. All compliance groundwater monitoring system wells shall be equipped with dedicated sampling pumps.

24. All metals analyses shall be for total metals using unfiltered samples. Metals samples must be preserved in accordance with the specified laboratory methods, however care shall be taken that the dissolved metals samples are not exposed to acids until after filtering. The Discharger may elect to also obtain filtered metals representative of the dissolved phase. If so the Discharger must report the results of both the filtered and unfiltered.

25. No filtering of samples taken for organics analyses shall be permitted. Samples for

Page: T-15 comments and responses

Sequence number: 1

Response:
No comment. A response is not necessary.

organic analyses shall be taken with a sampling method that minimizes volatilization and degradation of potential constituents.

26. The Discharger may submit additional data to the Regional Board not required by this program in order to simplify reporting to other regulatory agencies.

27. If the Discharger performs analyses for any parameter more frequently than required by this M&RP using approved analytical methods, the results of those analyses shall be included in the monitoring program.

28. Thirty-Day Sample Procurement Limitation:
For any given monitored medium, the samples taken from all monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span of 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [27 CCR section 20415(e)(12)(B)]. Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (temperature, pH, electrical conductivity, turbidity) for that monitoring point [27 CCR section 20415(e)(13)]; groundwater elevations taken prior to purging the well and sampling for monitoring parameters shall be used to fulfill groundwater flow rate/direction analyses required under Item No. 40(b)(i) of this M&RP. Statistical or non-statistical analysis shall be carried out as soon as the data is available, in accordance with statistical and non-statistical analyses requirements described in this M&RP.

29. The groundwater monitoring program must be carried out during the active life of the Landfill, during the closure and postclosure maintenance period, and during any interim periods when no wastes are deposited at the Landfill.

30. The Discharger shall describe the effectiveness of the CAP in the semi-annual groundwater monitoring reports due every February 15 and August 15.

31. Quarterly observations and measurements of the static groundwater levels shall be made on all compliance monitoring wells, and records of such observations shall be submitted with the quarterly monitoring reports. Compliance wells affected by pumping shall be measured prior to pumping insofar as is possible. All compliance monitoring wells shall be sounded annually during the fourth quarter to determine total depth.

32. Pumping data regarding fluid pumped from each monitoring well (other than for analytical samples) shall be reported to the Regional Board each month in the monthly waste disposal report and shall include:

    a. Date and quantity of fluid pumped, and the method of disposal or reuse purpose, if reused.

TENTATIVE

Page: T-16 comments and responses

Sequence number: 1
Thirty days to sample all wells?! That could make the flow-direction determination unreliable. If you can tighten that up A LOT, that would be good. In addition, consider requiring them to do all initial (non-retest) sampling at the very start of the Reporting Period so that there will be time left over for one retest (if needed) at mid-period and another at period-end (roughly quarterly). Otherwise, retesting can get VERY COMPLICATED because it extends into the next Reporting Period. Lastly, if you take this approach, then let a given well/MPar pair off the hook if it has that second (end-of-period) sample taken,regardless of the outcome of the retest, because that takes the place of the sampling done (for that well/MPar pair) in that next Reporting Period.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
If you set up six-monthly Reporting Periods (necessary for the best retesting approach {pass-1-of-3}, together with sampling at very start of the Period), then consider a once-a-year CAP Progress Report as being better [adopt under 20080(a)(1), & say it is better because the concentration-versus-time plots show changes MUCH better with at two new data points each analysis, rather than just one, for semi-annual reporting frequency] and include it as part of the annual summary monitoring report so that interested parties can access it readily through GeoTracker.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

f. Results of analyses, and the MDL and PQL for each analysis.

Reports to be Filed with the Board

39. Electronic quarterly and annual monitoring reports shall be submitted pursuant the following schedule. Every five years, the Discharger shall also submit a report concerning the direct analysis of all COCs (COC report), alternating between the monitoring periods. The COC report may be included in a corresponding quarterly report.

Period	Sampling Period	Reporting Date
January – March	March	May 15th
April - June	June	August 15
July – September	September	November 15th
October – December	December	February 15
January – December		May 15(Annual Report)

The Discharger can combine the annual report with the May 15 quarterly report but all required information must be included in the combined report. In the event monitoring is not performed as above because of unforeseen circumstances, substitute monitoring shall be performed as soon as possible after these times, and the reason for the delay shall be given.

40. The quarterly monitoring reports shall be comprised of at least the following:

a. Letter of Transmittal:
A letter detailing the essential points of the monitoring program shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice-president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

b. Each report shall include a compliance evaluation summary. The summary shall contain at least:

i. For each monitored groundwater body, a description and graphical

TENTATIVE

Page: T-20 comments and responses

Sequence number: 1
Once again, if you change it to a semi-annual Reporting Period (for the monitoring ~~~> the groundwater flow direction work remains as quarterly), then you have TIME to complete all sampling on even a pass-1-of-3 retesting approach (way good!) before starting the next Reporting Period. In addition, this landfill already has a release and is responding to it, so the change to sixmonthly will not cause you to be late in detecting a new release (any indication is, instead, a change in the existing release and you have LOTS of elbow-room for adjusting the CAP to meet that change).

Main Suggestions:
Go to semi-annual a Reporting Period;
Go with a pass-1-of-3 retesting scheme as standard for all statistical tests;
Require all initial tests to be done at the very start of the Reporting Period (first retest is med-period and second, if needed, is at end-of-period); and
Require all statistical tests (including pass-1-of-3 retest) to meet-or-beat the USEPA Statistcal Reference Power Curve (Sanitas will do this analysis).
Given those changes, you'll be in like Flynn.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Sequence number: 2
Semi-annual beats semi-anal hands down!

Response:
Comment noted.

presentation of the velocity and direction of the groundwater flow under/around the Landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report. In the case where this cannot be determined with meaningful results, a statement to the nature of the groundwater flow and general flow characteristics will suffice.

ii. Pre-Sampling Purge for Samples Obtained from Wells:
For each monitoring point addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment and methods used to monitor field pH, temperature, electrical conductivity and turbidity during purging, the calibration of the field equipment, results of the pH, temperature, electrical conductivity, and turbidity testing, and the method of disposing of the purge water).

iii. Sampling:
For each monitoring point addressed by the report, a description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the date and time of sampling, the name of the person taking the samples, and any other observations).

iv. A separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the Discharger into full compliance with waste discharge requirements. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements.

c. Unless otherwise approved by the Executive Officer, monitoring reports shall be submitted in PDF or JPEG format (tabular laboratory analytical data may be submitted in MS Excel or Access format). The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Order No. R4-2009-XXXX. The cover letter, the main report text, and any tables and/or figures that are directly quoted in the main report, shall be submitted. The submittal shall be signed by a responsible officer(s) of the Discharger. All original laboratory reports, quality assurance and quality control (QA/QC) data, and filed records that are used to prepare the reports must be kept in the Landfill's operating record, as required in 27 CCR section 20415(e)(16). These data must be available for Regional Board staff review, if required.

d. A map or aerial photograph showing the locations of observation stations and monitoring points;

Page: T-21 comments and responses

Sequence number: 1
Consider adding a new paragraphs v. through viii. like:

v. A separate appendix containing any revised COC List (showing its then-current MPar and UCOC Lists reflecting any constituent added or constituent moved from the UCOC List to the MPar list), together with, for each such listing, the wells to which that list applies. In any such listing, the new or moved COC(s) shall be in bolded print (or otherwise emphasized).

vi. A separate appendix containing, for each well/COC pair, the its then-current Concentration Limit (background data points) listed (left-to-right) from the earliest datum to the most recent one.

vii. A separate appendix containing, for the first submittal thereof, a complete succinct description of the data analysis method, including all parameter settings, for each well/MPar pair. If the method is the NSDAM, simply state "NSDAM" following the well/MPar pair's name, without further description. For subsequent annual monitoring reports, this appendix need address only those well/MPar pairs for which the data analysis method has changed since the initial (comprehensive) listing, together with the date when that (most recent) change became effective.

viii. A separate appendix listing, organized by well, listing all MPars that are in Tracking Mode (out of compliance) at each well and showing (in parentheses following the constituent name) the date when that well/MPar pair changed from Detection Mode to Tracking Mode.

Inserting paragraphs v.-vii. will allow any interested party (yourself included) to do a double-check of the Discharger's calculations whenever desired. Inserting new paragraph viii. will enable any interested party to track the nature and extent of the release, using this list and the monitoring well location map, and to note the changes through time.

Response:
The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

3)
Edward Wosika
State Water Resources Control Board
(received 3/25/09)

From: Ed Wosika
To: Casas, Enrique; Nelson, Rodney
CC: Graves, Leslie; Regan, Tim
Date: 3/25/2009 9:23 AM
Subject: Calabasas Heads-Up

Note: best viewed in HTML mode (tag this note's "VIEW" pull-down menu and be sure the radio button is blackened beside the "HTML" option, rather than the "Plain Text" option).

Dear Rod and Enrique:
I am not going to review the revised Calabasas WDRs/M&RP you sent, because it is up to you to apply whatever aspects you choose of the changes I suggested in my prior review ~~~> suggested changes mainly reflect the CAP WDRs class I gave last year. However, assuming that you want to proceed as I suggested, I noted some troubles in the **Definitions.pdf** document for the Calabasas (and, likely, your other landfills). Those definitions reflect a much earlier approach that preceded our discovery of the many problems our rules (plus the federal MSW rules) pose. After discovering the wide scope of those problems, I played catch-up with a bunch of interim fixes, as presented in the CAP WDRs class you attended last year. What never occurred to me, when putting on that class, was that most Regions were bundling a moldy-oldie set of definitions, as an attachment to revised T27 WDRs, and those definitions do not EEEEEVEN reflect the changes from the CAP WDRs class. I did not find this out until I saw your **Definitions.pdf** document (posted with the draft WDR/M&RP on your website for that landfill at http://www.swrcb.ca.gov/rwqcb4/board_decisions/tentative_orders/individual/non-npdes/calabasas/index.shtml).

I am so very glad that you brought that definitions list to my attention by including it in the Calabasas LF WDR revisions website. Whoooo wrote those now-way-Bozoiferous definitions? Why, of course, that famous trio: me, mah-seff, and eyesore! I am having heavy going in revising it and am not sure that I will make your Calabasas WDRs adoption deadline. The WHY of that I-may-be-late warning is that yours is not the only landfill using that list. The revised list should go out to all T27 folks statewide as an after-the-fact addendum to the CAP WDRs class. Given this list's wide intended distribution, Leslie indicated (and I agree) that we'll need to have our Program Counsel (**Tim Regan**) vet the changes first, but I know that he is a very busy guy right now. Therefore, it would be very wise if you can create some "elbow room."

To that end, I suggest that it would be a good idea to make a minor adjustment to the Calabasas WDRs that will allow you to attach a new-and-improved Definitions list that might arrive after WDR adoption. Of course, the change is subject to approval by you, your Regional Counsel, and the limitations imposed by your Region's procedural rules.

At present, the Definitions list is incorporated by reference in the WDRs per se, at Recital 4 (bottom of p. 4):

"This Order includes the attached definition of terms and acronyms (Attachment 1)."

If there is any way you can make a slight change to this Recital, at this point in the proceedings, perhaps by introducing it as an editorial/clarification change at the adoption hearing, all we need is for the Recital to be altered to make it clear that your EO can revise the Definitions list. As such, this Recital could read

something like:

"This Order includes the attached definition of terms and acronyms (Attachment 1), which the Regional Water Board Executive Officer can revise as the need arises." *[This option makes it clear that, like the M&RP, the Definitions listing is open to EO-revision.]*; or

"This Order includes a list of defied terms and acronyms, located at the end of this Order's associated monitoring and reporting program (M&RP)." *[This option makes the Definitions part of the M&RP, which the EO can alter on an as-needed basis. So, "Attachment I" would disappear, being slapped onto the end of the M&RP. When the revised Definitions are substituted for the old list, the effective date of the M&RP changes to reflect that revision (you issue the "revised" M&RP to the Discharger).]*

I'm going "as fasterest as I can," but, nevertheless, I feel that it would be wise to assure that I won't let you down by being late. If your Counsel will go along with a small change, such as those shown above, then I'll keep hammering away at the definitions, then give Tim his whack at them, and get the approved revision to you (and other T27 workers, statewide) as soon as it passes muster.
Regards, Zeek

Comment:
“the Recital to be altered to make it clear that your EO can revise the Definitions list”

Response:
The clarifying statement “, which the Regional Water Board Executive Officer can revise as the need arises." has been included to allow the Definitions included in Attachment 1 to the tentative Order to be revised by the Executive Officer as necessary.

4)
Jeff Ogata
Office of Chief Counsel, State Water Resources Control Board
(received 3/10/09)

From: Jeff Ogata
To: Wendy Phillips
CC: Enrique Casas; Rodney Nelson
Date: 3/20/2009 12:05 PM
Subject: Re: ALR and Calabasis - May board meeting

Hi, here are some comments responding to your specific questions and some edits I noticed in quickly reviewing the Calabasas doc (which I've never seen before, right?).

I'm glad the State Bd is paying attention to details. Good idea to send it to them for review.

The new language looks fine to me. Let's take out the comma after "wildfires" and use the word "superseded" (see last line). According to Webster's online, superceded is a disfavored spelling.

Comments on the doc: (**bolded** are the proposed edits)

Para 17 has some "private" junk in the text.

Para 27: Regional **Board**

Para 31: cap Health and Safety Code; section**s** 13510 to 13512.

Para 33 and other places: when you use CFR cites, you can use the word "part" for entire sections, but use the word "section" when you refer to specific sections, e.g. 258.54. And **code of fed regs** should be capitalized.

Para 36: 40 CFR **part** 258, not section. But section later is okay.

Para 37: same as above, **part** 258.

Para 45: 40 CFR section**s**

Para 54: 40 CFR**part** 258

Para 58: Please use the longer standard petition language.

Para E.2, please use "section 20080 (b) and (d)", not combining with "&".

Para E.3, use 20340**(b) through (d).**

Para F.9: use **section** 258.40(d) of **CFR,** 20080**(b) and (c).**

Para F.16: **sections** 20430**(i) or (j).**

Para G.2: shouldn't approval be from Executive Officer, not delegated staff?

Para I.8: delete "regulation" after Order cites. Delete comma after "standard provisions."

Para I.16: the Discharger shall work with Waste Board [delete prior words]California Integrated Waste Management Board (CIWMB) staff to provide acceptable financial assurance demonstrations for corrective action. What are "demonstrations"? Are we talking about insurance, bonds, LOC, etc?

Para I.20: subject to being superseded or modified.

RE: CAP: if we need that now because actions are necessary, I think they should provide it before the WDR is approved. If the CAP isn't necessary now, go ahead and give them a deadline and criteria for info that should be in the CAP, and say it will be noticed for public comment and EO review/approval, unless you want to have the Board approve the CAP later.

That's about all my poor little brain can handle in an hour. What do you mean Rod is retiring? He's too young to retire, isn't he??

Talk to you later.

Jeff

Comment:
Para 17 has some "private" junk in the text.

Response:
A response is not necessary.

Comment:
Para 27: Regional Board

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment:
Para 31: cap Health and Safety Code; sections 13510 to 13512.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment:
Para 33 and other places: when you use CFR cites, you can use the word "part" for entire sections, but use the word "section" when you refer to specific sections, e.g. 258.54. And code of fed regs should be capitalized.

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para 36: 40 CFR part 258, not section. But section later is okay.

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para 37: same as above, part 258.

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para 45: 40 CFR sections

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment:
Para 54: 40 CFRpart 258

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para 58: Please use the longer standard petition language.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment:
Para E.2, please use "section 20080 (b) and (d)", not combining with "&".

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para E.3, use 20340(b) through (d).

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para F.9: use section 258.40(d) of CFR, 20080(b) and (c).

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para F.16: sections 20430(i) or (j).

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para G.2: shouldn't approval be from Executive Officer, not delegated staff?

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment:
Para I.8: delete "regulation" after Order cites. Delete comma after "standard provisions."

Response:
The editorial comment is appropriate and the tentative Order has been modified universally accordingly.

Comment:
Para I.16: the Discharger shall work with Waste Board [delete prior words]California Integrated Waste Management Board (CIWMB) staff to provide acceptable financial assurance demonstrations for corrective action. What are "demonstrations"? Are we talking about insurance, bonds, LOC, etc?

Response:

The demonstration are financial instruments, i.e. “about insurance, bonds, LOC, etc” accepted by Waste Board staff to comply with title 27 of the California Code of regulations. Only the editorial portion of the comment is appropriate and the tentative Order has been modified accordingly.

Comment:
Para I.20: subject to being superseded or modifed.

Response:
The clarifying statement is appropriate and the tentative Order has been modified accordingly.

Comment:
RE: CAP: if we need that now because actions are necessary, I think they should provide it before the WDR is approved. If the CAP isn't necessary now, go ahead and give them a deadline and criteria for info that should be in the CAP, and say it will be noticed for public comment and EO review/approval, unless you want to have the Board approve the CAP later.

Response:
The existing corrective action program complies with state and federal requirements, made explicit by the suggested revisions by State Board staff. No additional action is required to implement the state/federal CAP.

5)
Mary Weisbrock, Save Open Space
(received 4/13/09)

Save Open Space ✧ P. O. Box 1284 ✧ Agoura, CA 91376

April 13, 2009

Re: Waste Discharge Requirements-Calabasas Landfill (File No. 60-118)

In the 1970s, the Calabasas Landfill received some 300,000 tons of hazardous liquid wastes in its western **unlined** section. It also accepted 4,643 tons of hazardous solid wastes. There are five years of missing records in the mid 1960s. This landfill was closed to hazardous wastes in the 1980s because it was determined that the geology was permeable. (LeRoy Crandall & Associates 1980,81). This entire statement needs to be added to this Order for completeness.

As time goes on, more of the thousands of barrels of toxic liquid wastes have the potential to rust through (per LA Times article, 11-23-84, Bob Poo.). As time goes on, the hazardous liquids potentially can move from the non-contained dirt wells (Enc. #1) into the groundwater aquifer.

LARWQCB needs to require quarterly testing of not just the Calabasas Landfill's shallow ground water wells but also the landfill's deep groundwater wells. There are no liners in the hazardous western section which received these hundreds of thousands tons. Unfortunately, Calabasas landfill's geology is permeable. SOS requests that quarterly testing be continued, since this is not a normal municipal waste landfill that received only Class III wastes. In addition, it lacks a lining in the huge hazardous section. These are very compelling reasons not to halt quarterly testing.

