

**California Regional Water Quality Control Board  
Central Valley Region  
Board Meeting – 10 and 11 December 2015**

**Response To Written Comments For  
Tentative Waste Discharge Requirements For  
Sacramento Regional County Sanitation District  
Sacramento Regional Wastewater Treatment Plant  
Biosolids And Solids Storage And Disposal Facilities  
Class II Land Treatment Units  
Unclassified Solids Storage Basins  
Class III Landfill  
Construction, Closure, Post-Closure Maintenance  
And Corrective Action  
Sacramento County**

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At a public hearing scheduled for 10 and 11 December 2015, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of Waste Discharge Requirements (WDRs) for discharges from the Sacramento Regional County Sanitation District (Discharger), Sacramento Regional Wastewater Treatment Plant (facility).

This document contains responses to written comments received from interested parties regarding the tentative WDRs. Written comments from interested parties were required by public notice to be received by the Central Valley Water Board by 26 October 2015 to receive consideration. The Discharger was the only interested party to submit comments.

Written comments from the Discharger are summarized below, followed by the responses of Central Valley Water Board staff. Based on the comments, Central Valley Water Board staff revised the tentative WDRs, and also made minor changes to correct typographical errors and to improve clarity.

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**SACRAMENTO REGIONAL WASTEWATER TREATMENT PLANT (DISCHARGER) COMMENTS**

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On 26 October 2015, the Discharger provided comments regarding the tentative WDRs and Monitoring and Reporting Program. These comments are provided below, along with Central Valley Water Board staff's responses.

**COMMENTS ON WDR FINDINGS**

**Comment on Finding #1:** Item g. should be corrected from January 2013 to November 2013 Standard Provisions and Reporting Requirements.

**Response:** Staff incorporated the requested change.

**Comment on Finding #8:** Add to the Unit Classification & Status table for the SSBs that they are "Unclassified, Active, Exempt under tit. 27 § 20090(a).

**Response:** Finding# 8 remains unchanged. Finding #4 and #5 detail the exemption for the SSBs.

**Comment on Finding #8:** Correct hydraulic conductivity of low permeability soil used for Grit and Screenings Landfill from  $10 \times 10^{-6}$  cm/sec. to  $1 \times 10^{-6}$  cm/sec.

**Response:** Staff incorporated the requested change.

**Comment on Finding #13:** Revise the following section for clarity as it may appear that primary and secondary sludge is *directly* discharged into the digesters.

13. The Discharger proposes to continue to discharge anaerobically digested ~~primary and secondary~~ sludge to the SSBs. The digested sludge has about 0.4% to 3% solids. The solids are composed of about 50% to 80% volatile solids.

**Response:** Staff incorporated the requested change.

**Comment on Finding # 14:** Revise the following sentence for clarification.

14. The Discharger also proposes to redirect return flow from the BRF to the SSBs. ~~Currently, approximately 35% A portion of the digested sludge from the wastewater treatment plant digesters, typically discharged directly to the SSBs, is routed to the BRF for processing to produce a pelletized fertilizer, and the rest is discharged to the SSBs. The BRF uses polymer to dewater then thermally dries the digested sludge to EPA 503b Class A quality. Secondary effluent from the wastewater treatment plant is also used in the dryer exhaust for cooling and particulate removal. The BRF then returns the centrate from the centrifuge as BRF return flow to the plant via a sanitary drain and the City Interceptor. or to the SSBs. This BRF return flow may contain trace amounts of polymer from dewatering.~~ The BRF return flow contains significantly less solids and reduced ammonia concentration than digested sludge. ~~When compared to digested sludge the BRF return flow contains significantly less solids, and a reduced ammonia concentration (448 mg/l versus 1,000 mg/l in the digested sludge) due to dilution of the digested sludge with secondary effluent.~~ When the BRF is not operating, digested sludge flow normally going to the BRF is sent to the SSBs.

**Response:** Staff incorporated the requested changes with additional edits for clarity.

**Comment on Finding #18 and Table 2:** It is inappropriate to compare the liquid supernate concentrations directly to water quality objectives/water quality criteria because the standards apply to the groundwater underneath the SSBs - not the supernate concentrations. Accordingly, Regional San requests that the last sentence describing comparison of liquid supernate concentrations to MCLs and WQOs, and the associated columns in Table 2 to be removed.