Save Open Space/Santa Monica Mountains (SOS) requests two very important testing measures be added to protect the groundwater and this watershed. Calabasas landfill is located at the top of the headwaters of the Malibu Creek Watershed. 1) To ensure the health of this watershed, the testing protocol should begin requiring deep groundwater testing. Deep ground water testing all along the Western border (unlined hazardous section) has been discontinued for several years. This protective deep groundwater testing should not have been stopped. Deep groundwater wells already exist and are called the CA wells. 2) Also, SOS requests that the Order add annual rainy season specific radionuclide testing since this landfill accepted many shipments from Rocketdyne. (See Rocketdyne shipments in the submitted CD). Even though the Calabasas Landfill Leachate has tested "Hot", testing for radioactivity is not required (Enc.#2) and is not being done on a routine basis.

Specific Comments to sections:

Page 2. The reason needs to be given why the Calabasas landfill was closed to all hazardous materials. It was because the geology report, LC& Associates, found that it had permeable geology that would not contain the hazardous wastes.

Page 4. When it was finally required by the state to be tested for radioactivity, The Calabasas landfill leachate significantly exceeded established MCLs in Gross Beta and Gross Alpha radioactivity and in Uranium. (Enc.#2)

This Order needs to require testing for Rocketdyne specific radionuclides. Tons of Rocketdyne wastes were sent to the unlined part in the 1970's. Check testing on incoming waste for radioactivity by the landfill was not implemented until the 1980's. To be assured that the surface and groundwater does not contain Rocketdyne dangerous radionuclides, this Order needs to add the requirement for yearly specific radioactive testing for Rocketdyne known radionuclides. Annual rainy season radioactive testing needs to be done on the surface runoff, leachate, and from shallow and deep groundwater well testing. The waste disposal practices of Rocketdyne were not protective of Human Health. It has recently been revealed that waste was dumped in adjacent Sage Ranch. Also, recently revealed was shoddy and questionable Rocketdyne waste operations that included the burning toxic waste and shooting up waste barrels and hot lab canisters. The public can't trust that the Rocketdyne waste, received by the Calalabasas Landfill in the 1970s, was free of dangerous radioactivity.

There were several inadequacies in the studies overseen by LA County Regional Sanitation which concluded that high radioactivity results from the Calabasas landfill leachate were only from natural sources:
1) Radioactivity testing method allowed filtering. (Enc. #3) Filtering lowers results on radioactivity testing except for Tritium.
2) Background wells were not in the right place but were down gradient of the landfill. (See attached Slosson and Committee to Bridge the Gap letters)
3) Rocketdyne employed sloppy waste disposal practices (shooting up waste barrels and hot lab canisters, dumping in canyons, etc.). There are missing, unaccounted for, nuclear reactors, KEWB and the Van de Graaf neutron Accelerator. Disposal of the KEWB was in 1975 and the Accelerator in 1966, but it is not known where these reactor components were disposed. (Enc. #4) Until it can be proven not to be the case, one has to assume that these components potentially could have been part of one of the many shipments of Rocketdyne wastes that the Calabasas Landfill accepted in the 1970s. (Review enclosed CD)

Page 6. The operational areas of the landfill are located in a liquefaction zone on the new Seismic Hazard Map. In the Hesdiel school property's EIR, boring logs show that it has groundwater. This Heschel property is also in a liquefaction zone. (Enc. #5) Amazingly, the groundwater under the Heschel school site was not tested for hazardous contaminants from the Calabasas Landfill. Why put 650 small school children in enclosed classrooms over untested groundwater that potentially could contain toxic soil gases from the

Calabasas Landfill? The Heschel School property is .6 of a mile from the boundary of the unlined hazardous section of the Calabasas Landfill. The Liberty Canyon property which includes the Heschel school site has groundwater which is assumed to be "continuous with the groundwater at the Calabasas landfill"(statement from The Clement Report, 1990) These small children in enclosed classrooms, 9 months a year for 5 days a week, have the potential to get cancer from toxic landfill soil gas.

Page 8. The 6 barriers (Figure 6) are not deep enough (only about 30 feet) to stop the flow of contaminants from the unlined hazardous part of this permeable landfill into the medium to deep groundwater. Either under the barriers through fractures and/or faults and around the majority of the western edge which isn't covered by these barriers, contaminants can easily move out from the western edge of this permeable landfill. The barriers are only placed at alluvial canyon areas. It should be noted that these barriers couldn't possibly stop all movement of hazardous contaminants from the unlined western section in the deep groundwater.

Page 9. It is not adequate to focus the monitoring program on just the alluvial canyon areas. (Figures 12-14). The deep groundwater along the entire western edge could be carrying landfill hazardous chemicals and this pathway is not being adequately tested at all! The deep groundwater CA wells in the unlined western section should be tested quarterly to monitor this dangerous situation.

Page 12. It is stated that they will continue to notify landowners whose properties overlie the plume. What plume? Please include a map of the plume and list the contaminants in the Calabasas landfill plume.

Pages 37 and 42. Replace Figure 5 with better maps. (Enc. #6) Figure 5 is not a good map for it is not clear where the unlined area of the landfill is. This is a very dangerous situation because the **unlined area is the area, which received hundreds of tons of hazardous waste.** (Review CD and Encs. #7) Disclosure is the key here and the public has the right to know of the huge potential of off site deep groundwater contamination because the hazardous area is not lined. The agencies should not allow any additional development within 1 mile of the Calabasas Landfill, which puts new human receptors in potential harm's way from soil gas migration from the deep groundwater in the water table.

Pages 7 and 41. The land use map **should show land use up to 3/4 mile (not 1000 ft) from the property boundaries.** One thousand feet is too short since hazardous materials can move thousands of feet with time.
Unfortunately, the property for Heschel's private elementary school is located .6 of a mile from the western boundary of the unlined toxic part of this landfill. Amazingly, no agency has come forward to request that Los Angeles County require a Health Risk Assessment to protect the Health and Welfare of these young 650 children -receptors-as they sit in enclosed classrooms, 9 months of the year and 5 days of the week.

Another project (the Mendor property) to the south also is also within a mile of the Calabasas landfill. LA County planning will process this project soon.

An adequate buffer needs to be purchased with Prop A funds, Los Angeles County park money, which must include the entire Mendor property and the entire Heschel school property. An alternate safer site can be found for Heschel School.

Saratoga Hills never should have been built in the shadow of this former Class I permeable landfill. Los Angles county agencies must help support an effort to buy out these properties (Heschel and Mendor) with the available Prop A funds.

In this new Order, LARWQB should implement much needed deep groundwater testing and require testing for all specific Rocketdyne radionuclides. By adding these new testing requirements, developments potentially putting more people in harm's way might not be allowed in the near vicinity of this former hazardous landfill.

Pages 75 and 92. Do not change from monitoring on a quarterly basis. This landfill's geology is permeable, and it received hundreds of tons of hazardous wastes. The permeable nature of this geology caused it to be closed to hazardous wastes in the 1980s. These two facts prove that this former hazardous landfill is unique. To adequately protect public health and safety, quarterly monitoring is necessary.

Page 93. Are they actually "purging" to collect the samples as the Order requires? Does this new "micro" purging method ending up with an inadequate picture of the contaminants in the groundwater or does this new method fail to adequately portray the contaminants in the wells?

General Comments

Background wells are not acceptable as background if they are located down gradient. This needs to be added to this Order. In Order No. 89-053-077 CAP for Calabasas Landfill lists only MW4, CA22, CA24, and CA25 as the background wells. MW4 is down gradient of Barrier 6 and should not be a background well. It appears that down gradient background wells might have been used to establish incorrectly high background levels for metal contaminants. Is this the case? Why does the testing protocol at the end of this Order only include 3 metals?

Figures showing the alluvium and bedrock as distinct zones are misleading. There are fractures and faults throughout this geology underlying this landfill making it permeable to allowing the hazardous wastes in the unlined section to move out into the groundwater aquifers. (Enc. # 8 Geologist Tom Sleeper letter and geological framework map)

In the 1990 Health Risk Assessment for the nearby Liberty Canyon Property (Heschel property is a part of it), many organic landfill type chemicals were found in all media: subsurface gas, groundwater, surface water, sediments, soils, and ambient air. (Enc. #9)

The testing is inadequate because it is only at the alluvial canyons where the inadequate barriers (too short in length and not deep enough) were put.

SOS requests these two main changes to protect the watershed and public health. Additional testing in the deep groundwater wells throughout the western unlined hazardous landfill section and off site needs to be required. Testing for Rocketdyne's specific radionuclides needs to be required annually in the shallow and deep ground water and leachate.

Will Heschel schoolchildren be exposed to toxic soil gas permeating out in the ground water from the Calabasas Landfill? Why wasn't testing of the groundwater under the proposed Heschel School property (located .6 mile from the Calabasas Landfill) required by Los Angeles County and Los Angeles Regional Sanitation District? Why not test to be safe?

Mary E. Wiesbrook, Chair SOS.
State of California Clinical Laboratory Scientist

Enclosed letters: Enclosure #10: Slosson and Associates Peer Review Reports on the Calabasas Landfill

Enclosure #11: "Radioactivity in Calabasas Landfill" by Daniel Hirsch

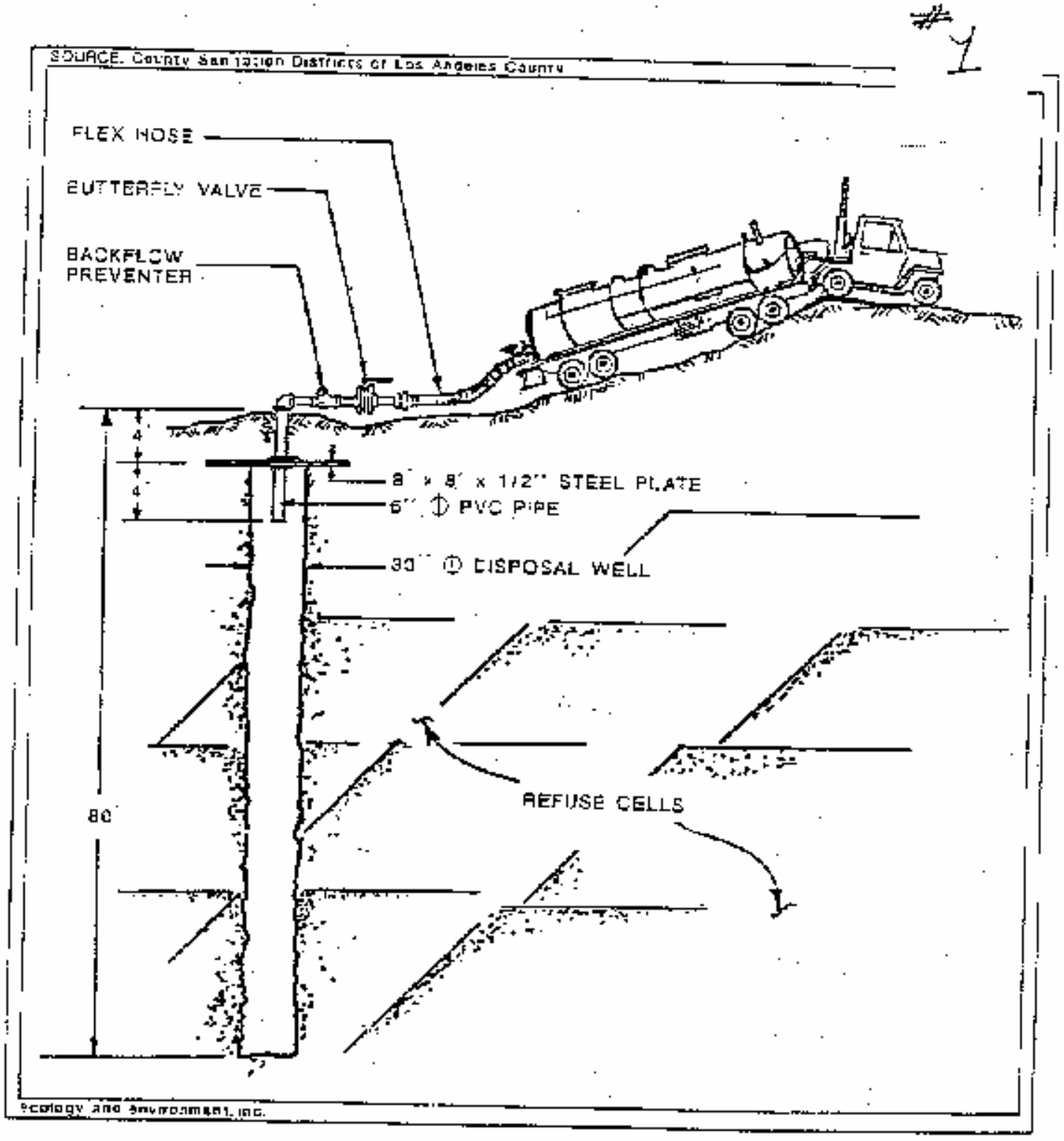


FIGURE 2-4: HAZARDOUS LIQUID WASTE DISPOSAL METHOD

Used at the Calabasas Landfill from 1965 to 1980

Source: E & E, 1988

#2

PRELIMINARY SUMMARY OF
RADIOACTIVITY IN WATER SAMPLING

Regional Board	Landfill Name	Status/Waste Classification	Liner Type(s)	Water Sample Exceeds MCL: Upgradient	Downgradient	Leachate
1	Central Landfill, Petaluma	Active (III)	Composite/Clay			
2	Ox Mountain Landfill	Active (III)	Composite			
2	Vasco Road Landfill	Active (III)	Composite/Unlined			B (80); T(34,000);
2	Newby Island Landfill	Active (III)	Composite/Clay/Unlined			D (61); T (51,000)
2	Redwood Landfill	Active (III)	Unlined/Clay			
3	Cold Canyon Landfill	Active (III)	Composite/Unlined	A (44); D (450); U (48)	A (21)	
4	Bradley Landfill	Active (III)	Composite/Clay/Unlined			B (140)
4	Puente Hills Landfill	Active (III)	Composite/Unlined			B (270)
4	Calabasas Landfill	Active (III)	Composite/Clay/Unlined			B (450)
4	Sunshine Canyon Landfill	Active (III)	Composite/Unlined			T (93,000)
5(F)	Chemical Waste Management, Kettleman Hills	Active (?)	Composite	A (68); U (90)	A (38); U (57)	A (91); B (97); U (135)
5(F)	American Avenue Landfill	Active (III)	Composite/Unlined			T (58,000)
5(R)	Anderson Solid Waste Landfill	Active (III)	Composite/Unlined			A (15)
5(S)	Altamont Sanitary Landfill	Active (III)	Composite/Clay	A (154); U (172)	A (205); B (38); U (474)	T (41,000)
5(S)	Kiefer Road Class III Landfill	Active (III)	Composite/Clay			
6(SLT)	Eastern Regional Landfill	Closed (III)	Unlined (LCRS)			
6(V)	Barstow Landfill	Active (III)	Unlined			
6(V)	Boron Landfill	Active (III)	Unlined	T (55,900)		
7	Calexico Landfill	Active (III)	Unlined			B (102)
8	El Sobrante Landfill	Active (III)	Composite/Unlined	A (19)		
8	Frank R. Bowerman Landfill	Active (III)	Composite/Unlined			
8	Milliken Landfill	Active (III)	Unlined			T (23,000)
8	Olinda Alpha Landfill	Active (III)	Composite/Unlined		A (18)	
8	Redlands	Active (III)	Composite/Clay/Unlined			
8	Double Butte Landfill	Closed (III)	Unlined	A (19)	A (32); U (28)	T (64,000)**
8	Lamb Canyon Landfill	Active (III)	Composite/Unlined			T (40,000)
8	Mead Valley Landfill	Closed (III)	Unlined		A (244); U (257)	
8	Highgrove Landfill	Active (III)	Unlined			
8	Colton Landfill	Active (III)	Unlined		A (291); U (143)	
8	Mid-Valley Landfill	Active (III)	Unlined		A (18)	
8	San Timoteo Landfill	Active (III)	Composite/Unlined			T (513,000)**
8	California Street Landfill	Active (III)	Unlined			
8	Corona Landfill	Closed (III)	Unlined			

Report #3

LCRS Sampling

LCRS samples were obtained at the outlet of each respective LCRS storage tank. Samples are collected by opening a sampling spigot, purging the spigot for approximately one minute, rinsing sample bottles three times, and filling sample bottles. As with the groundwater samples described above, sample bottles are labeled to identify each sample. A chain-of-custody/sample request form was also completed for each LCRS sample.

Filtered

Sample Preservation

No field preservation was performed for these samples. Within five days, the laboratory filtered the sample through a 0.45-µm filter, and then acidified the sample with ultrapure nitric acid to a pH of less than 2.

Sample Handling

Immediately after sample collection, samples were placed in ice chests and transported to the Sanitation Districts' San Jose Creek Water Quality Laboratory (SJCWQL). The SJCWQL then packed the samples for overnight shipping to Severn Trent Laboratories Inc. (STL), in St. Louis, Missouri for analysis.

5.2.2 Sample Analysis

Severn Trent Laboratories Inc. (STL) was retained to perform the sample analysis. STL is a California State Department of Health Services (DHS) certified laboratory for all the radiochemical analyses required by the RWQCB. All samples were analyzed for specific conductance, gross alpha/beta particle activity, tritium, isotopic uranium (i.e., uranium-234, uranium-235, and uranium-238), radium-226, radium-228, and strontium-90. One LCRS sample was also analyzed for potassium, potassium-40, and cesium-137. Analytical methods used for the above parameters are summarized in Table 1.

Detection Limits

Radiochemical parameter results reported as part of this program are reported in terms of "activity" which is defined as the number of nuclear transformations (i.e., decay) of a radioactive substance which occur in a specific time interval (USEPA, 1991). Results are expressed in terms of activity because it is not the mass of the radiochemical parameter that is of interest but the radioactive emissions. Activity can be related to half-life, which is defined as the length of time required for a radionuclide to lose 50 percent of its activity by decay. A radionuclide with a shorter half-life (e.g., radium-226 at 1,600 years) emits higher activity whereas a radionuclide with a longer half-life (e.g., uranium-238 at 4,500,000,000 years) emits lower activity (EPA, 2000). Half-lives can range from a millionths of a second to billions of years (NRC, 2001).

#4

09/25/02

Prior Released Radiological Buildings Demolished

Bldg No.	Year	Landfill destination of released building debris*	Comments
4019 (aka KEWB)	1970	No information available	
4010	1983	No debris disposal to landfills	
4886 (aka FSDF)	1982	Chiquita Canyon	Released soil went to Kettleman Hills and Hullcanwillow
4093 (aka L-85)	1995	No debris disposal to landfills	Metal recycled, concrete still in place
4005	1956	Bradley	
4373	1996-99	Bradley	
4064	1997	California Asphalt (Monofill	Asbestos containing material
4120 (aka Hot Lab)	1996-97	No debris disposal to landfills	Concrete blocks sent to Santa Clara Plough
4028	1996	Bradley	
4030	1998	Bradley	
4023	1994	Bradley	
4149 (aka SHE)	1990	Bradley	
4300	1989	Bradley	
4363	200*	Bradley	ACM to Kettleman Hills

14 prior radiological buildings demolished, 12 since 1992, and 11 since 1995.
Bradley, Kettleman Hills and Chiquita Canyon are the only identified landfill destinations.
Disposition of debris from 1 building uncertain.
Note that building serial numbers 4XXX are sometimes identified in historical documents as TXXX.
* Excludes metal, which has generally been recycled

Landfill Summary 9-25-02.xls

#4

No: 030-AR-0002
Date: Nov.13, 1997
Page: 15 of 18

4. 6. WASTE

4.1 PHASE I (1966)

The Van de Graaf Accelerator was removed from Building T030. Disposition of the accelerator could not be determined.

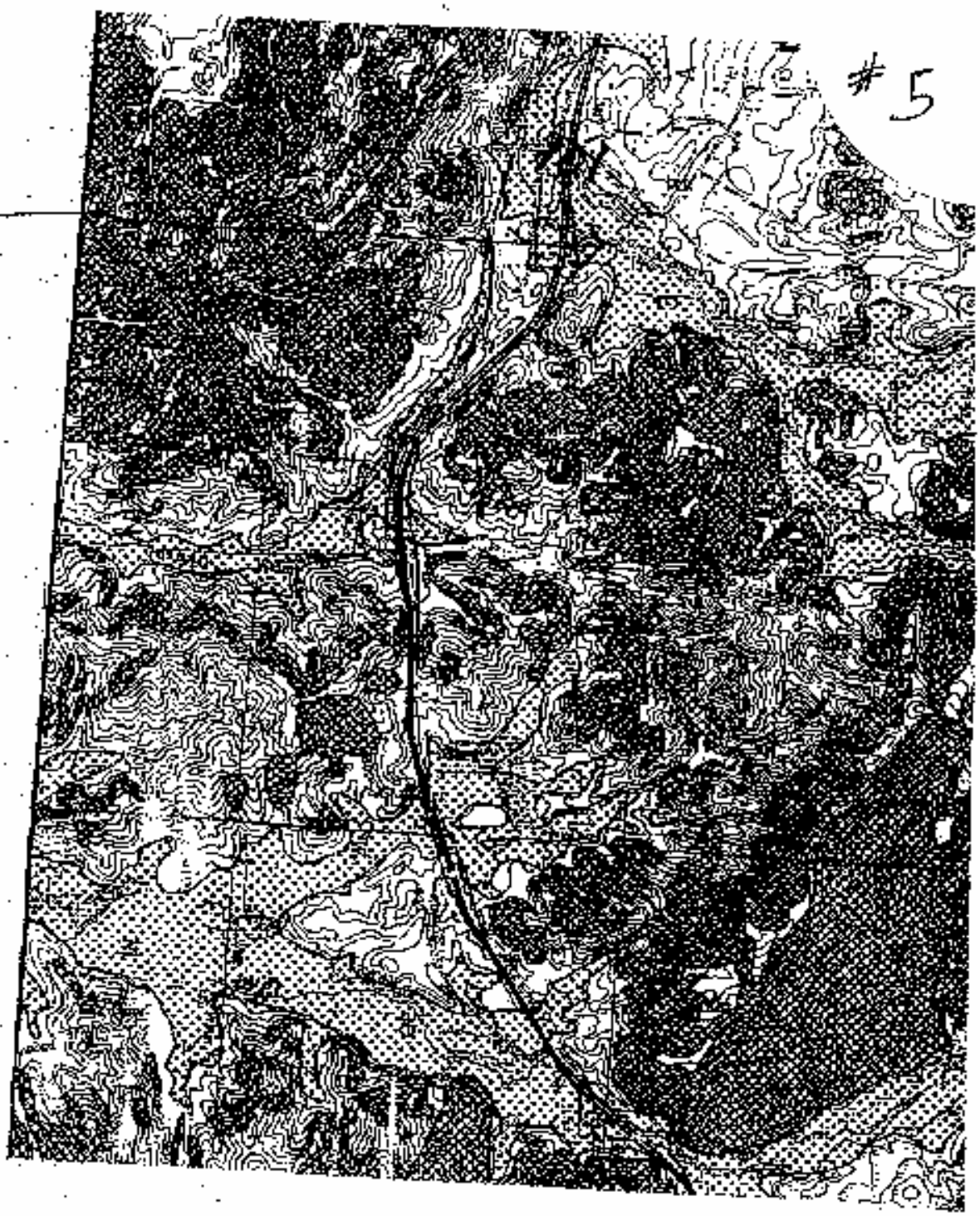
4.2 PHASE II (1996)

Approximately 2,31\ ft^2 of asbestos floor tile was removed and disposed of as non-radioactive hazardous waste.

previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required

#5

CHESEBORO ROAD



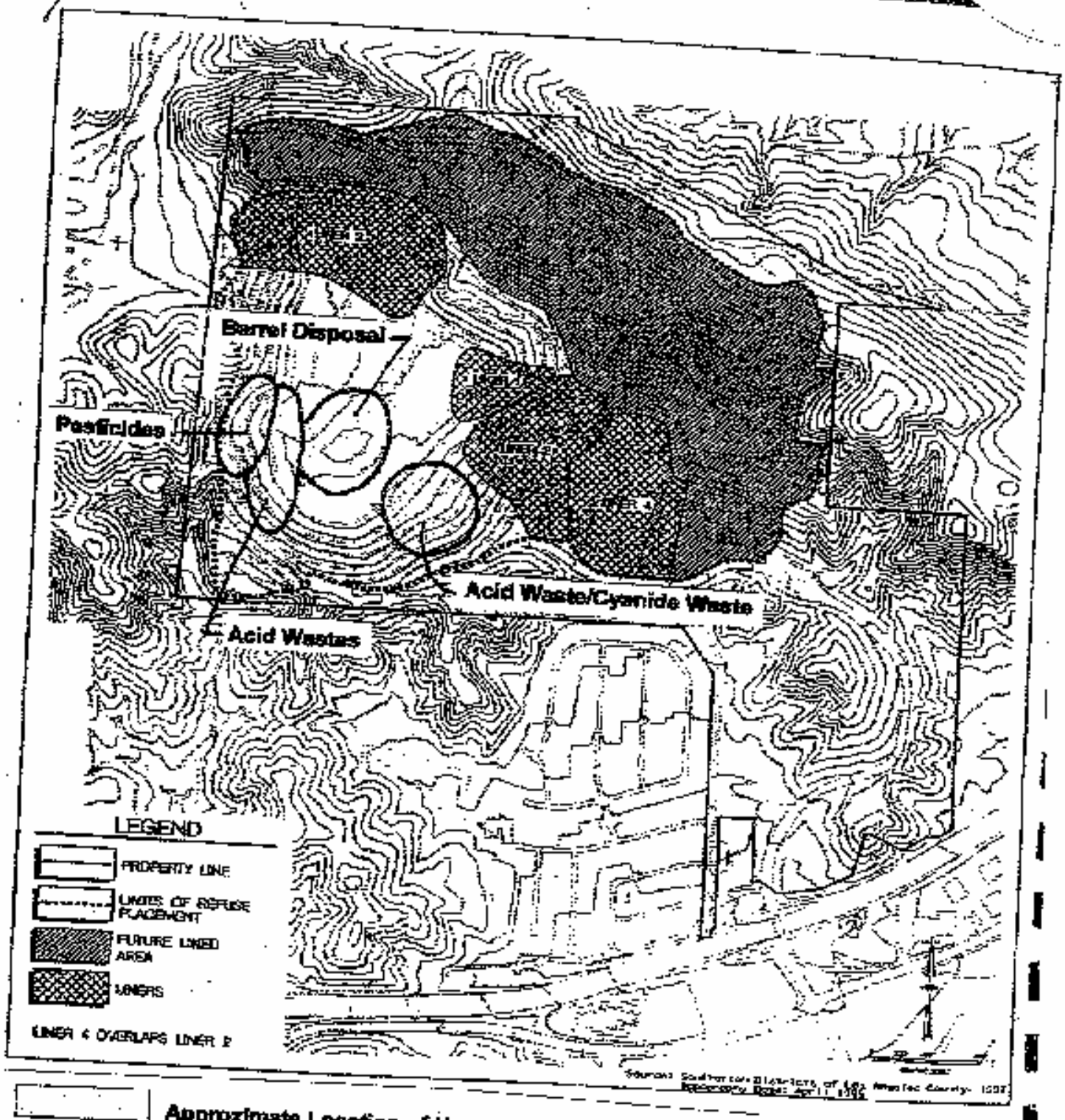
Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslides

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

#6



Approximate Location of Hazardous Waste Disposal

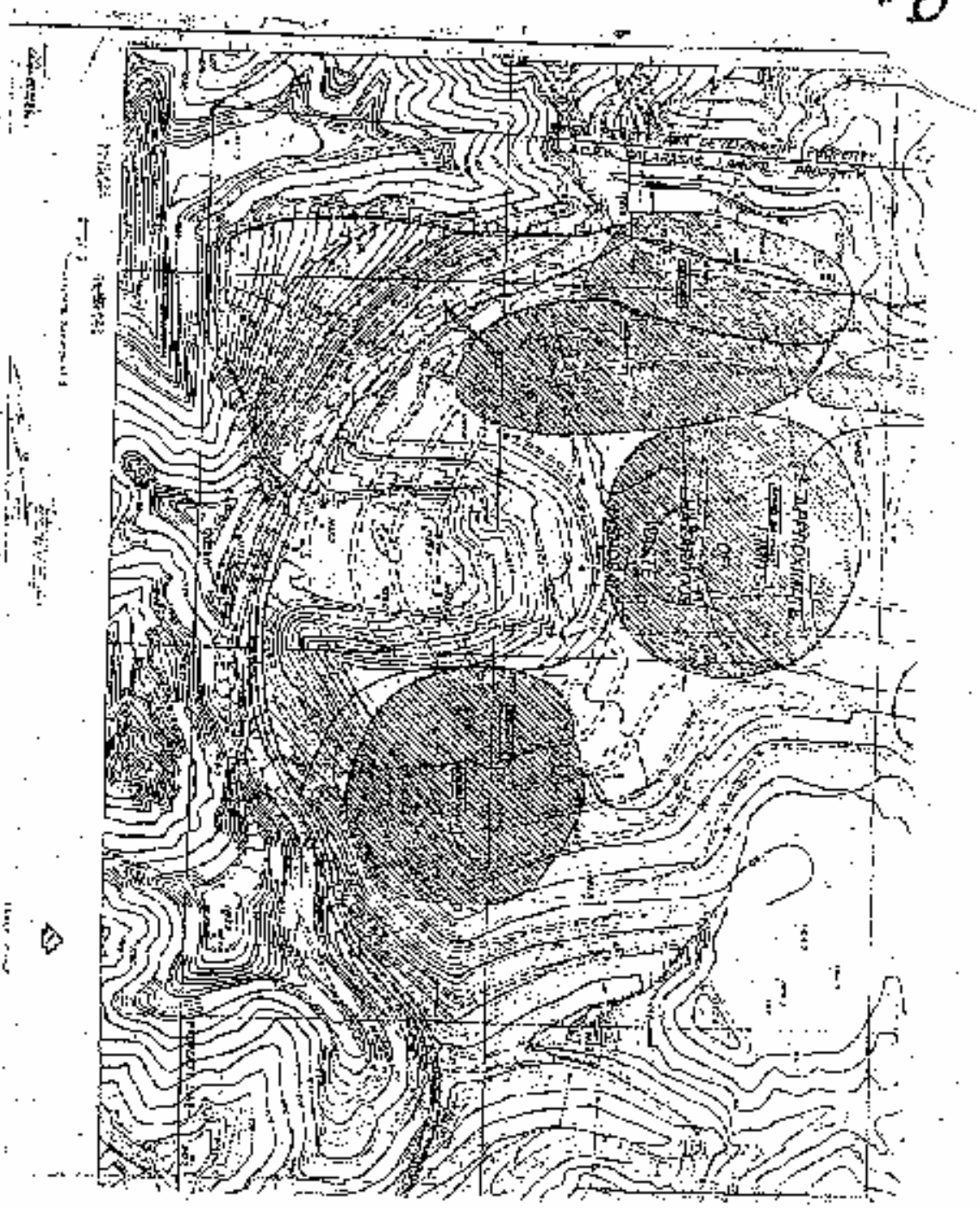
Liner Areas

CALABASAS LANDFILL

EXHIBIT 3-10

MODIFIED BY SLOSSON AND ASSOCIATES

#6



#7

TABLE 10-6
LIQUID WASTE DISPOSED OF AT THE CALABASAS LANDFILL
(July 1, 1972 to July 31, 1980)

TYPE OF LIQUID WASTE	1972	1973	1974	1975	1976	1977	1978	1979	1980	TOTAL
CLASS I - HAZARDOUS	QUANTITY IN TONS									
Acid Solution	1,846	5,626	3,709	5,460	9,755	10,069	27,799	41,397	19,778	125,456
Alkaline Solution	24	1,927	4,216	6,042	8,671	4,453	8,557	10,772	4,374	49,345
Pesticides	*	*	[9]	346	297	201	420	352	273	2,040
Solvents	*	*	127	334	525	681	1,149	1,438	1,367	5,623
Tetra-ethyl Lead Sludge	*	*	18	8	4	<1	0	8	25	62
Chemical Toilet Wastes	*	*	42	22	0	<1	18	21	0	109
Hazardous Tank Bottom Sediments	*	*	512	881	302	215	1,071	1,324	2,447	6,662
Oily Wastes	*	*	2,552	3,378	4,529	5,702	2,879	4,102	4,000	27,092
Contaminated Soil and Sand	*	*	-	14	3	47	180	67	91	402
Cyanides	3	39	170	24	4	105	0	*	-	345
Brine	9	-	3	83	0	23	1,574	302	761	2,757
Other Hazardous Wastes	-	161	3,118	5,333	2,647	8,018	5,152	6,921	7,848	41,198
TOTAL HAZARDOUS LIQUID WASTES	1,882	7,808	14,458	22,427	26,597	30,238	49,109	66,755	40,956	260,068
CLASS 2 - NON-HAZARDOUS	QUANTITY IN TONS									
Paint Sludge	551	1,289	1,085	1,577	2,262	2,560	2,849	3,596	616	15,925
Drilling Mud	755	1,425	367	135	4	14	5	55	253	3,013
Cannery Wastes	*	*	5,143	3,462	78	1,385	1,042	11	37	11,165
Latex Wastes	74	72	48	144	72	119	108	86	110	819
Mud and Water	1,971	3,903	3,799	3,076	3,421	3,421	3,067	6,054	7,087	34,199
Non-hazardous Tank Bottom Sediments	1,254	2,503	-	624	876	845	32	43	0	6,177
Other Non-hazardous Wastes	9,339	8,264	7,408	6,109	7,345	3,457	3,478	1,749	3,189	50,831
TOTAL NON-HAZARDOUS LIQUID WASTES	13,544	18,556	17,944	15,125	13,058	11,741	10,581	10,996	11,292	122,137
TOTAL LIQUID WASTES	15,226	26,364	32,302	37,552	39,655	41,979	59,728	77,359	52,248	382,205

Source: Sanitation Districts of Los Angeles County.
Note: * = waste type not accepted at the site
- = [not recorded]

Prior to 1972, waste deposition data was not segregated into types of waste. Total tons of refuse disposed of between September 1965 and July 1972 (including hazardous and nonhazardous) was approximately 1.76 million tons.

#1

TABLE 10-7
SOLID HAZARDOUS WASTE DISPOSED OF AT THE CALABASAS LANDFILL
(July 1, 1972 to July 31, 1980)

CLASS I - HAZARDOUS SOLID WASTE	1972	1973	1974	1975	1976	1977	1978	1979	1980	TOTAL
	QUANTITY IN TONS									
Acid Solution	-	-	-	37	3	12	50	65	35	207
Alkaline Solution	-	-	-	17	0	25	94	64	21	231
Pesticides	-	-	-	146	3	5	150	20	31	1,004
Solvents	-	-	-	7	13	22	19	30	5	109
Tetra-Ethyl Lead Sludge	-	-	-	0	6	0	0	6	0	0
Chemical Toilet Wastes	-	-	-	0	0	0	0	0	0	0
Hazardous Tank Bottom Sediments	-	-	-	13	0	0	0	2	23	44
Oily Wastes	-	-	-	0	3	30	13	25	46	126
Contaminated Soil and Sand	-	-	-	88	15	32	28	1	260	431
Cyanides	-	-	-	0	0	0	6	0	0	0
Brine	-	-	-	3	0	0	0	0	0	0
Other Hazardous Wastes	-	-	-	227	190	241	644	789	400	2,481
TOTAL HAZARDOUS SOLID WASTES	-	-	-	576	331	587	1,450	967	867	4,443

Source: Sanitation Districts of Los Angeles County.
Note: - = not recorded.
Prior to 1972, waste deposition data was not segregated into types of waste. Total tons of refuse deposited between September 1968 and July 1972 (including hazardous and nonhazardous) was approximately 1.75 million tons.

Regulatory Process

Following the Sanitation Districts' submittal of this *Final Amended Report of Waste Discharge for Corrective Action Program and Engineering Feasibility Study, Calabasas Landfill* to the RWQCB, the RWQCB will issue a draft waste discharge requirements specifying the conditions for the corrective action program for the Calabasas Landfill. The draft waste discharge requirements will be sent to all interested and affected parties for review and comments, and will be considered at a regular RWQCB Board meeting. Once the RWQCB's Board adopts the draft waste discharge requirements, the requirements become an Order that has to be complied with and implemented by the Sanitation Districts for the Calabasas Landfill.

One condition proposed in the corrective action program is to continue monitoring groundwater quality at the site and evaluate any changes in groundwater quality

#8

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March 19, 2008

Save Open Space
P.O. Box 1284
Agoura, CA 91376

SUBJECT: Additional Comments Regarding the Proposed Heschel School Site

At your request, this office has reviewed portions of "Findings of Fact and Regarding the Final Environmental Impact Report and Statement of Overriding Considerations for Heschel West School, County Project No. 98-062, Conditional Use Permit No. 98-062" provided by you. Additionally, this office has again reviewed "Geology of the Calabasas-Agoura-Eastern Thousand Oaks Area, Los Angeles and Ventura Counties, California," DMG Open-File Report 84-1, prepared by California Department of Conservation, Division of Mines and Geology.