**Response:** Finding# 18 and Table 2 remain unchanged. Finding #18 and Table 2 compare the waste within the waste management units, in this case the Solids Storage Basins, to water quality objectives shows that the waste has the potential to impact groundwater to concentrations above water quality objectives and is; therefore, a designated waste.

**Comment on Finding #19:** Reference to the term “high concentration of” should be removed. Further, comparison of supernate concentration levels to water quality objectives/criteria is inappropriate, is indicated in the comment above.

**Response:** Finding# 19 remains unchanged. The comparison of the waste within the waste management units, in this case the Solids Storage Basins, to water quality objectives shows that the waste has the potential to impact groundwater to concentrations above water quality objectives and is; therefore, a designated waste.

**Comment on Finding #19:** Suggest deleting SSB supernate constituent concentrations as compared to secondary MCLs because criteria/objective is not applicable directly to the supernate. In fact, supernate is collected and returned to the plant headworks for treatment.

**Response:** Finding# 19 remains unchanged. The comparison of the waste within the waste management units, in this case the Solids Storage Basins, to water quality objectives shows that the waste has the potential to impact groundwater to concentrations above water quality objectives and is; therefore, a designated waste.

**Comment on Finding # 20 and Table 4:** L-DLD Leachate is not discharged to groundwater as it is collected and returned to the plant headworks for treatment. Thus, it is inappropriate to compare the L-DLD leachate to water quality objectives/criteria. Regional San requests removing the last sentence describing comparison of liquid supernate concentrations to MCLs and WQOs, and the associated

columns in Table 4.

**Response:** Finding# 20 and Table 4 remain unchanged. Finding #20 and Table 4 compare the waste within the waste management units, in this case the Lined Dedicated Land Disposal Units, to water quality objectives shows that the waste has the potential to impact groundwater to concentrations above water quality objectives and is; therefore, a designated waste.

**Comment on Finding #21:** Remove “continue to have high” from the first sentence and modification for clarification. As commented above, it is inappropriate to compare SSB harvested solids and the L-DLD leachate to water quality objectives/criteria and is; therefore, a designated waste. L- DLD Leachate is not discharged to groundwater as it is collected and returned to the plant headworks for treatment.

**Response:** Finding# 21 remains unchanged. The comparison of the waste within the waste management units, in this case the Solids Storage Basins and Lined Dedicated Land Disposal Units, to water quality objectives shows that the waste has the potential to impact groundwater to concentrations above water quality objectives if not managed properly.

**Comment on Finding #19 and #21 Tables 1 to 4:** Revise data using ½ reporting limit for Non-Detect (ND) values. Otherwise, if data is not revised, add a footnote that states “Nitrate and nitrite values are most likely based on reporting limits, and not actual results.

**Response:** The values reported in the Tables 1 to 4 were calculated from the data reported in the Discharger’s 2014 Annual Report using half of the reporting limit for non-detect values. The tables were updated to correct rounding errors.

**Comment on Finding #19 and #21 Tables 2 and 4:** The WQC/WQO in the tables (Table 2 and 5) list the lowest secondary MCL for TDS, specific conductivity, chloride and sulfate. However, these secondary MCLs are ranges, with three different values for the “Recommended,” “Upper,” and “Short Term” ranges. The State Water Board has recognized that the Recommended as well as the Upper values are applicable water quality objectives. At the very least, the table should be revised to reflect both the Recommended and Upper values for these four constituents. For example, when TDS is compared to the Upper value from title 22, the average SSB supernate is only 63 mg/L above the applicable secondary MCL of 1000 mg/L. When TDS is compared to the Upper value from Title 22, the average SSB supernate is only 63 mg/L above the applicable secondary MCL of 1000 mg/L. If WQC/WQO are to remain, request they are revised to reflect both the Recommended and Upper values from title 22 for TDS, specific conductivity, chloride and sulfate.