It should be noted that Plate II C of the DMG Open-File Report 84-1 shows that the Liberty Canyon Fault could project towards or under the proposed Heschel School site. Plate I also shows the Liberty Canyon Fault trending in the direction of the proposed school site, and also shows "Possible Low Angle Faults" in the vicinity. The effect that these faults could have on the site need to be discussed and addressed. Additionally, there needs to be discussion about these faults as to how they may affect the landfill, and how they have created or could create fractures, joints, and shear planes that could allow movement of groundwater from the landfill area towards the proposed school site. Any hazardous materials that may leak out of the landfill could move along these zones toward the proposed school. You should keep in mind that in the past the landfill used to accept hazardous materials that were pumped into drywells into the subsurface in areas where there were no liners, or the dumping of these materials happened long before there were liners, and at a much lower elevation than the subsequent liners. These materials were pumped into the drywells as liquids. This needs to be addressed.

Along with the potential of movement of toxic and hazardous materials and groundwater from the landfill, there is the potential for possible vapor intrusion up from the soils from toxic materials within the soils beneath the site. This needs to be considered and addressed.

There has been no additional discussion regarding the fact that the State Seismic Hazard Zone map for the area indicates that the area of the proposed school is within the liquefaction hazard zone, as well as the slopes potentially being within the earthquake-induced landslide hazard zone per the map. This needs to be discussed with regard to the potential hazards for the site and the proposed school.

It should also be noted from the Geologic Map prepared by Gorian that some of the cut slopes will be exposing alluvium and landslide material and that some of the proposed cut slopes may expose out-of-slope bedding which could lead to distress and slope problems/failures. The area with the alluvium and landslide material will be exposed in the sports field slopes. The potential out-of-slope bedrock would be along the proposed cuts for the roadways. These conditions could lead to potential slope distress and slope failures, especially with the fact that, as noted above, some of these slopes are mapped on the State Seismic Hazard Zone map as having an earthquake induced landslide hazard. This needs to be addressed.

If you have any questions regarding this review, please do not hesitate to contact this office.

Thomas L. Slosson
Chief Engineering Geologist
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TLS:cg

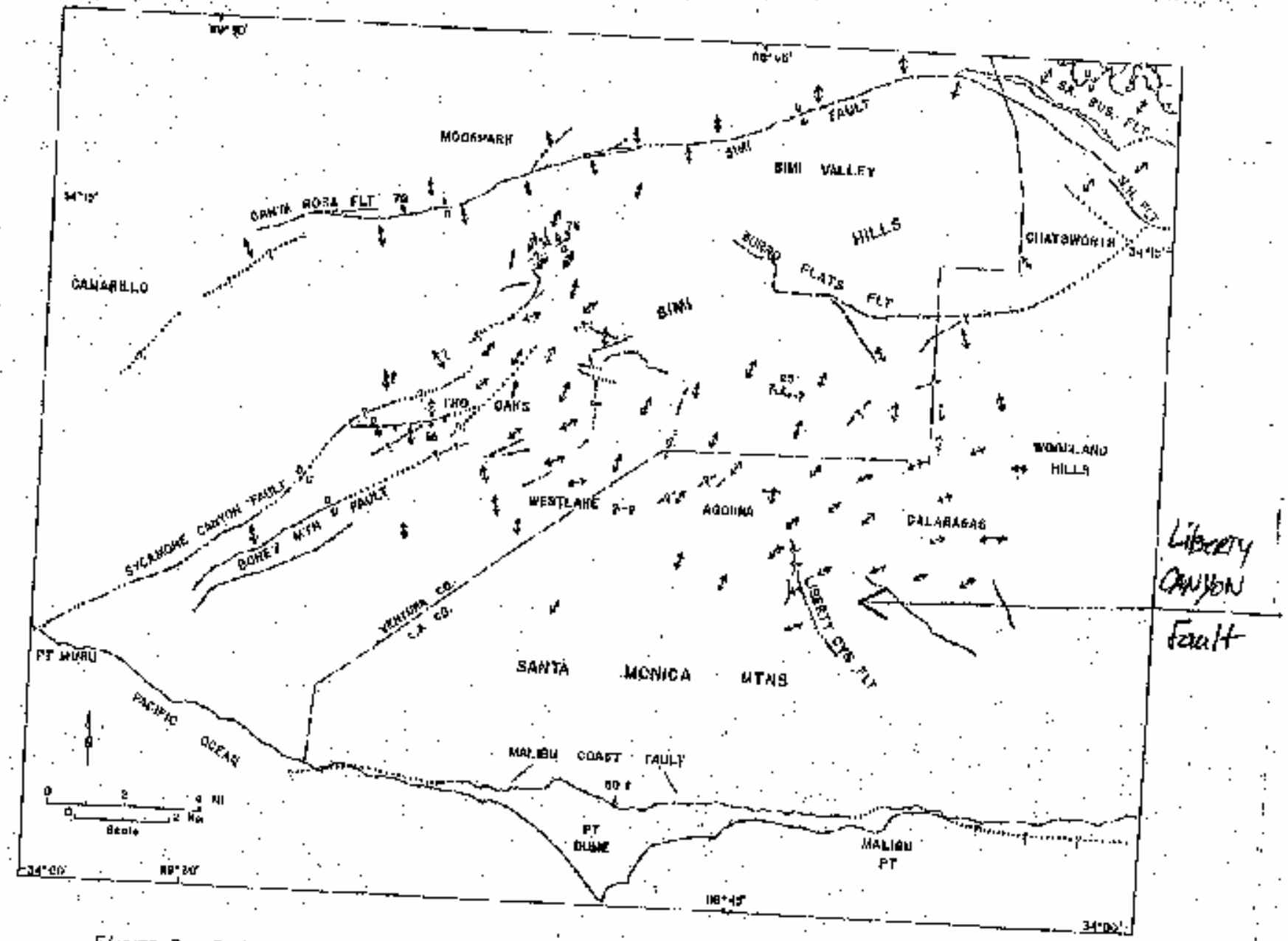

Figure 7. Double arrows show apparent direction of compressional stresses, as interpreted from geologic framework map (Plate 1).

CLEMENT REPORT - 1990

SUMMARY OF ORGANIC CHEMICAL DISTRIBUTION IN ENVIRONMENTAL MEDIA

RISK ASSESSMENT #9
LIBERTY CANYON PROPERTY

CHEMICAL	DETECTED IN: SUBSURFACE GAS				GROUNDWATER			SURFACE WATER	SEDIMENTS	SOILS	AMBIENT AIR	
	Soil Gas Survey	Soil Gas Confirmation Samples	Raw Landfill Gas	Field Screening Samples	Landfill Downgradient Wells	Landfill Upgradient Wells	Landfill Storm Water Runoff	Field Screening Investigation Results	Sed Test Pit Samples	Field Screening Investigation Results	Landfill Monitoring Data
Monocyclic Aromatic Hydrocarbons												
Benzene	X	X	X	X	X	X						
Chlorobenzene				X						X	X	
m-Dichlorobenzene												
Ethylbenzene				X						X		
Toluene	X			X		X			X	X		
1,2,4-Trimethylbenzene										X		
Xylenes				X						X		
Halogenated Aliphatic Hydrocarbons												
Carbon Tetrachloride												
Chloroform			X		X	X	X			X		
1,1-Dichloroethane				X	X	X						
1,2-Dichloroethane			X		X	X						
1,1-Dichloroethylene				X	X	X						
cis-1,2-Dichloroethylene					X	X						
trans-1,2-Dichloroethylene					X	X						
1,2-Dichloropropane						X						
Ethylene Dibromide		X	X									
Freon 11												
Methylene Chloride		X	X		X	X				X		
Tetrachloroethylene	X	X	X		X	X				X	X	
1,1,1-Trichloroethane			X							X	X	
1,1,2-Trichloroethane							X			X	X	
Trichloroethylene	X	X	X	X	X	X				X	X	
Vinyl Chloride			X		X	X					X	
Other												
4-Nitrophenol												
Phenol						X	X					
Plates												
Diethylhexylphthalate						X	X		X			

Enc. 10

CITY of CALABASAS

CITY COUNCIL AGENDA REPORT

DATE: NOVEMBER 7, 2003

TO: HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: STEVE CRAIG, COMMUNITY DEVELOPMENT DIRECTOR
BRIAN TRUSHINSKI, PLANNING MANAGER

SUBJECT: SLOSSON AND ASSOCIATES' PEER REVIEW REPORTS ON THE CALABASAS LANDFILL

MEETING DATE: NOVEMBER 19, 2003

SUMMARY RECOMMENDATION:

The Open Space Advisory Task Force recommends that the City Council support the findings and recommendations presented in the Slosson and Associates peer review reports, as set out in Appendices "A" through "D" regarding County Sanitation District's radioactivity testing and water quality monitoring analyses at the Calabasas Landfill and to forward this submission to the County requesting a response by December 31, 2003.

BACKGROUND:

In the fall of 2002, the City Council held a forum to receive public concerns about community health impacts associated with potential off-site migration of groundwater contamination containing radioactive materials including perchlorate from the Calabasas Landfill property.

In late January 2003, the County Sanitation Districts of Los Angeles County released its technical report findings and recommendations pertaining to radioactivity testing at the Calabasas Landfill. In response, City Council directed staff to retain the services of a qualified geology and groundwater consultant who was familiar with the historical and operational use of the Calabasas Landfill and who could provide an expert peer review of the County's report. Since that time, the County also undertook and released two water quality monitoring reports for the Landfill, both of which were also to be reviewed by the City's consultant.

AGENDA ITEM #13

Enc D

OPEN SPACE ADVISORY TASK FORCE:

Under the City Council's "New Initiatives" package; matters pertaining to the Calabasas Landfill are to be addressed by the Open Space Advisory Task Force and reported back to the City Council. At its October 27th meeting, the Task Force reviewed and expressed its support for the findings and recommendations contained in the Slosson reports. The Task Force recommends that the City Council support Slosson's findings and recommendations and to forward this submission to the County Sanitations District, requesting a response by year-end.

FISCAL IMPACT/SOURCE OF FUNDING:

None.

REQUESTED ACTION:

The Open Space Advisory Task Force recommends that the City Council support the findings and recommendations presented in the Slosson and Associates peer review reports, as set out in Appendices "A" through "D" regarding County Sanitation Districts radioactivity testing and water quality monitoring analyses at the Calabasas Landfill and to forward this submission to the County requesting a response by December 31, 2003.

ATTACHMENTS:

Appendix A - Slosson Report (November 6, 2003) Summarizing 2003 County Sanitation District Reports

Appendix "B" - Slosson Report (October 16,2003): Peer Review of "Radioactivity Sampling Report for Calabasas Landfill, Agoura, California - January 2003"

Appendix "C" - Slosson Report (October 16, 2003): Peer Review of "Calabasas Landfill 2002 Water Quality Monitoring Annual Report - May 2003"

Appendix "D" - Slosson Report (October 16, 2003): Peer Review of "Calabasas Landfill Water Quality Monitoring Report, Second Quarter 2003 and Corrective Action Progress Report - January to June 2003"

Map 1 - Calabasas Landfill: Location of wells CAZ2, CA21 and CA25.

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November 6, 2003
S&A #031002

TO: City of Calabasas
26135 Mureau Road
Calabasas, CA 91302

Attn. Brian Trushinski

SUBJECT: Review of Los Angeles County Sanitation District Reports Regarding the Calabasas Landfill for Radioactive Testing and for the 2002 Water Quality Report and Second Quarter 2003 Water Quality Report

This office has reviewed the following reports.

"Radioactivity Sampling Report for Calabasas Landfill, Agoura, California" prepared by the County Sanitation Districts of Los Angeles County, Whittier, California, dated January 2003

"Calabasas Landfill, 2002 Water Quality Monitoring Annual Report, Orders No. 00-077, 93-062, &89-053, File No. 60-118 C.I. No. 4902", Volumes 1 and 2, prepared by County Sanitation Districts of Los Angeles County, dated May 15, 2003.

"Calabasas Landfill Water Quality Monitoring Report, Second Quarter, 2003 and Corrective Action Progress Report (January-June) 2003", Volume 1 and 2, prepared by the County Sanitation Districts of Los Angeles County

Based on a review of these reports, this office has prepared comments on each report, which are attached as an appendix to this review. This review is a short synopsis of those comments. Following are some of the keys items noted in the reports:

- There appears to be some confusion on what really constitutes a "background well" for monitoring purposes. Typically, a background or upgradient monitoring well is one which is upgradient, or on the upper side of the item which could be affecting or polluting the groundwater. At the Calabasas Landfill, this would be on the ridge line or above the landfill, and typically

would be along the northern limits of the landfill. The northern edges of the landfill are higher topographically than the landfill and the lower areas to the south, east and west. In the Radioactivity Sampling report, monitoring well M16A was considered as the main background well, and well M18D was also used as another background well. Both of these wells are, in reality, clearly downgradient wells and should not be utilized as upgradient or background wells. In the other two reports, well M16A, and M18D were clearly used as downgradient wells or wells that could be most likely affected by the landfill. Both wells are clearly downgradient and in the area of Subsurface Barrier #6, which is used to try and trap any fluids that may be moving offsite, in an older topographic low of swale. Well M16A is actually a part of the Detection Monitoring Program (DMP) for the lined portion of the landfill. If this is an upgradient well, why is it part of a DMP which monitors waters coming from the landfill? These wells should not be used as background wells. Only wells clearly upgradient should be utilized.

- It is indirectly indicated in the reports that there was a period of time from the beginning of the land fill being used as a dump in 1961, to the mid 1980's when there was no record keeping or checking as to what actually went into the landfill. During this time of landfill operation, there was no lining of the landfill being used. The first liner was installed in 1984. It appears that there is a significant period of time that it was not known what went into the landfill, or if any of it could be hazardous, toxic, or a problem of any sort. It is interesting to note that these areas that were the unlined portions are where there is a need to have the "Corrective Action Program" (CAP) monitoring wells. These are the areas where it has been shown that there is an identifiable effect of the landfill on the local groundwater.

- There does not appear to have been any consideration that there exists many fractures, joints and shears which act as conduits for groundwater to move through the bedrock. While the porosity and permeability of the native bedrock may be low, or such that water would move very slowly through the bedrock material, the fractures, joints and shears could have a much different impact on how the groundwater moves. The fractures, joints, and, to some extent, the shears lead to a much higher secondary permeability, where water can move freely in open and interconnected joints and fractures. These would be like open cracks in a pottery bowl, which would allow water to flow out of the bowl. If the bowl was not cracked, water would stay in the bowl. The area has undergone many periods of tectonic warping and faulting, which has lead to these interconnected joints and fractures. The extent of this fracturing, jointing and shearing needs to be documented, as well as how they may intersect or

interconnect. Without this data, it makes it difficult to make true informed conclusions on how the water moves.

- There are discussions that there are naturally occurring radioactive and certain petroleum byproducts in the bedrock material which exists onsite. There is no testing of the actual onsite materials or near proximity of these materials to actually verify what does exist in the natural bedrock. Only assumptions have been made. There is a need to actually test and verify what exists in the native materials so informed and correct decisions can be made as to the background levels of these compounds.

- There is a need to conduct further testing to verify what are actually the upgradient wells. The wells which appear to be clearly upgradient are well's CA22, CA24 and CA25. These wells would be the best to use. In the "Calabasas Landfill 2002 Water Quality Monitoring Annual Report", there is a discussion of these wells, and how there was other testing to show what could be considered as upgradient. All that this other testing of "Soil Equilibrium Study" and "Mineral Leaching Study" did was to expand both up and down the limits of the constituents outside of the limits from the actual upgradient wells. It would probably be more prudent to use the actual upgradient wells.

- There is a need to further and properly map and document faults that cross or are on the site. It is known that there was damage and minor offset along some minor fault zones from the 1994 Northridge earthquake. This damage was noted at the Las Virgenes Water District's headquarters, the Steeplechase condos on Lost Hills Road, and in the development to the south of the landfill and north of the freeway. This offset along these secondary faults may have affected and continue to affect the landfill site.

- Based on some of the findings, there may be a need to do some further offsite and down gradient monitoring or observation via monitoring wells. These additional monitoring wells may need to be placed along one or on the sides of the faults that go across the site. There may be a need for wells further down gradient from the landfill site to observe if any waters which may be contaminated and flowing in fractures and joints may be coming to the surface further down gradient.

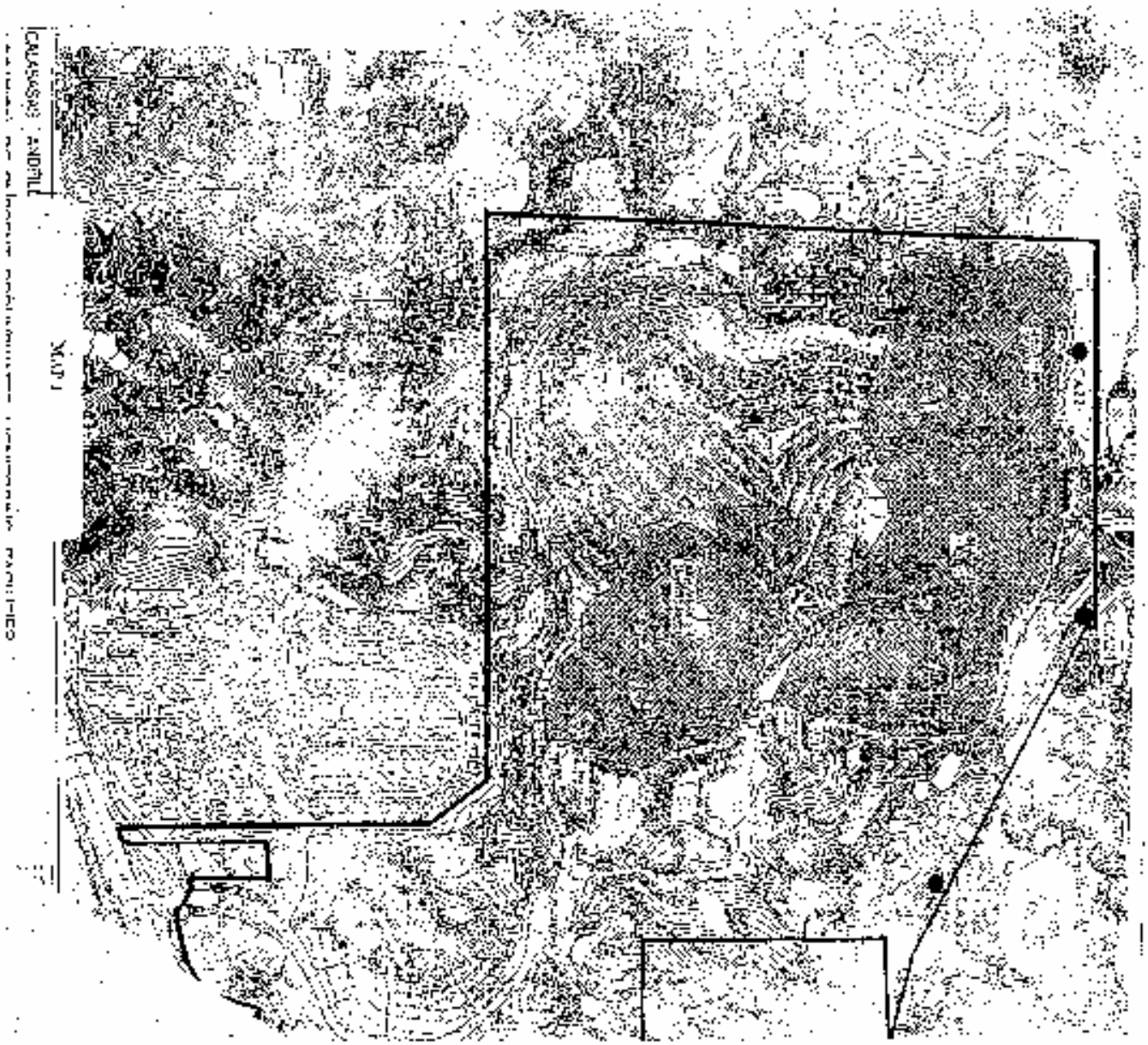
For additional comments, please see the attached reviews prepared by this office. In general, there are currently problems with some of the data and conclusions presented in these three reports. There is a need to retest and verify some of the actual conditions at the site to be able to properly analyze and come to conclusions regarding the impact of the existing landfill on the surrounding area and groundwater.

If you have any comments regarding this review, do not hesitate to contact this office.

Thomas L. Slosson
Supervising Engineering Geologist
R.G. #4204, C.E.G. #1177

TLS:cg
Ref:goip radioactive quality

Exc 10



APPENDIX "B"

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October 16, 2003
S&A #03-002

TO: City of Calabasas
26135 Mureau Road
Calabasas, CA 91302

Attn: Brian Trusinski

SUBJECT: Notes on Report Titled "Radioactivity Sampling Report for Calabasas Land, Agoura, California" Dated January 2003

The report does not seem to consider the movement of water through the faults which crisscross the site.

The report indicates that the uranium and alpha particle activity exceed the maximum contaminant levels (MCLs) for drinking water but may reflect natural sources. It is unclear what the natural sources may be.

It is indicated that the source of the natural uranium may be from uranium bearing shales. What testing has been done on these Modelo formation materials locally to prove or disprove the natural uranium?

On page 1 of the report, it is indicated that there was extensive review of records such as regulatory agency correspondence, remediation and radiological survey reports, and waste hauler and disposal records. If the disposal of the contaminated materials from Rocketdyne occurred in the 1950-early 1960 range, were there records from that time period? The materials may have been disposed of without official records into the unlined portion of the original landfill. This possibility needs to be considered and assumed as part of the analysis rather than assuming that the records are complete.

There appears to be 6 subsurface barriers along some of the old creek channels. Is it known if these completely cutoff any outflow, or can there be outflow below these into the fractured bedrock?

It does not appear that there has been any testing done on the fractured bedrock nor on the water that flows through the fractured bedrock as far as any of the radioactive

materials. There should be testing of those waters, since any leakage from the unlined landfill portion would enter into the fractures and flow within the fractures, not in the alluvium. One should not assume that all of the waters would flow primarily in the upper earth materials (alluvium and colluvium) only.

On Page 3, there is a discussion on groundwater which states "Generally, shallow groundwater flow appears to mimic the surface topography. Groundwater in the fractured Topanga shale/siltstone which underlies most of the southern portions of the landfill, flows toward the southeast canyon area at Barriers 1 and 6 and toward the southwest canyon at Barrier 2. In the northern and central portion of the landfill, groundwater occurs in the Modelo Formation sandstones and conglomerates. Groundwater elevation data indicate that groundwater flows toward the west near Barriers 3, 4, and 5." There does not appear to be testing to verify that these assumptions are correct. If there are fractures and faults then the testing to date has not adequately characterized or addressed these conditions and tested to verify what their impacts may be.

Also on Page three, there is a discussion of black shales being known to contain elevated uranium levels. Has this been actually confirmed for the units on site? If the units on site are tested and do not have a high uranium level, then high numbers must be from a different source.

On Page 4 there is discussion of the linings in the different portions of the landfill where there are linings. Where the linings exist, there are liquid collection and removal systems (LCRS). These were where samples were taken of the materials from the lined portions. What if the materials from Rocketdyne were placed in the landfill prior to the use of the liners, then the materials and liquid in those lined areas would not have any radioactive materials from the earlier dumping. If the liners work as designed, no liquid from outside should get into the liners, and no fluid from inside the liners should leak out. If the materials were in the unlined portion from the earliest dumping, it would not be in the lined sections or portions.

There is discussion on Page 4 regarding the sampling of waters from the downgradient of the six barriers that were placed subsurface for the "Downgradient monitoring wells". If the barriers are acting to slow down the movement of waters and liquids, would it not be prudent to test the liquids on the upside or upstream side of these barriers, where any waters that might be contaminated may exist? This would at least allow the data to be collected that there may be some of these materials held at the barriers that may move offside with time. The waters and liquids on the upstream side of these barriers needs to be collected and tested for true data collection of the conditions at the site.

On Page 4 and onto Page 5 there is a discussion of the "Background Monitoring Well sampling". It should be noted that these background monitoring wells are not truly background or upstream, but are in monitoring wells downgradient from the lined portions of

the landfill and may be contaminated from the unlined portions of the landfill. (possibly 50% of the landfill). It is strange how the "Background Monitoring Wells" (M18D and the main background well M16A) had gross alpha higher than the downgradient wells and almost at the same level as the LCRS. This does not make sense. The "Background Monitoring Wells" are also very possibly located in an area of faults, as described in other parts of the report. Background monitoring well M16A is located in the southeastern portion of the landfill in the area of the P-Cut liner. On Page 3 it is indicated that Faulting near the P Cut area has been inferred based on a shear zone. As such, these wells may be impacted by water moving through the fractured and faulted bedrock to the vicinity of these wells, and could come from the unlined landfill areas. This should be considered and verified by the proper groundwater sampling. There should be a true upgradient sampling of uncontaminated water and liquid for a proper scientific analysis and results.

Another interesting item on Well M16A is that its Conductivity is high and equal to the samples of the LCRS and the downgradient monitoring wells (M16A had conductivity of 5,070, the LCRS and downgradient ranged from 5,190 to 7,040 with most in 5 to 6 thousand range). The other background monitoring wells had a conductivity of 3,380 (M19R) and 947 (M18D). This could indicate that the waters in M16A are contaminated and this should be checked.

On Page 16 there is a discussion of "Commercially exploitable uranium found in Wyoming Basin, Colorado Plateau, California, Belgian Congo, Canada, and Czechoslovakia. Many relatively more concentrated deposits of uranium- and thorium-bearing minerals are known in eastern and southern California. Most of the enriched uranium deposits are found in the southern Sierra Nevada, Mojave Desert Region and Western Kern County (Troxel, et al., 1957)." The discussion continues onto Page 17 with a discussion that there is high uranium in parts of the black shales of the Monterey Formation, and that the Modelo is basically the same as the Monterey, with the implication that the uranium should also be there, but with no testing to back it up. It further goes on to state "Prospective uranium ore deposits have been identified approximately 20 miles from the Calabasas Landfill in the Grimes Canyon area near Fillmore in Ventura County". This site is not at the Calabasas landfill and may be from a different depositional environment than the materials at the landfill. There should be some onsite testing of the onsite bedrock to verify what the actual background level or naturally occurring level of uranium is in the bedrock rather than making assumptions that the level of all liquids is due to the background or naturally occurring uranium in the bedrock.

On Page 18 there is a table (Table 6) "Los Angeles and Ventura Counties, Drinking Water Sources Radiochemistry Data, 1994 through November 2002". Is this for all wells, or for those with some level of contamination only? The source and data needs to be explained for consideration. If this is of wells with contamination, it would be higher than the listing of all wells. It should be considered if these wells are near any other sources of contamination or radioactive materials, such as near industrial areas. The location of all of the wells tested needs to be included.

On Page 35 there is a statement which reads "Beta particle activity in downgradient monitoring wells is below the range seen in the background monitoring wells. Beta activity in two of the four LCRS samples was slightly above the level seen in background wells." The question is why? Is this further indication that the wells chosen as the background wells were or are not truly "Good Background wells" and are contaminated and could be actually downgradient due to the faults and fractures.

It is also interesting that the Uranium 234 and Uranium 238 are high in the background well M16A (U234 36.0, U23829.5) as compared to some of the other wells (downgradient wells: R02A U234 29.4, U23825.7,; R06A U234 12.7, U238 10.6; R07A U234 4.6, U238 3.9; LCRS wells: DLCS, u234 6.0, u238 5.7; DLCS U234 64; U238 58). Is this further indication that the supposed "Background wells" are not really good 'background' wells but have some form of contamination from the unlined portion.

Also on Page 36 is the statement, "Gross alpha activity was detected above the 15 pCi/L MCL in downgradient monitoring wells and LCRS samples. However, the alpha particle activity in downgradient monitoring wells is below the range seen in "Background Monitoring Wells". Is this further proof that the 'Background Monitoring Wells' are not truly good background monitoring wells, but are contaminated? True upgradient "Background Monitoring Wells" need to be placed and sampled, or the data should be considered inconclusive.

The bottom line appears to be that the testing wells were not laid out properly, specifically the background wells, and that there has not been data included for the pathways of the water in the numerous faults and fractures. There is a need to test the water in the fractured bedrock, on the upgradient areas of the subsurface barriers, and upgradient of the landfill. There should be proper consideration of the unlined portions of the landfill, and the percentage of the landfill site that the unlined portion is. These needs to be consideration for the fact that there may not be any documentation and records for what may have really been placed in the unlined portion of the landfill in the 1940, mid 1960 period, or when true documentation was done on any of the hazardous materials. There needs to be actual onsite testing of the onsite bedrock materials as to the actual uranium levels in these materials, as compared to general, unsubstantiated assumptions made.

If you have any comments regarding this review, do not hesitate to contact this office.

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R.G. #1204, C.E.G. #1327

TLS:cg
Ref: grip\radioactivity

APPENDIX "C"

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October 16, 2003
S&A #03002

TO: City of Calabasas
26135 Mureau Road
Calabasas, CA 91302

Attn: Brad Trushinski

SUBJECT: Review of "Calabasas Landfill 2002 Water Quality Monitoring Annual Report Orders No. 00-077, 93-069, & 89-055, File No. 60-118 C.I. No. 1992" prepared by County Sanitation District of Los Angeles County, dated May 2003

The landfill has been in operation since 1961, but there were no restrictions or any record keeping of materials in the landfill or liners installed until the 1980's (1984). As such, there is no real record of what had gone into the landfill from its start to the period in the 1980's. Currently, there is also no indication of the amount of materials that went into the landfill during these times. There are records and numbers given for the amount of waste placed during the period of 2002. There are sections of the landfill that are unlined and there are no records of what went into the landfill in these unlined sections.

There are currently two types of monitoring programs for the groundwater at the site. One is a detection monitoring program (DMP) which is downgradient of Barriers 3, 4, and 6. Barriers 3, 4, and 6 are downgradient of the lined disposal areas. The other is the corrective action program (CAP) downgradient from Barriers 1, 2, and 5. The CAP program is in effect because the landfill has had an effect on the groundwater downgradient of these barriers.

The report on page 7 indicates that the containment barriers installed in the 1980's downgradient of the unlined sections consist of vertical barrier wall constructed from a cement/bentonite mixture, and a system of extraction wells to remove water retained behind the wall. Evidently, these barriers are not working as planned, or the groundwater is moving downgradient below and around theses barriers. Water downgradient of barriers 1,2,and 5 has been impacted and is part of a CAP program. The water is most likely moving through fractures in the bedrock that are interconnected and act as a way to transport any contamination past the barriers. The

in highly fractured, sheared, jointed and weathered bedrock materials. Several faults have been observed in the past on the site of the landfill, in the southwest part of the landfill, scale house (southeast portion) and along the eastern margin. Many faults cut or go across the property, and under the utilized portions of the landfill.

It is usually considered that the bedrock in the area has a low groundwater yield and is non-water bearing, but this does not mean that water can not flow through the fractures and joints and shears in these units. Additionally, not much consideration has been given this groundwater as a drinking supply due to the high salinity. Therefore, not much has been done in the way of investigations to truly understand the hydrology or the subsurface in these areas. The jointing, fracturing and shearing will allow for a much higher secondary permeability in the bedrock as compared to the primary permeability of the bedrock.

In the report, on page 14, there is discussion regarding the direction of groundwater flow as measured from groundwater surface elevations. It indicated that the groundwater flow in the fractured Topanga shale/siltstone beneath the southern portions of the landfill is towards the southeast and/or southwest. These flow directions are opposite of the dip of the bedrock of the Topanga formation in these areas. The only unknown in some of these assumptions is the question of the groundwater surface elevations as a good measurement. Are there faults or other conditions that could affect the groundwater surface elevations? Currently, there is not sufficient data to come to an informed conclusion. It further goes on to indicate that the water in the Modelo sandstones and conglomerates flows to the northeast in the northern areas of the site and towards the west in the area of Barriers 3, 4, and 5. This is interesting in that the primary dip direction of the Modelo formation in these areas is to the northeast, and for the flow to be towards the west, it is flowing laterally along bedding, not down dip, and/or along fractures towards the west. Again, there is not enough data to provide a comprehensive answer to this question of actual flow mechanism. The discussions of where the water is found in the wells around the barriers does not provide sufficient data to help understand the actual depths to groundwater and if there are only separate zones.

On page 15, there is the start of a discussion on the barriers, the groundwater elevation, and where or what the groundwater flows through. It is indicated that the total depth of the barriers were keyed into bedrock at least 5 feet. Since it is unclear how deep the barriers are from the ground surface, it is difficult to tell if the flow is below or around the barriers. From the data presented, there is groundwater flow in the alluvium and weathered bedrock, as well as in the unweathered bedrock. The flow in the unweathered and weathered bedrock is most likely along fractures, joints, and shears and is of the secondary permeability type. The flow most likely goes below the barriers through the weathered bedrock as well as the unweathered bedrock, since the barriers are at least into bedrock 5 feet, and the weathered bedrock may easily be deeper than 5 feet in the canyon areas, as well as in the fault zones. In these zones, the weathered bedrock could go as deep as 20± feet below the alluvium or

ground surface, depending on how much alluvium or fill there is between the ground surface and the start of the weathered bedrock.

It is indicated that, during 2002, the Calabasas landfill accepted only nonhazardous solid wastes and inert solid wastes. It is unclear from the report what materials have gone into the landfill from the start up of the landfill in 1961 to the mid 1980's and from mid 1980's to 2002. It is unclear if, during the time from 1961 to the mid 1980's, there were hazardous materials placed in the unlined portion of the landfill.

On page 21, there is discussion regarding the radioactivity sampling that occurred at the site in June of 2002. It is indicated that well M16A is hydraulically isolated from all waste disposal areas. In the report regarding the radioactivity sampling, it was discussed that well M16A was considered as being upgradient of the landfill. It is unclear how it can be upgradient and hydraulically isolated since it sits downgradient of Subsurface Barrier #6, and is in the location of some of the other wells used for monitoring. In the documentation, well M16A is actually a DMP well for Barrier 6. The M16A well is possibly in a fault zone. This well's results should not be considered indicative of the background conditions.

If well M16A is to be considered as hydraulically isolated, and representative of an upgradient, even though it is downgradient (as in the radioactive testing), why is it part of the Detection Monitoring Program? To be a part of the detection monitoring system means it is downgradient of the lined landfill sections.

It appears that there were groundwater surface elevations taken at 96 wells and piezometers in 2002. The location of those wells and piezometers are part of the report reviewed (as Exhibit 3-2). Based on a review of the map, there are monitoring wells on the upgradient side of the landfill (CA22, CA24, and CA25). It is unclear why these would not be used as the upgradient wells for the monitoring and radioactive sampling, as compared to well M16A, which is clearly downgradient of the landfill.

On page 29, there is a discussion of the waters that were tested from Wells CA22, CA24, and CA25. It indicates that these wells are upgradient or sidegradient of all waste disposal areas. These are the wells that should be probably used for all background, upgradient wells. It is indicated that the data suggests the native subsurface materials are very heterogeneous, and the groundwater quality at these three wells is distinct. Well CA22 contains primarily calcium and magnesium sulfate. The mineral composition of Well CA24 is mainly calcium carbonate. The groundwater in Well CA25 contains mainly sodium sulfate. If the water quality is so diverse, it is still unknown why a well clearly downgradient is considered as the representative upgradient well. It is noted that, typically, the waters are high in TDS.

The report goes on to say that the data shows that defining background water quality is not a simple task. "Background groundwater quality may vary spatially and seasonally because of the complex interplay between hydrologic and geochemical process which include the seasonal recharge and drainage of alluvial and bedrock formations, the gradual movement and blending of formation waters, and a variety of geochemical reactions within rocks and sediments such as solubilization of salts, equilibria and ion exchange phenomena, irreversible weathering process, interactions with atmospheric and soil gases, and the oxidation or reduction of solid and soluble species. Because of the high degree of heterogeneity of sediments at the site, a few monitoring wells cannot represent the complete range of background conditions." If this is true, then it is even more necessary to actually have some true upgradient wells as the background wells versus having downgradient, possibly fault affected wells as the background wells.

On page 33 there is a discussion of the findings in Well 18D as compared to Wells M15B, M16A, and M19R. It is unknown why only those four were utilized, and why M18D is so different from the others, except that it is at a different location. Per the map with the report, M15B and M16A are both at subsurface barrier #6, M19R is at subsurface barrier #4, and M18D is at subsurface barrier #3. While these appear to be representative samples for the subsurface barriers listed, other wells should also be included. Additionally, it should be discussed if there is a particular reason why the TDS is low compared to the other wells listed in Table 7-2.