**Response:** Finding #19 and #21 Tables 2 and 4 remain unchanged. The purpose of comparing waste within waste management units to water quality objectives is to demonstrate that the waste has the potential to impact groundwater above water quality objectives and is; therefore, a designated waste. It is irrelevant if the SSB supernate TDS is 63 mg/L above the Title 22 “upper value” of 1000 mg/L or 563 mg/L above the California Department of Public Health published secondary MCL of 500 mg/L. Utilizing either published value for secondary MCLs, the waste exceeds the water quality objective, and is deemed as designated waste.

**Comment on Finding #28:** Include source of information for hydraulic conductivity of the native soils underlying the waste management units.

**Response:** Finding# 28 remains unchanged. Various historical sources document the hydraulic conductivity for the waste management units and it would be inappropriate to list all of the sources in the WDR. Some of the documents reviewed for the preparation of the WDR are tabulated below for reference:

- Dames and Moore. Technical Memorandum Geotechnical Studies. June 1994.
- Geosyntec Consultants Inc. Technical Report on the Potential for Salt Migration to the Point

of Compliance, Closure Plan for DLD #1 and DLD #5. December 2001.

- Sacramento Area Consultants. Sacramento Regional Wastewater Management Program, Sewage Sludge Management Program, Volume 2 SSB Operation and Performance. September 1979.
- Lowery Associates Geotechnical Engineers. SRWTP Phase II Solids Facilities, Results of Laboratory Tests. April 30, 1981.

**Comment on Finding #35:** Request to revise section for clarification.

35. The site is on a low-lying alluvial basin at the confluence of Morrison, Beacon and Laguna Creeks. Currently, Morrison, Beacon, and Laguna Creeks converge on the north side of the property and drain westerly into the Beach-Stone Lakes Basin. ~~This The Beach-Stone Lakes Basin lies within the Morrison Creek, Cosumnes River and Mokelumne River watersheds as well as the Sacramento-San Joaquin Delta. discharges to the Sacramento and Mokelumne Rivers.~~

**Response:** Staff incorporated the requested change.

**Comment on Finding #56:** Request to revise section for clarification.

56. Approximately 8 acres of the 23-acre landfill received grit, screenings, ash, and inert construction wastes. The landfill, closed in 1994, had a capacity of about 1.16 million cubic yards; ~~however, only an estimated 36,000 cubic yards of waste was placed within the 8 acres that was used.~~ The landfill is covered by a 1-foot vegetative layer, a 1-foot thick low permeability layer, and a foundation layer with a minimum thickness of two feet.

**Response:** Staff incorporated the requested change with minor modifications for clarity.

**Comment on Finding #61:** Request to revise section for clarification.

61. In general, the SSBs receive inflows of digested sludge while supernatant and sludge are discharged and harvested from the SSBs. Digested sludge is discharged into the SSBs via one of two digested sludge pipes located at the bottom of each pond. Each SSB receives digested sludge based on a ~~computer control strategy and operator input that regulates the total volume limiting the quantity of digested sludge inflow into each SSB. The automated control system fills each SSB in sequential order. to the maximum allowable value.~~ The operating levels in each SSB pond are maintained at 14.0 feet above msl with approximately 3.5 feet of freeboard at the level of the supernate outflow pipe. The Battery II and III SSBs are also equipped with overflow pipes (at 15.0 feet above msl) which provide approximately 2.5 feet of freeboard that discharge liquid to a metering structure and back to the wastewater treatment plant headworks as additional protection.

**Response:** Staff incorporated the requested change with minor modifications for clarity.

**Comment on Finding #79:** Request to revise section for clarification.

79. The Discharger closed C-DLDs 1 and 5 using an evapotranspirative (ET) cover and lined the runoff zones using a 45-mil polypropylene liner as described in Findings 70 and 71. The ET cover consisted of vegetating existing DLD 1 and 5 soils. The cover was graded to drain by increasing existing slopes to a nominal 1 percent (%). Runoff from the final cover would continue to be captured and routed to the treatment plant headworks. The primary mechanism of an ET cover for minimizing infiltration of rainwater is uptake of moisture by evaporation and plant transpiration. The vegetation for the final cover ~~consists had consisted~~ of a mixture of various grasses and forbs listed in Table 7, ~~but was~~ subsequently changed (see Item 86).

**Response:** Staff incorporated the requested change with minor modifications for clarity.

**Comment on Finding #86:** Request to revise section for clarification.

86. The Discharger utilized two different seed mixes to reseed two 10-acre test plots to revegetate C-DLDs 1 and 5 final cover from fall 2010 through spring 2011. Based on the results of test plots, the remaining C-DLD cover areas were revegetated in November 2012 with a seed mix composed of Tall wheatgrass, Perennial rye, California brome, and Slender wheatgrass. The Discharger established the target vegetative cover through the application of broadleaf specific herbicides to reduce competition with broadleaf weeds and utilized haying practices (cutting, baling and removing) to promote the target perennial grass species while discouraging less desirable annual grasses and broadleaf weeds.

**Response:** Staff incorporated the requested change.

**Comment on Finding #87:** Revise section for clarification and consistency with previous finding.

87. A May 2013 vegetation survey indicated healthy seed germination and substantial first season growth. During a subsequent vegetation survey in June 2014, roots were observed throughout the test pits to depths of 37-inches and 48-inches. Additionally, the percent cover of target species in C-DLDs 1 and 5 were 108% and 60%, respectively. The June 2014 vegetation report concluded that the high absolute percent cover of target species achieved in less than 2 years following the reseeding effort is encouraging. The Discharger will continue weed control measures at C-DLDs 1 and 5 to reduce the occurrence of non-target species. Based on the results of the assessments, the Discharger will continue using the plant species listed in Item 86 (Tall wheatgrass, Perennial rye, California brome, and Slender wheatgrass) Table 7 and regularly inspecting the C-DLDs to remove non-target plant species for the C-DLDs 1 and 5 cover systems.

**Response:** Staff incorporated the requested change with minor modifications for clarity.

#### **COMMENTS ON WDR PROHIBITIONS, SPECIFICATIONS & TASKS**

**Comment on Prohibitions, Specifications, and Provisions A.5, B.3, C.15, D.10, D.11, E.10, F.4, G.7, and H.24:** Provisions A.5, B.3, C.15, D.10, D.11, E.10, F.4, G.7, and H.24 are not necessary and are duplicative. Regional San recommends that all specific references be eliminated and that only Provision H.1 remain. Provision H.1 incorporates all provisions by incorporating by reference Standard Provisions and Reporting Requirements. By identifying them individually, as well as generally, arguably it creates the potential to be found in non-compliance for multiple permit provisions.

**Response:** Reference to various sections of the Standard Provisions and Reporting Requirements (SPRRs) in associated sections of the WDR is included to assist Dischargers maintain compliance with the WDR. However, violation of a portion of one section of the SPRRs does not mean that the Discharger is out of compliance with multiple permit provisions because the SPRRs are listed multiple times in the WDRs. Additional language was included in the WDRs for clarity. Prohibition A.5 is shown below as an example:

- 5. The Discharger shall comply with all Standard Prohibitions listed in Section C of the SPRRs dated November 2013. Provision H.1 references the SPRRs in entirety. Violation of Section C of the SPRRs constitutes being out of compliance with Prohibition A.5 and not Provision H.1.*

**Comment on Facility Specification C.3 and C.13:** Provision C.3 and Page 30, Provision 13. a., b., and d. – Replace the term “immediate” with a specific time frame, such as “within 24 hours,” or some other specific time frame that is appropriate to ensure that there is a clear understanding with respect to when reporting needs to occur. The term “immediate” is subjective and difficult to determine compliance.

**Response:** Title 27 routinely uses the term “immediately” with no qualifier when describing when action shall be taken by a reasonable, responsible person. For example, Title 27 section 20365(d) when describing how the Discharger shall maintain capacity in its precipitation and drainage

collection and holding facilities states that such collection and holding facilities “*shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system.*” Therefore, no qualifier is added to C.3 and C.13 to elaborate on what is meant by “immediately” except as generally accepted as what a reasonable, responsible person would do under such circumstances.