In Table 7-2, Well M16A is listed and in the discussion of Barrier #6. It is discussed that Well M16A is one of the monitoring wells for the DMP at the Barrier. In Table 7-6, Well M16A is listed as a background monitoring well. Additionally, Well M19R is listed as the DMP monitoring well for barrier #4, and on Table 7-6, it is also listed as a background monitoring well, and Well M18D is a DMP well for Barrier #2, and it is also listed on Table 7-6 as a background well. How can wells downgradient in a DMP be considered background wells?

The report presents as Table 7-1 results of different background water tests, including from the wells actually upgradient from the landfill. This information should have been used in the radioactivity sampling done.

Throughout the report it is reiterated that the bedrock materials are of low permeability, especially in the beds of claystone and siltstone. The problem is there is no consideration of the potential for higher secondary permeability and porosity due to the interconnected joints, fractures shears, etc., due to the extensive folding that has occurred in the area.

It appears that, to date, the impact that the landfill has had on the downgradient groundwater has primarily come from the unlined sections of the landfill, and involve VOCs (volatile organic compounds). These are still moving offsite as indicated.

Based on the findings for Barrier #5 on Page 59, it would appear that the landfill is affecting the groundwater beneath Cheseboro Creek. Some of the monitoring wells below the creek had VOCs detected in them. It is indicated that the wells in the creek had lower readings for VOCs in 2002 than were found in 2001. Either way, there is some effect on the offsite groundwaters by the landfill in this area. While, in the area of the surface water sampling and the groundwater sampling, the levels were different, somewhere down the watercourse the two elevations could be at the same elevation due to geologic constraints.

As has been indicated in the past, the radioactivity sampling results are flawed based on some of the assumptions in the analysis, including the use of Well M16A as a background and upgradient well. Other problems include the assumption that there is a natural radioactivity from black shale deposits, without testing to show that, in effect, this is true.

The irrigation utilized around and on the site, as well as water used for dust control and rainfall all together most likely exceed the evapotranspiration for the site. The evaporation from the Chatsworth Reservoir may not be comparable to the evaporation at the site. It might be better to use the evaporation from the Westlake Reservoir, or other data from the Las Virgenes Municipal Water District for the nearby area.

In this report, it was referenced there was a report by Advanced Earth Sciences, Inc., titled "Calabasas Landfill Installation of Monitoring Wells and Piezometers, Hydrogeologic Investigations and Aquifer Testing", dated 1996. This would be a good report to obtain to review the information within.

If you have any comments regarding this review, do not hesitate to contact this office.

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TLS:kg
[illegible]

APPENDIX "B"

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October 16, 2003
S&A #05.002

TO City of Calabasas
25135 Mureau Road
Calabasas, CA 91302

Attn: Brian Toshinski

SUBJECT: Review of "Calabasas Landfill Water Quality Monitoring Report, Second Quarter 2003, and Corrective Action Progress Report (January-June), 2003" prepared by County Sanitation Districts of Los Angeles County

Upon review of the above mentioned report, the following comments are presented for consideration:

It was noted on Table 4 that, for Barrier 2 area and Barrier 5 area, there are clearly multiple levels of water that are monitored. It was also noted that a good number of the monitoring wells for the barriers showed that the high reading out of the three months was typically in May of 2003. It is interesting to note that the discussion on Barrier 1 indicates two separate groundwater bearing zones, one at approximately 45 feet, and the other in the deeper, unweathered bedrock of the Upper Topanga formation. The readings for the groundwater monitoring in Barrier 1 indicate depths of 45.08 to 60.52. It is unclear if the readings at the 59 to 60 + feet depths are the deeper water bearing zones. The readings from the Barrier 1 wells have some that go down in elevation and others that go up over time. This needs to be discussed.

It is indicated in the text that Barrier 2 has unconfined groundwater at approximately 10 feet below the ground surface. There is no discussion of a deeper zone, yet, on Table 4, there are wells for Barrier 2 with water depths of 49± feet below ground surface, indicating that there is a deeper water zone.

It is indicated in the report that Barriers 3 and 4 have two distinct groundwater zones, one in the alluvium and weathered bedrock, and the other in the deeper unweathered bedrock. It is noted on Table 4 that the monitoring wells for Barriers 3 and 4 are 60 to 80 feet

below the ground surface, with others being dry. This would seem to indicate that the water is at the deeper levels, not the upper levels."

Regarding Barrier 5, it is discussed that the groundwater occurs at approximately 13 feet below the ground surface and in the unweathered bedrock. In Table 4, the water levels at Barrier 5 are at levels of 2-9, 11-17, 19-36, 39-36, and 45-47 feet below ground surface. This would appear to show that there are more than two groundwater bearing zones. In the Barrier 5 report, it is discussed that the wells in the alluvium are generally dry and that there is groundwater in the deeper unweathered bedrock. Table 4 shows that the water is found between 51 to 66 feet below the ground surface, indicating that the water is in the deeper bedrock.

It is important to consider that there is a high potential that the different groundwater zones may actually be interconnected by joints and fractures, which are prevalent throughout the area.

The report on Page 26 indicates that there is no beneficial use of the groundwater due to the naturally occurring high levels of dissolved solids and heavy metals and their limited quantity. This does not mean that the waters are okay to have high VOC's (volatile organic compounds). It is also interesting that the actual upgradient wells are not utilized in the discussion of what are the TDS and heavy metals.

It should be noted that "Exhibit 4, Total Dissolved Solids at Monitoring Location M15B" shows an upward trend in the TDS at that well. This needs to be discussed as it could be an indication of a landfill impact on the groundwater at Barrier 6, which currently is a DMP, not a CAP, but maybe should be considered as a CAP if the trend in rise in TDS is correct.

On Page 30, there is a discussion regarding the effect of the landfill on the waters in Cheseboro Creek. It is indicated that the water level of the groundwater from the landfill is below the level of the creek and that the creek is recharging the groundwater. This may be true at the location indicated, but may not be true downstream. It may be possible that the groundwater will flow into the creek and be the source of water in areas where the water bearing materials are closer to the surface, such as a fault area, or in an area downgradient.

It is noted on Page 33, under the heading of "VI. Emergent Chemical Testing", that testing had been done on a one-time monitoring of Wells M16A, M18D, M19R, R02A, R06A, R07A, P68S, P69S, P10, and P11. These tests were to determine if five emergent chemicals were present which include: perchlorate, N-nitrosodimethylamine, 1,4-dioxane, 1,2,3-trichloropropane and total chromium/hexavalent chromium. These wells were all in the down gradient side of the landfill, as would be expected for testing for

emergent chemicals. The main confusion is why M16A was considered as a non affected and upgradient well for the radioactive testing?

On Page 62, there is a discussion that the CAP program at Barrier 2 is working but there are two VOC's that are at the same level or are not decreasing, and are increasing. It then goes on to indicate that the materials are attenuating as the groundwater flows further from the site. It could also be that the water is going deeper due to joints and fractures and, as such, is not detected if it is not in the water tested.

If you have any comments regarding this review, do not hesitate to contact this office.

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Letter

Encl

Radioactivity in Calabasas Landfill
by
Daniel Hirsch[1]

Introduction

In 2002, the U.S. Department of Energy (DOE) disclosed that wastes with residual radioactive contamination from the nearby Santa Susana Field Laboratory (SSFL) operated for DOE by the Rocketdyne Division of Boeing has been disposed of at the Calabasas municipal landfills.[2] Partially in response to this disclosure, the Regional Water Quality Control Board directed that testing be conducted for radioactivity in leachate and groundwater at the landfill site. Groundwater samples were to be taken both from wells upgradient and downgradient of the landfill to provide additional information as to whether the landfill was the source of any detected radioactivity. Samples were primarily measured for gross alpha radioactivity, gross beta radioactivity, tritium, isotopic uranium, radium-226, radium-228, and strontium-90, and compared with Maximum Concentration Levels (MCLs) established by state and federal regulation.[3]

Results

Sampling results were reported in January 2003.[4] Four of the five "downgradient monitoring wells" exceeded the gross alpha MCL of 15 picoCuries per Liter (pCi/L), with levels as high as 38 pCi/L. Three of four of these wells also exceeded the MCL of 20 pCi/L for total uranium, reaching a high of 56.7.[5]

Leachate samples also generally exceeded MCLs *and* the levels found in the monitoring wells. Three of four leachate samples measured for gross alpha radioactivity exceeded the 15 pCi/L MCL, reaching as high as 91.3 pCi/L. Three samples also exceeded the 50 pCi/L gross beta MCL, recorded up to 97 pCi/L. Total uranium measured in the leachate samples also exceeded the 20 pCi/L MCL, reaching 134.7 pCi/L.

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[1] President, Committee to Bridge the Gap; former Director, Stevenson Program on Nuclear Policy, University of California at Santa Cruz.

[2] Letter from then-DOE Secretary Spencer Abraham to U.S. Senator Barbara Boxer, 28 June 2002. Wastes with radioactivity indicative of contamination from Rocketdyne activities but below controversial "release limits" were sent to regular landfills such as Calabasas rather than disposed of at licensed radioactive waste disposal facilities.

[3] The adequacy of the MCLs for gross alpha and gross beta radioactivity have been called into question by the California Office of Environmental Health Hazard Assessment, indicating that these MCLs could result in radioactivity concentrations well above generally accepted risk levels. See "Gross Alpha and Gross Beta Screening Levels for Chemicals in Drinking Water" by Robert A. Howd, Ph.D., Chief, OEHHA Water Toxicology Unit, 17 December 2003.

[4] "Radioactivity Sampling Report for Calabasas Landfill, Agoura, California" by William Neaf, GeoChem Applications, and David Todd, Todd Engineers.

[5] One of the wells was apparently not sampled for uranium.

Letter

Discussion

While not dispositive of the issue, the test results suggest radioactivity disposed of at the landfill may be the source of the elevated radioactivity found in monitoring wells at the site and in leachate. The gross alpha and total uranium concentrations in site groundwater are significantly elevated. Gross alpha, gross beta, and total uranium concentration in leachate are also significantly elevated, and at levels generally exceeding the concentrations found in groundwater. This would suggest contamination in the landfill may be leaking into the groundwater.[6]

The consultants who performed the testing for the operator of the landfill argued that the elevated radioactivity levels may be due to unusually high natural radioactivity in the area of the landfill, although they present no evidence that natural radioactivity at the Calabasas location is in fact unusually high. Instead, they point to the fact that the radioactivity levels found in the "downgradient monitoring wells" were generally lower than those found in the "background wells." Based on the available data, this argument is not convincing.

As indicated above, the Regional Board directed that samples be taken from downgradient and upgradient wells, the latter to serve as "background" locations. As indicated in the consultants' report, "Ideally, background wells located upgradient of refuse disposal area would provide information on regional background conditions." However, the consultants chose not to do this at Calabasas. *All wells monitored were downgradient of the landfill.*[7] Thus downgradient wells were compared with downgradient wells, and no genuine "background" or "control" wells were employed to attempt to ascertain the natural radioactivity levels that might exist unaffected by the landfill itself.

One should also note that water samples were apparently filtered before monitoring. As the US EPA has noted, if this is done, the radioactivity collected in the filter must be added to the radioactivity found in the filtered water, or the results will otherwise understate the true radioactivity levels.[8]

Conclusion

Available data suggest that disposal of radioactive wastes in the Calabasas Landfill may be linked to the elevated radioactivity measured in the leachate and groundwater at the site.

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[6] If natural radioactivity in the local geologic formation were the source for the surprisingly high concentrations in groundwater, the levels in the leachate in the landfill itself would presumably be lower than that found in the groundwater, rather than the reverse as was found at Calabasas.

[7] The consultants designated as "background" wells those that were downgradient of lined landfill units. These are, of course, not background wells, because liners routinely fail and groundwater gets contaminated by leachate leaking from them.

[8] See "Water Sampling and Analysis: EPA Methods and Guidance," 16 March 2005 by Gregg Dempsey, USEPA Radiation and Indoor Environments National Laboratory, Las Vegas.

PRELIMINARY SUMMARY OF RADIOACTIVITY IN WATER SAMPLING

Regional Board	Landfill Name	Status/Waste Classification	Liner Type(s)	Water Sample Exceeds MCL		
				Upgradient	Downgradient	Leachate
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
2	Redwood Landfill	Active (III)	Unlined/Clay			B (270)
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	Compliant			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]			
6(SLT)	Eastern Regional Landfill	Closed (III)	Unlined (LCRS)	T (55,000)		B (102)
6(V)	Barstow Landfill	Active (III)	Unlined			
6(V)	Boron Landfill	Active (III)	Unlined	A (19)		
7	Calexico Landfill	Active (III)	Unlined			
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
8	Milliken Landfill	Active (III)	Unlined			T (64,000)**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]			
8	Double Butte Landfill	Closed (III)	Unlined		A (288); T (257)	
[illegible]	[illegible]	[illegible]	[illegible]			
8	Mead Valley Landfill	Closed (III)	Unlined		A (29!); T (143)	
8	Highgrove Landfill	Active (III)	Unlined		A (18)	
8	Colton Landfill	Active (III)	Unlined			T (513,000)**
8	Mid-Valley Landfill	Active (III)	Unlined			
[illegible]	[illegible]	[illegible]	[illegible]			
8	California Street Landfill	Active (III)	Unlined			
8	Corona Landfill	Closed (III)	Unlined			

Comment 1:
In the 1970s, the Calabasas Landfill received some 300,000 tons of hazardous liquid wastes in its western unlined section. It also accepted 4,643 tons of hazardous solid wastes. There are five years of missing records in the mid 1960s. This landfill was closed to hazardous wastes in the 1980s because it was determined that the geology was permeable. (LeRoy Crandall & Associates 1980, 81). This entire statement needs to be added to this Order for the completeness.

Response:
The history of permitted hazardous waste acceptance at the Landfill is described in the WDR Finding Nos. 2 and 19. Board staff disagrees that the proposed clarification add significant new information to the WDR findings. The tentative Order has not been modified accordingly.

Comment 2:
As time goes on, more of the thousands of barrels of toxic liquid wastes have the potential to rust through (per LA Times article, 11-23-84, Bob Pool). As time goes on, the hazardous liquids potentially can move from the non-contained dirt wells (Enc. #1) into the groundwater aquifer.

Response:
Comment noted. Board staff concurs that the hazardous waste disposal area at the Landfill continues to be an environmental threat that must be effectively monitored.

Comment 3:
LARWQCB needs to require quarterly testing of not just the Calabasas Landfill's shallow groundwater wells but also the landfill's deep groundwater wells. There are no liners in the hazardous western section which received these hundreds of thousands tons. Unfortunately, Calabasas landfill's geology is permeable. SOS requests that quarterly testing be continued, since this is not a normal municipal waste landfill that received only Class III wastes. In addition, it lacks a lining in the huge hazardous section. These are very compelling reasons not the halt quarterly testing.

Response:
See State Board (3/9/09) Page T-16, comment 2 (above), and related comments included in the introductory submittal email regarding the effectiveness of a semiannual versus quarterly sampling and monitoring program.

State Board staff recommends setting up six-monthly monitoring and reporting periods, together with sampling at very start of the period, and once-a-year corrective action program progress report. ." This longer monitoring and reporting period is needed to accommodate a pass-1-of-3 retesting approach and the quarterly time-between-successive-samples approach (for data to be used for statistical tests), so that all retesting can be completed in a single monitoring and reporting period in spite of the greater time period (to give sample independence) between successive retests. Per State Board staff, this approach will give far more reliable monitoring program results.

The tentative Order has not been modified accordingly.

See comment 2, above. Board staff concurs hazardous waste disposal area at the Landfill continues to be an environmental threat, though we disagree that bedrock underlying the Landfill can be characterized as "permeable".

See comment 4, below regarding monitoring of deep bedrock wells.

Comment 4:
Save Open Space/Santa Monica Mountains (SOS) requests two very important testing measures be added to protect the groundwater and this watershed. Calabasas Landfill is located at the top of the headwaters of the Malibu Creek Watershed. 1) To ensure the health of this watershed, the testing protocol should begin requiring deep groundwater testing. Deep ground water testing all along the Western border (unlined hazardous section) has been discontinued for several years. This protective deep groundwater testing should not have been stopped. Deep groundwater wells already exist and are called the CA wells. 2) Also, SOS requests that the Order add annual rainy season specific radionuclide testing since this landfill accepted many shipments from Rocketdyne. (See Rocketdyne shipments in the submitted CD). Even though the Calabasas Landfill Leachate tested has tested "Hot", testing for radioactivity is not required (Enc. #2) and is not being done on a routine basis.

Response:
Deep bedrock groundwater monitoring was conducted at the Landfill between August 1989 through August 1995. The deep bedrock groundwater monitoring wells network included wells: CA1, CA2, CA3, CA4, CA4A, CA5, CA6, CA7, CA8, CA9, CA10, CA12, CA13, CA16, CA21, CA22, CA24, and CA25. Because the deep bedrock monitoring wells were not deemed to provide for the earliest possible detection of a release from the Landfill, the monitoring program at the Calabasas Landfill was revised to the monitoring program proposed in the Calabasas Landfill Water Quality Monitoring System Report in Compliance with Order No. 93-062 (Subtitle D Report) beginning in October 1995 to focus on alluvial groundwater in pre-existing alluvial canyons.. This monitoring program was approved by the Board staff during a June 6, 1995 meeting with the Discharger.

Board staff has reviewed the August 1989 through August 1995 monitoring data for the CA-series wells in response to SOS concerns. Though there is no apparent release to offsite wells, a rise in pH to approximately 12.0 in several on-site wells indicates the potential for leachate from the hazardous waste area to penetrate to depth. These results, in addition to the extended time that deep bedrock water quality has been evaluated supports SOS's recommendation to renew deep bedrock groundwater monitoring.

Finding No. 2(P) has been added to the tentative Order to describe the history of deep bedrock monitoring as described above. Provision F.18 has been added to the tentative Order requiring the Discharger to submit within 90 days of the adoption of the tentative Order, a technical report for sampling CA-series wells. (See also comment 10, below).

Comment 5:
Page 2. The reason needs to be given why the Calabasas landfill was closed to all hazardous materials. It was because the geology report, LC& Associates, found that it had permeable geology that would not contain the hazardous wastes.

See comment 3, above. Board staff disagrees that bedrock underlying the Landfill can be characterized as "permeable". The tentative Order has not been modified accordingly.

Comment 6:
Page 4. When it was finally required by the state to be tested for radioacitivity, The Calabasas landfill leachate significantly exceeded established MCLs in Gross Beta and Gross Alpha radioactivity and in Uranium. (Enc.#2)

Response:

Finding 2(S) includes a summary of the radioactivity testing program requested on April 25, 2002 by the Executive Director of the State Board, including an interpretation of the monitoring results. The tentative Order has not been modified pursuant to the comment.