**Comment on Design and Construction Specification D.7:** Revise section to expand the use of C-DLD 1 for Echo Water construction activities to include stockpiling of excavated materials from the conversion of C-DLD 5 into an active L-DLD. The conversion of C-DLD 5 will be completed before construction of the Echo Water Project is completed.

7. C-DLDs 1 and 5 may be converted to active L-DLDs using similar procedures to L-DLD 2 to 4 as detailed in Finding 67. Prior to lining a DLD, the Discharger shall excavate existing biosolids, waste materials, and native soil to a minimum depth of five-feet. The Discharger may use a portion of C- DLD 1 for stockpiling excavated materials from the conversion of C-DLD 5 to an active L-DLD. Detailed plans will be included in the Construction Plans to be submitted for review and approval.

**Response:** Design and Construction Specification D.7 was revised for clarity. The Discharger may not store excavated materials from the conversion of C-DLD 5 on C-DLD 1. The materials excavated from C-DLD 5 are considered designated wastes and must be handled accordingly. Excavated materials removed from the C-DLD 5 footprint shall be stored in a Lined DLD (L-DLD 2, 3, or 4).

**Comment on Closure and Post Closure Specification E.13:** Revise section to allow the Discharger to pilot various plant species for optimum results, including the original mixture listed in Table 7, based on what was experienced with C-DLD 1 and C-DLD 5.

a. Install a final evapotranspirative cover system. The Discharger will pilot different mixtures of grasses and forbs, including those listed in Table 7. The final selected mixture of plant species will be used to vegetate consisting of vegetating the existing DLD soils with a mixture of various grasses and forbs listed in Table 7.

**Response:** Staff incorporated the requested change with minor modifications for clarity.

**Comment on Closure and Post Closure Specification E.16:** Revise section to be consistent with Finding 86.

16. All vegetation shall be maintained over C-DLDs to maximize uptake of moisture in the DLD soils. The closure vegetation shall include the plant species listed in Finding 86 (Tall wheatgrass, Perennial rye, California brome, and Slender wheatgrass). Table 7 of Finding 79.

**Response:** Staff incorporated the requested change to include Table 7 and Finding 86.

**Comment on Closure and Post Closure Specification E.19:** Revise section to expand the use of C-DLD 1 for Echo Water construction activities to include stockpiling of excavated materials from the conversion of C-DLD 5 into an active L-DLD. The conversion of C-DLD 5 will be completed before construction of the Echo Water Project is completed.

**Response:** Closure and Post Closure Specification E.19 remains unchanged. The materials excavated from C-DLD 5 are considered designated wastes and must be handled accordingly. Excavated materials removed from the C-DLD 5 footprint shall be stored in a Lined DLD (L-DLD 2, 3, or 4).

**Comment on Provision H.18c:** Footnote 2, delete reference to drinking water standards and agricultural water quality goals. Substitute as follows: “Compare to Basin Plan water quality objective, including narrative and numeric.”

2. Compare to Basin Plan water quality objectives, ~~including drinking water standards, agricultural~~

~~water quality goals, etc. including narrative and numeric.~~

**Response:** Staff incorporated the requested change.

**Comment on Provision H.18.g.iii:** The parenthetical should be deleted as it is not applicable to the term Best Practicable Treatment or Control.

iii. How current treatment ~~and or~~ control measures are justified as Best Practicable Treatment or Control (~~i.e., what justifies not implementing additional measures~~);

**Response:** Staff incorporated the requested change.

**Comment on Provision H.18.g.v:** To be consistent with the terminology contained in Resolution 68-16, the revision should be revises as follows:

v. Why allowing existing and/or anticipated degradation is ~~in the best interest of~~ to the maximum benefit ~~to~~ the people of the state.

**Response:** Staff incorporated the requested change.

### **MONITORING & REPORTING PROGRAM**

**Comment on Reporting Requirements:** Confirm that the new reporting format is not required to be implemented until the first semi-annual report following adoption of the permit, due August 1, 2016. The 2015 Annual Report will not have many of the new monitoring requirements.

**Response:** The MRP reporting requirements become effective when the permit is adopted. The 2015 Annual Report may include the results from monitoring conducted under the old and new permits, which may be different.