Comment 7:
This Order needs to require testing for Rocketdyne specific radionuclides. Tons of Rocketdyne wastes were sent to the unlined part in the 1970's. Check testing on incoming waste for radioactivity by the landfill was not implemented until the 1980's. To be assured that the surface and groundwater does not contain Rocketdyne dangerous radionuclides, this Order needs to add the requirement for yearly specific radioactive testing for Rocketdyne known radionuclides. Annual rainy season radioactive testing needs to be done on the surface runoff, leachate, and from shallow and deep groundwater well testing. The waste disposal practices of Rocketdyne were not protective of Human Health. It has recently been revealed that waste was dumped in adjacent Sage Ranch. Also, recently revealed was shoddy and questionable Rocketdyne waste operations that included the burning toxic waste and shooting up waste barrels and hot lab canisters. The public can't trust that the Rocketdyne waste, received by the Calabasas Landfill is the 1970's, was free of dangerous radioactivity.

Response
Calabasas Landfill did accept hazardous waste from Rocketdyne Corporation. Moreover, it is the understanding of Board staff that the information regarding the nuclear testing program at Rocketdyne Corporation was not public information during the period when hazardous waste was accepted at the Landfill. Nonetheless, Board staff is not aware of any documented connection between the disposal of radioactive materials from Rocketdyne to any Region landfills.

Board staff concurs that the continuing environmental threat from the unlined hazardous waste portion of the Landfill merits, at a minimum, periodic assessment of a deep bedrock groundwater pathway. Provision F.18 has been added to the tentative Order requiring the submittal a technical workplan, within 90-day of the adoption of the Order to assess the deep bedrock groundwater pathway with the potential that deep bedrock groundwater monitoring be continued as deemed necessary by the Board Executive Officer.

The reference to waste disposal at Sage Ranch is unclear. The tentative Order has not been modified pursuant to the comment.

Because the disposal of hazardous wastes into injected or buried in the waste mass and all wastes disposed of at the Landfill are covered with daily or intermediate cover that is a minimum of a 1-foot layer of soils or approved alternative, Board staff does not concur that radionuclide testing of surface runoff is merited.

Board staff believes that there was no indication of a radionuclide release to groundwater determined during the monitoring event discussed in Finding 2(S) of the tentative Order. Nevertheless, the monitoring results do indicate the potential for radionuclides in leachate such that the addition to radionuclides to the COC list included in Table 3 is warranted. The tentative Order has been modified accordingly. Commensurately, radionuclides monitoring is to be considered in the deep bedrock groundwater pathway technical workplan described above.

Comment 8:
There were several inadequacies in the studies overseen by LA County Regional Sanitation which concluded that high radioactivity results from the Calabasas landfill leachate were only from natural sources:

1) Radioactivity testing method allowed filtering. (Enc. #3) Filtering lowers results on radioactivity testing except for Tritium.
2) Background wells were not in the right place but were down gradient of the landfill. (See attached Slosson and Committee to Bridge the Gap letters)
3) Rocketdyne employed sloppy waste disposal practices (shooting up waste barrels and hot lab canisters, dumping in canyons, etc.). There are missing, unaccounted for, nuclear reactors, KEWB and the Van de Graaf neutron Accelerator. Disposal of the KEWB was in 1975 and the Accelerator in 1966, but it is not known where these reactor components were disposed. (Enc. #4) Until it can be proven not to be the case, one has to assume that these components potentiall could have been part of one of the many shipments of Rocketdyne wastes that the Calabasas Landfill accepted in the 1970s. (Review enclosed CD)

Response:
See comment 7, above. Board staff believes that there was no indication of a radionuclide release to groundwater determined during the monitoring event discussed in Finding 2(S) of the tentative Order but concurs that radionuclide testing should be included in the proposed monitoring and reporting program.

Comment 9:
The operational areas of the landfill are located in a liquefaction zone on the new Seismic Hazard Map. In the Heschel school property's EIR, boring logs show that it has groundwater. This Heschel property is also in a liquefaction zone. (Enc. #5) Amazingly, the groundwater under the Heschel school site was not tested for hazardous contaminants from the Calabasas Landfill. Why put 650 small school children in enclosed classrooms over untested groundwater that potentially could contain toxic soil gases from the Calabasas Landfill? The Heschel School property is .6 of a mile from the boundary of the unlined hazardous section of the Calabasas Landfill. The Liberty Canyon property which includes the Heschel school site has groundwater which is assumed to be "continuous with the groundwater at the Calabasas landfill" (statement from The Clement Report, 1990) These small children in enclosed classrooms, 9 months a year for 5 days a week, have the potential to get cancer from toxic landfill soil gas.

Response:
The discussion of the subsurface geology at the Landfill is included in Finding Nos. 7, 12, and 13. Boundary probe soil gas testing is described in Finding No. 28. There is no indication that toxic soil gases are migrating offsite from the Landfill as alluded to. Nonetheless, as discussed in comment 7, above, a provision to assess a deep bedrock groundwater pathway has been added to the tentative Order.

Comment 10:
Page 8. The 6 barriers (Figure 6) are not deep enough (only about 30 feet) to stop the flow of contaminants from the unlined hazardous part of this permeable landfill into the medium to deep groundwater. Either under the barriers through fractures and/or faults and around the majority of the western edge of this permeable landfill. The barriers are only placed at alluvial canyon areas. It should be noted that these barriers couldn't possibly stop all movement of hazardous contaminants from the unlined western section in the deep groundwater.

Response:
The design intent of keying subsurface barriers a minimum of 5-feet into bedrock was documented in construction quality assurance programs associated with the construction of the barriers. Hence, Board staff believes that the design intent to stop/limit the alluvial groundwater flow path has been achieved at each barrier. As described in Finding No. 7 of the tentative Order, The Landfill is underlain by folded and faulted, generally low-permeability, sedimentary marine bedrock units. Geotechnical investigation do not confirm that secondary porosity at the site render the sedimentary marine bedrock units as

"permeable". Nevertheless, as discussed in comment 7, above, a provision to assess a deep bedrock groundwater pathway has been added to the tentative Order.

Comment 11:
Page 9. It is not adequate to focus the monitoring program on just the alluvial canyon areas. (Figures 12-14). The deep groundwater along the entire western edge could be carrying landfill hazardous chemical and this pathway is not being adequately tested at all! The deep groundwater CA wells in the unlined western section should be tested quarterly to monitor this dangerous situation.

Response:
See comment 7, above.

Comment 12:
Page 12. It is stated that they will continue to notify landowners whose properties overlie the plume. What plume? Please include a map of the plume and list the contaminants in the Calabasas landfill plume.

Response:
Pursuant to section 258.55(g)(1)(iii) of title 40 of the Federal Code of Regulations, dischargers are required to notify all persons who own the land or reside on the land that directly overlies any part of the contaminant plume about the status of contaminants that have migrated off-site. Specifically, at the Landfill, this requirement is relevant to the groundwater release discussed under the Corrective Action Program heading of the Findings portion of the tentative Order. The tentative Order has not been modified pursuant to the comment.

Comment 13:
Pages 37 and 42. Replace Figure 5 with better maps. (Enc. #6) figure 5 is not a good map for it is not clear where the unlined area of the landfill is. This is a very dangerous situation because the unlined area is the area, which received hundreds of tons of hazardous waste. (Review CD and Encs. #7) Disclosure is the key here and the public has the right to know of the huge potential of off site deep groundwater contamination because the hazardous area is not lined. The agencies should not allow any additional development within 1 mile of the Calabasas Landfill, which puts new human receptors in potential harm's way from soil gas migration from the deep groundwater in the water table.

Response:
The descriptor "UNLINED" has been added to the "ORIGINAL PORTION" of the Landfill.

Comment 14:
Pages 7 and 41. The landfill use map should show land use up to 3/4 mile (not 1000 ft) from the property boundaries. One thousand feet is too short since hazardous materials can move thousands of feet with time.
Unfortunately, the property for Heschel's private elementary school is located .6 of a mile from the western boundary of the unlined toxic part of the landfill. Amazingly, no agency has come forward to request that Los Angeles County require a Health risk Assessment to protect the Health and Welfare of these young children – receptors-as they sit in enclosed classrooms, 9 months of the year and 5 days of the week.
Another project (the Mendor property) to the south also is also within a mile of the Calabasas Landfill. LA County planning will process this project soon.

An adequate buffer needs to be purchased with Prop A funds, Los Angeles County park money, which must include the entire Mendor property and the entire Heschel school property. An alternative safer site can be found for Heschel School.
Saratoga Hills never should have been built in the shallow of this former Class 1 permeable landfill. Los Angles county agencies must helop support an effort to buy out these properties (Heschel and Mender) with the available Prop A funds.
In order this new Order, LARWQB should implement much needed deep groundwater testing and require testing for all specific Rocketdyne radionuclides. By adding these new testing requirements, developments potentially putting more peoples in harm's way might not be allowed in the near vicinity of this former hazardous landfill.

Response:
The 1000 foot limit around the perimeter of the Landfill is consistent with section 20923(2)(E) of title 27 of the California Code of Regulation that the gas probe monitoring network be designed to account for the specific site characteristics and potential migration pathways or barriers, including adjacent land use, and inhabitable structures within 1000 feet of the disposal site permitted facility boundary.

Board staff has no comment on the use of Proposition A funds to purchase area land for converse to open park space.

See comment 4 above, with regard to monitoring a deep bedrock groundwater pathway as proposed.

Comment 15:
Pages 75 and 92. Do not change from monitoring on a quarterly basis. This landfill's geology is permeable. And it received hundreds of tons of hazardous wastes. The permeable nature of this geology caused it to be closed to hazardous wastes in the 1980s. These two facts prove that this former hazardous landfill is unique. To adequately protect public health and safety, quarterly monitoring is necessary.

Response:
See comment 3 (above) regarding the effectiveness of a semiannual versus quarterly sampling and monitoring program.

The tentative Order has not been modified pursuant to the comment.

Comment 16:
Page 93. Are they actually "purging" to collect the samples as the Order requires? Does this "micro" purging method end up with an inadequate picture of the contaminants in the groundwater or does this new method fail to adequately portray the contaminants in the wells?

Response:
Micropurging using dedicated sampling equipment is an established, industry accepted sampling protocol. The tentative Order has not been modified pursuant to the comment.

Comment 17:
Background wells are not acceptable as background if they are located down gradient. This needs to be added to this Order. In Order No. 89-053-077 CAP for Calabasas Landfill lists MW4, CA22, CA24, and CA25 as background wells. MW4 is down gradient of Barrier 6 and should be a background well. It appears that down gradient background wells might have been used to establish incorrectly high background levels for metal contaminants. Is this the case? Why does the testing protocol at the end of this Order only include three metals?

Response:
As discussed in Item No. 13(b) of the tentative monitoring and reporting program and defined in Attachment 1 to the tentative Order, intra-well comparisons are the standard monitoring protocol. Meaning that, a type of statistical or nonstatistical data analysis, applied to a given detection mode compliance well / MPar pair, in which one compares current concentration data, for that monitoring parameter, with a suite of background data consisting of selected historical data from that same well to determine if that monitoring parameter has produced a measurably significant increase at that well. Typically, the use of a compliance well's own historical data, for a monitoring parameter, provides better statistical power (to identify a real release and to avoid producing false-positive indications) than does the inter-well comparison approach, but only in a case where it is reasonable to assume that the compliance well's own historical data does not reflect the presence of a release for that monitoring parameter.

The constituents of concern as contained in Table 3 of the tentative monitoring and reporting program includes all CAM metals. Even though there has not been any indication of a metals release from the Landfill, three metals chromium, mercury, and lead have been elevated to MPar status given the historic hazardous waste disposal at the Landfill. The tentative Order has not been modified pursuant to the comment.

Comment 18:
Figures showing the alluvium and bedrock as distinct zones are misleading. There are fractures and faults throughout this geology underlying this landfill making it permeable to allowing the hazardous wastes in the unlined section to move out into the groundwater aquifers. (Enc. # 8 Geologist Tom Slosson letter and geological framework map)
Response:
See comment 10, above.

Comment 19:
In the 1990 Health Risk Assessment for the nearby Liberty Canyon Property (Heschel property is a part of it), may organic landfill type chemicals were found in all media, subsurface gas, groundwater, surface water, sediments, soils, and ambient air (Enc #9)

Response:
Board staff disagree that the cited Health Risk Assessment was based on known "landfill type chemicals" release to all media, "subsurface gas, groundwater, surface water, sediments, soils, and ambient air". Board staff concurs, that a deep bedrock pathway should be re-assessed at this time. See comment 4 above, with regard to monitoring a deep bedrock groundwater pathway.

Comment 20:
The testing is inadequate because it is only the alluvial canyons where the inadequate barriers (too short in length and not deep enough) were put.

See comment 7 (above) with regard to deep bedrock pathway groundwater water monitoring.

SOS requests these two main changes to protect the watershed and public health. Additional testing in the deep groundwater wells throughout the western unlined hazardous landfill section and off site needs to be required. Testing for Rocketdyne's specific radionuclides needs to be required annually in the shallow and deep groundwater and leachate. The diagram (Enc. # 10) illustrates the relationship between contaminated landfill groundwater and soil gas production. Will Heschel schoolchildren be exposed to

toxic soil gas permeating out in the ground water from the Calabasas Landfill? Why wasn't testing of the groundwater under the proposed Heschel School required by Los Angeles County and Los Angeles Regional Sanitation District? Why not test to be safe?

Response:
See comment 7 (above) with regard to deep bedrock pathway groundwater water and radionuclide monitoring incorporated in the tentative Order.

6)
County Sanitation Districts of Los Angeles County
(received 4/14/09)

From: "Min, Yoonkee" <YMin@lacsd.org>
To: "Rodney Nelson (E-mail)" <RNELSON@waterboards.ca.gov>, "Enrique Casas (E...
CC: "Louie, Brian" <BLouie@lacsd.org>, "Ruffell, Kristen" <KRuffell@lacsd.org>
Date: 4/14/2009 3:44 PM
Subject: Written Comments on Revised Tentative Order R4-2009-XXXX - Waste Discharge Requirements for Calabasas Landfill
Attachments: Comment_Letter_on_CALF_Tentative_Order_R4_2009_XXXX_WDRs.pdf

Rod,

Attached to this electronic mail is a letter with the Districts' written comments on Revised Tentative Order No. R4-2009-XXXX, dated March 20, 2009, regarding Waste Discharge Requirements for Calabasas Landfill. The original wet signature letter is being sent via Federal Express. In accordance with the Regional Board's cover letter to the Districts transmitting the Revised Tentative Order, written comments must be received at the Regional Board's office by 5:00 pm on April 14, 2009. This electronic mail with attached written comments should meet this requirement.

Please contact me if you have any questions.

Sincerely,
Yoonkee Min

Yoonkee Min
Project Engineer
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90601
(562) 908-4288, ext. 2441
(562) 908-9572 (FAX)
<<Comment_Letter_on_CALF_Tentative_Order_R4_2009_XXXX_WDRs.pdf>>

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

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STEPHEN R. MAGUIN
Chief Engineer and General Manager

April 14, 2009
File: 31R-106.10A

California Regional Water Quality Control Board
Los Angeles Region
Groundwater Permitting and Landfills Unit
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Mr. Rod Nelson

Comments on Revised Tentative Order R4-2009-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

The Sanitation Districts of Los Angeles County (Districts) appreciate the opportunity to comment on Revised Tentative Order No. R4-2009-XXXX, dated March 20, 2009, for "*Revised Waste Discharge Requirements for Waste Disposal, Assessment Monitoring Program, and Corrective Action Program, County Sanitation Districts of Los Angeles County (Calabasas Landfill) (File No. 60-118).*" The Districts operate the Class III Calabasas Landfill (Landfill) and support the effort of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to revise the Waste Discharge Requirements (WDRs) for the Landfill.

The Districts met with Regional Board staff on April 7, 2009 at the Regional Board's office to discuss and request clarifications to the information and requirements in the Revised Tentative Order. This letter presents comments and clarifications discussed at the meeting. In addition to the comments and clarifications discussed below, the Districts have minor comments and corrections to the information contained in the Revised Tentative Order, which are enclosed as Attachment 1. We request that the Regional Board include these comments and clarifications in the administrative record and revise the Revised Tentative Order dated March 20, 2009 as discussed herein.

Comment 1: The fifteen-day sample procurement limitation in the Monitoring and Reporting Program (M&RP) may not be feasible for Calabasas Landfill because of the high number of monitoring wells.

Discussion: Item No. 28 on Page T-18 of the M&RP requires all monitoring wells to be sampled within a span of fifteen days for a given monitoring period. During the April 7, 2009 meeting, Regional Board staff indicated that the intent of the M&RP is to ensure that all monitoring well samples are collected early enough within a monitoring period to allow enough time for potential retests and demonstrations to be completed during the semi-annual monitoring period. The Districts may not be able to collect samples from all groundwater monitoring wells within a

fifteen-day sample procurement window because of the number of samples required to be collected during each monitoring event.

Requested Revisions: ***Revise Item No. 28 on Page T-18 of the M&RP to indicate that the monitoring well samples shall be taken within a span of fifteen days ", if feasible."***

Comment 2: The Districts request a revision to the designated monitoring months to allow efficient utilization of the Districts' field sampling crews and analytical laboratory.

Discussion: Item No. 9 on Page T-3 and Item No. 39 on Page T-22 of the M&RP require samples to be collected in January and July. During the April 7 meeting, Regional Board staff indicated that the intent of designating these monitoring months is to ensure that all monitoring well samples are collected early enough within a monitoring period to allow enough time for potential retests to be completed during the semi-annual monitoring period. The Districts' field sampling crews and analytical laboratory staff collect and analyze samples from 12 facilities. Based on the requirements at the other facilities, the Districts request that the sampling be shifted to February and August to allow efficient utilization of the Districts' field sampling crews and analytical laboratory. Sampling in February and August should allow enough time for potential retests during the semi-annual monitoring period if reports are due on July 31 and January 31 for the January-June and July-December monitoring periods, respectively.

Requested Revisions: ***Revise Item No. 9 on Page T-3 and Item No. 39 on Page T-22 of the M&RP to indicate that the designated monitoring months are February and August for the January-June and July-December monitoring periods, respectively. Revise Item No. 39 on Page T-22 of the M&RP to indicate that the designated reporting dates are July 31 and January 31 for the January-June and July-December monitoring periods, respectively.***

Comment 3: The requirements regarding the development of the MPar/UCOC lists are confusing.

Discussion: The Districts believe that the intention of the M&RP is to require the MPar lists for lined areas to be amended based on the Annual Appendix II leachate monitoring (Item No. 6 on Page T-2 of the M&RP) and the MPar lists for unlined areas to be amended based on the UCOC scans of affected wells (Item No. 12.b on Page T-5 of the M&RP). The language in Items No. 10, 11, and 12 of the M&RP seems to combine these concepts.

Requested Revisions: ***Revise Items No. 10, 11, and 12 of the M&RP in accordance with the language highlighted in green in Attachment 2.***

Comment 4: Waste disposal information should be submitted with the semiannual reports.

Discussion: Item No. 36 on Page T-20 of the M&RP requires all waste disposal reporting information to be filed monthly with the Regional Board. Regional Board staff have previously indicated that these data can be submitted with the routine monitoring reports. The Districts request that this process continue with the adoption of the new WDRs.

Requested Revisions: ***Revise Item No. 36 on Page T-20 of the M&RP to indicate "Waste disposal reporting of the following information shall be compiled on a monthly basis and shall be submitted with the semiannual monitoring reports:"***

Comment 5: Section F.15 of the Revised Tentative Order requires submittal of semiannual reports that describe the effectiveness of the CAP although Item No. 30 of the M&RP requires that the effectiveness of the CAP to be described in the annual groundwater monitoring report.

Discussion: Section F.15 on Page 25 of the Revised Tentative Order specifies that semiannual reports describing the effectiveness of the CAP be submitted. Item No. 30 on Page T-18 of the M&RP requires the effectiveness of the CAP to be described in the annual groundwater monitoring report. During the April 7 meeting, Regional Board staff clarified that the intent of the Revised Tentative Order is for submittal of annual reports describing the effectiveness of the CAP.

***Requested Revisions:** Revise Section F.15 on Page 25 of the Revised Tentative Order to indicate that reports describing the effectiveness of the CAP shall be submitted annually.*

Comment 6: Section G.1 of the Revised Tentative Order regarding application of landfill water on completed lifts requires clarification.

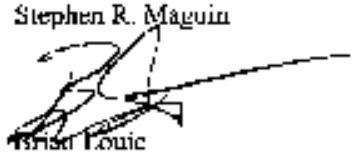
Discussion: Section G.1 of the Revised Tentative Order requires that water used at the Landfill shall only be applied on completed lifts. Situations occur where application of water to areas that may not necessarily be considered "completed lifts" are necessary to reduce dust emissions or achieve optimal moisture content for soil compaction. The Districts understand that the intent of the requirement is to prevent disposal of excess liquids into refuse lifts. The Districts support that prohibition and believe that the remaining language in the requirement adequately requires that the water shall only be applied in the amount necessary to reduce immediate dust hazards and achieve desired compaction.

***Requested Revisions:** Revise Section G.1 on Page 25 of the Revised Tentative Order to strike the phrase "only on completed lifts."*

The Districts thank you in advance for your consideration of our comments. If you have any questions concerning this letter or need additional information, please contact me at (562) 908-4288, extension 2802.

Very truly yours,

Stephen R. Maguin



Brian Louie
Division Engineer
Water Quality and Soils Engineering Section

BL:KMR:YAM:dbs
Enclosures

DOC# 1244427

ATTACHMENT 1

Minor Comments and Corrections on Revised Tentative Order R4-2009-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

Reference	Discussion	Revision
Finding No. 34 on Page 11	The Revised Tentative Order indicates that the Landfill is subject to industrial stormwater permit No. 4190006192. The Landfill is subject to industrial stormwater permit WDID No. 4 19I006192.	Replace "No. 4190006192" with "WDID No. 4 19I006192".
Finding No. 53 on Page 15	The finding appears to have some typographical errors. The constituent of concern (COC) lists for areas downgradient of Barriers 3, 4, and 6 include, from Appendix II, only those constituents that have been detected and verified in leachate. For groundwater monitoring wells downgradient of Barriers 1, 2, and 5 areas, the COC list includes all Appendix II constituents.	Replace "Barriers Nos. 1, 2, 5" with "Barriers Nos. 3, 4 and 6" in the third sentence of the finding. Replace "Barriers No. 2 area" with "Barriers Nos. 1, 2 and 5 areas" in the last sentence of the finding.
Item No. 7 on Page T-3 of the M&RP	The last sentence of the requirement appears to have a typographical error.	Replace "Item No. 13" with "Item No. 13(b)".
Item No. 11 on Page T-4 of the M&RP	The second sentence of the requirement appears to have a typographical error.	Replace "Item Nos. 12(a, b, or c)" with "Item No. 12(a or b)".
Item No. 20(a) on Page T-15 of the M&RP	The first sentence of the requirement appears to have a reference error.	Replace "Item No. 11" with "Item No. 6 or 12(b)".
Item No. 20(c) on Page T-15 of the M&RP	The first sentence of the requirement references a "Figure 4" which does not show the complete "Landfill Area" as described in the requirement.	Reference a figure which shows the complete "Landfill Area" as described the requirement. Figure 11 of the WDRs shows the complete "Landfill Area".
Item No. 42(a) on Page T-26 of the M&RP	The last sentence of the requirement appears to have a typographical error.	Replace "plotted data" with "plotted data".

DOC# 1245523

ATTACHMENT 2

***Requested Revisions for* Items No. 10, 11, and 12 of the M&RP**
Revised Tentative Order R4-2019-XXXX
Waste Discharge Requirements
Calabasas Landfill, Agoura Hills, CA (File No. 60-118)

background source, and name that source whether it is a given background well (interwell background) or is the compliance well in question (intrawell background)) together with a viable substantiation for using that background data source for that well/COC pair. If the new COC is a VOC, then it shall become a monitoring parameter (MPar) as of the next reporting period following the establishment of its concentration limit. If the new COC is not a VOC, then it shall go onto the Landfill's uninvolved COC (UCOC) list (i.e., those COCs that are not MPars) immediately following the establishment of its concentration limit.

7. The existing compliance groundwater monitoring system at the Landfill (see Figure 1, attached) includes three monitoring wells (R02A, R02B, M22D~~B~~) for the Barrier 1 area, four monitoring wells (R06A, R06B, EMP10, EMP11) for the Barrier 2 area, one monitoring well (M18D) for the Barrier 3 area, one monitoring well (M19R) for the Barrier 4 area , eight monitoring wells (R07A, R07B, R08B, M20S, P64S, P67S, P68S, P69S) for the Barrier 5 area, and two monitoring wells (M15B, M16A) for the Barrier 6 area. Because the Discharger has established ranges of background groundwater quality at the Landfill and documented the heterogeneous nature of the groundwater quality at the Landfill, the Executive Officer finds that no concurrent background groundwater monitoring point are likely representative of any single downgradient monitoring well. Therefore, inter-well background water quality monitoring for this M&RP are not required unless directed by the Executive Officer. Monitoring elements include the validating of intra-well background data sets (Item No. 13, below); detection of man-made constituents in background wells (Item No. 17); and ongoing background well testing (Item No. 18).

8. Existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figures 2-4 (attached).

Sampling and Analytical Methods

9. Groundwater monitoring shall be conducted on a **semiannual** ~~**quarterly**~~ basis as shown in the following schedule:

Period	Sampling Period
January – March	~~February~~ **January**
~~April – June~~	~~May~~
July – September	~~August~~ **July**
~~October – December~~	~~November~~

10. MPar List - At any given time, the MPar list for the Landfill shall include all constituents listed for the compliance monitoring wells in Table 2 of this M&RP. The attached list is the MPar list as of the effective date of Order No. R4-2009-XXXX. Any time a new constituent is added to the MPar list, as discussed below, the Discharger shall provide the Regional Board with an updated list of this table**, shall identify this move (from the**

UCOC list to the MPar list, for that portion of the Landfill) prominently in the next scheduled monitoring report, and shall exhibit a revised COC list (showing the revised MPar and UCOC lists for that portion of the Landfill) as an appendix in the next annual summary monitoring report, at which time the revised COC list shall replace the prior COC list (e.g., Table 3 of this M&RP). ~~MPars vary.~~ **The MPar List and, therefore, the COC List (meaning the MPar List and UCOC List), varies** for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) of the Landfill the MPars consist of general organic and inorganic indicators of concern, all Appendix I VOCs, any anthropogenic Appendix II constituents detected in groundwater, and any COCs detected and verified in groundwater samples obtained as part of the five-year scans under Item No. 12(b) of this M&RP. For lined areas (Barriers 3, 4, and 6) the MPars consist of general organic and inorganic indicators of concern, and any anthropogenic Appendix II constituents previously detected in groundwater, **every Appendix II VOC that found in a leachate sample and verified by retest.** ~~, and any COCs detected and verified in the five year scans under Item No. 12(b) of this M&RP.~~

11. **U**COC List – Likewise, as ~~As~~ of the effective date of Order No. R4-2009-XXXX, the ~~list of potential COCs consists of those constituents listed in Table 3 of this M&RP. As above, COCs vary for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) the COCs include all Appendix II constituents not identified as Mpars as well as any other constituent directed by the Executive Officer. For lined areas (Subsurface Barriers 3, 4, and 6), the COC list includes all Appendix II constituents detected and verified in the annual leachate testing under Item No. 6 of this M&RP as well as any other constituent directed by the Executive Officer. Subsequently, the Discharger shall note prominently the constituent(s) added to the COC list in the next scheduled monitoring report.~~ **UCOCs and, therefore, the COCs (meaning the MPar list and UCOC list), vary for unlined versus lined portions of the Landfill. For the unlined areas described above, the UCOC list includes all Appendix II constituents that have never been identified as being in groundwater pursuant to the five-year scans under Item No. 12(a or b~~ ~~, or c~~**), plus any constituents added by the Executive Officer. For lined areas described above, the UCOC list includes only those Appendix II constituents that have been detected and verified (by retest) to be present in leachate at-or-above their respective PQL concentration under Item No. 6 of this M&RP, and that have not become an MPar pursuant to the requirements under Item No. 6,** ~~the five-year scans under Item No. 12(a, b, or c),~~ **plus any constituents added by the Executive Officer.**

12. This Order recognizes that there has been a release from the Barriers 1, 2, and 5 areas of the Landfill. Therefore, the Discharger shall continue to comply with a federal AMP and state CAP requirements for the known releases by incorporating the following monitoring and analysis requirements. **As stated in Finding 46 of Order No. R4-2009-XXXX, the Order places the entire Landfill into a CAP while implementing corrective measures for the known releases meeting applicable state and federal requirements. This approach eliminates needless complexity associated with applying concurrent**

programs (i.e., running unaffected portions of the Landfill under a DMP and the portions affected by the release under either an EMP or a CAP, or both).

a. **U**COC scans for the releases have previously been completed.

b. Five-Yearly **U**COC Scan - Every five years, the Discharger shall analyze a sample from each compliance groundwater monitoring point known to be within the release ["affected well," **downgradient of Subsurface Barriers 1, 2, and 5** ~~as described in Item No. 12(c) of this M&RP~~] for the detectable presence (including trace determinations) of all ~~COCs that are not yet on the MPar list~~ **UCOCs applicable to that well**. This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR section 258.55(b-d). **In addition, this approach is imposed, pursuant to Section 20080(a)(1) of Title 27, as a replacement for the less-stringent-and-effective five-yearly statistical testing of UCOCs normally applied under Title 27."**

i. During each such **U**COC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each **affected** ~~required~~ well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting a **U**COC **(COC that is not yet on the MPar List applicable to that well),** ~~that is not yet on the MPar list,~~ the Discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

ii. Any **U**COC detected in samples collected from a groundwater monitoring well, and verified by a retest, ~~moves automatically~~ ~~becomes part of the MPar list for the Landfill~~ **moves automatically from the UCOC List applicable to that well to its MPar List**. The Discharger shall notify Regional Board staff of any such change immediately via phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall note prominently the constituent(s) added to the MPar list in the next scheduled monitoring report, along with a listing of which well(s) were involved in this detection and verification. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR section 258.55(d)(2) **and shall include an updated COC List (showing the revised MPar and UCOC Lists applicable to that group of wells) as an appendix to the annual monitoring report, which revised COC List shall supercede the previously applicable COC List for the wells to which it applies (named at the top of the list)**.

~~c. Five-Year COC Scans only at Affected Point of Compliance (POC) Wells Pursuant to 40 CFR section 258.55(b), the Regional Board hereby limits the scope of five yearly COC list scans, under Item No. 12(b) of this M&RP, to "affected~~

TENTATIVE

Comment 1:
The fifteen-day sample procurement limitation in the Monitoring and Reporting Program (M&RP) may not be feasible for Calabasas Landfill because of the high number of monitoring wells…… Revise Item No. 28 on Page T-18 of the M&RP to indicate that the monitoring well samples shall be taken within a span of fifteen days ", if feasible."

Response:
The intent of the monitoring and reporting program is to have monitoring wells sampled early within a monitoring period to allow time for potential retests and analysis be completed during the semi-annual monitoring period pursuant to the recommendation by State Board staff. Board staff recognizes that the complexity associated with monitoring a large number of monitoring wells may lead to inadvertently missing the 15-day sampling goal. Rather than change the specification to a non-specific requirement of "if feasible", the specification has been revised to require the Discharger report any sampling events when the 15-sampling goal was not met. In this manner Board staff can track the Discharger's effort to meet the 15-day sampling goal.

Comment 2:
The Districts request a revision to the designated monitoring months to allow efficient utilization of the Districts' field sampling crews and analytical laboratory…. Revise Item No. 9 on Page T-3 and Item No. 39 on Page T-22 of the M&RP to indicate that the designated monitoring months are February and August for the January-June and July-December monitoring periods, respectively. Revise Item No. 39 on Page T-22 of the M&RP to indicate that the designated reporting dates are July 31 and January 31 for the January-June and July-December monitoring periods, respectively.

Response:
Board staff recognizes that the complexity associated with monitoring a large number of monitoring wells and the added flexibility that may be required to direct sampling personnel to conduct any required resampling per the revised analysis program recommended by State Board staff. Revising the sampling period by one month to allowed added flexibility for existing sampling personnel to effectively resample as necessary will not diminish the effectiveness of the proposed sampling and analysis program. The proposed sampling and reporting schedule is accepted and the tentative Order has been modified accordingly.

Comment 3:
The requirements regarding the development of the MPar/UCOC lists are confusing…. The Districts believe that the intention of the M&RP is to require the MPar lists for lined areas to be amended based on the Annual Appendix II leachate monitoring (Item No. 6 on Page T-2 of the M&RP) and the MPar lists for unlined areas to be amended based on the UCOC scans of affected wells (Item No. 12.b on Page T-5 of the M&RP). The language in Items No. 10, 11, and 12 of the M&RP seems to combine these concepts. Revise Items No. 10, 11, and 12 of the M&RP in accordance with the language highlighted in green in Attachment 2.

Response:
Editorial corrections to the tentative Order have been pursuant to the comment.

Comment 4:
Waste disposal information should be submitted with the semiannual reports…… Revise Item No. 36 on Page T-20 of the M&RP to indicate "Waste disposal reporting of the following information shall be compiled on a monthly basis and shall be submitted with the semiannual monitoring reports:"

Response:
An acceptable alternative is that the required information be compiled on a monthly basis and be submitted with the semiannual monitoring reports in order to be assured that it is part of the Landfill operating record. The tentative Order has been modified accordingly.

Comment 5:
Section F.15 of the Revised Tentative Order requires submittal of semiannual reports that describe the effectiveness of the CAP although Item No. 30 of the M&RP requires that the effectiveness of the CAP to be described in the annual groundwater monitoring report….. Revise Section F.15 on Page 25 of the Revised Tentative Order to indicate that reports describing the effectiveness of the CAP shall be submitted annually.

Response:
See State Board (3/9/09), Page T-16, comment 2, above. The proposed correction revises the template post-release requirements developed by State Board staff. The proposed revision information is appropriate and the tentative Order has been modified accordingly.

Comment 6:
Section G.1 of the Revised Tentative Order regarding application of landfill water on completed lifts requires clarification….. Revise Section G.1 on Page 25 of the Revised Tentative Order to strike the phrase “only on completed lifts,”

Response:
The provision allows for “non-emergency uses approved by the Executive Officer”. Hence, the application of water other than to completed lifts can be allowed with Executive Officer approval if there is a specific landfilling or construction related need to apply water. The editorial comment is not necessary and the tentative Order has not been modified accordingly.

Comment: Finding No. 34 on Page 11
The Revised Tentative Order indicates that the Landfill is subject to industrial stormwater permit No. 419I006192. The Landfill is subject to industrial stormwater permit WDID No. 4 19I006192.
Replace "No. 419I006192" with "WDID No. 4 19I006192".

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment: Finding No. 53 on Page 15
The finding appears to have some typographical errors. The constituent of concern (COC) lists for areas downgradient of Barriers 3, 4, and 6 include, from Appendix II, only those constituents that have been detected and verified in leachate. For groundwater monitoring wells downgradient of Barriers 1, 2, and 5 areas, the COC list includes all Appendix II constituents. Replace "Barriers Nos. 1, 2, 5" with "Barriers Nos. 3, 4 and 6" in the third sentence of the finding. Replace "Barriers No. 2 area" with "Barriers Nos. 1, 2 and 5 areas" in the last sentence of the finding.

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment: Item No. 7 on Page T-3 of the M&RP
The last sentence of the requirement appears to have a typographical error.
Replace "Item No. 13" with "Item No. 13(b)".

Response:
The editorial comment as suggested makes a more specific reference to the process for validating of intra-well background data sets. The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment: Item No. 11 on Page T-4 of the M&RP
The second sentence of the requirement appears to have a typographical error.
Replace "Item No. 12(a, b, or c)" with "Item No. 12(a or b)".

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.

Comment: Item No. 20(a) on Page T-15 of the M&RP
The first sentence of the requirement appears to have a reference error. Replace "Item No. 11" with "Item No. 6 or 12(b)".

Response:
Item No. 11 of the M&RP is the correct reference for defining the constituents of concern for unlined and lined portions of the Landfill. The tentative Order has not been modified accordingly.

Comment: Item No. 20(c) on Page T-15 of the M&RP
The first sentence of the requirement references a "Figure 4" which does not show the complete "Landfill Area" as described in the requirement. Reference a figure which shows the complete "Landfill Area" as described the requirement. Figure 11 of the WDRs shows the complete "Landfill Area".

Response:
Board staff concurs that the cited Figure does not show the entire Landfill area. The tentative Order has been modified to identify the relevant boundary as that labeled “Limits of Refuse Placement and Groundwater Monitoring Point of Compliance Boundary” in Figure 8 of Order No. R4-2009-XXXX).

Comment: Item No. 42(a) on Page T-26 of the M&RP
The last sentence of the requirement appears to have a typographical error. Replace "plotted date" with "plotted data".

Response:
The editorial comment is appropriate and the tentative Order has been modified accordingly.