**Comment on Section A:** Delete "All metals analyses shall be for dissolved metals", as the analysis methods are case-dependent. This will also affect historical continuity of the monitoring data, except for groundwater monitoring.

**Response:** This sentence is not deleted. Metals should be analyzed as dissolved to determine the solubility of the metals in the various waste streams with the exception of the sludge samples. Additional language added to the MRP Section A to clarify sludge samples are not analyzed as dissolved.

**Comment on Section A.1:** Propose to remove extraction wells from the groundwater monitoring system, based on consultant recommendations (included). Currently, the extraction wells are monitored for elevation only, and these elevation readings are affected by the operation of the extraction pump and do not represent static conditions. If the extraction wells remain as part of the groundwater monitoring system, clarify this section so that it does not require monitoring as per Table 1. As mentioned above, the extraction wells are currently sampled for elevation only, and each extraction well is paired with a detection monitoring well. The detection monitoring wells are sampled as per Table 1.

**Response:** Extraction wells are not included in the detection monitoring program as detailed in Section A.1 and Table 1 Footnote 4, "*Extraction wells shall be monitored as specified in Section A.8 for corrective action and are not part of the detection monitoring system.*"

**Comment on Section A.1:** MW-223, 233, 235, and 236 are extraction wells, and should be labeled accordingly. Remove reference to "detection" for these wells.

**Response:** Extraction wells MW-223, 233, 235, and 236 do not have associated well pairs for detection monitoring and shall also serve as detection monitoring wells for the shallow zone.

**Comment on Section A.1:** Propose to remove MW-339 from detection monitoring system based on consultant recommendation (included). A review of the historical data shows that the water levels

and water quality from this well is duplicated by MW-335.

**Response:** MW-339 shall not be removed from the detection monitoring system. Water typically flows from the west to the east below the site; however, the groundwater extraction system has changed the groundwater gradient in localized areas to remove groundwater impacted by the dedicated land disposal units. Specifically, in the vicinity of MW-339, extraction well MW-333 has the potential to extract groundwater below the closed landfill. MW-339 is the first monitoring well that would detect potential impacts from the landfill.

**Comment on Section A.1 Table 1:** Modify footnotes in Table 1 for clarification.

**Response:** Footnote 2 modified to show Ammonia as Nitrogen. Footnote 5 not added, metals being analyzed as dissolved are included in Section A.

**Comment on Section A.3(c):** Add “has been determined a leak in the containment structures” and replace “immediately” with “within 24 hours” for clarification of requirements (refer to comments on Provision C.3 and C.13 a. b. and d.)

**Response:** Title 27 routinely uses the term “immediately” with no qualifier when describing when action shall be taken by a reasonable, responsible person. For example, Title 27 section 20365(d) when describing how the Discharger shall maintain capacity in its precipitation and drainage collection and holding facilities states that such collection and holding facilities “*shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system.*” Therefore, no qualifier is added to A.3(c) to elaborate on what is meant by “immediately” except as generally accepted as what a reasonable, responsible person would do under such circumstances.

**Comment on Section A.8:** Propose to remove the extraction wells from the groundwater monitoring system, based on consultant recommendations (included). Currently, the extraction wells are monitored for elevation only, and these readings are affected by the operation of the extraction pump. If corrective action monitoring is still required, then modify this section for clarification, so that it does not require monitoring as per part A.1, Table 1 of the MRP. The extraction wells are currently sampled for elevation only, and each extraction well is paired with a detection monitoring well.

8. Corrective Action Monitoring - The Discharger shall conduct corrective action monitoring to demonstrate the effectiveness of corrective action in accordance with Title 27, section 20430 and this MRP. Groundwater monitoring wells that are in a corrective action monitoring program shall be monitored ~~in accordance with the groundwater monitoring requirements in parts A.1 of this MRP, except as modified in this part of the MRP for any additional constituents or modified monitored frequencies. for elevation only.~~

**Response:** Staff incorporated the requested change to A.8 with minor modifications for clarity. The extraction wells will remain in corrective action monitoring for elevation only. Understanding the draw down effect of the extraction system is part of evaluating the corrective action monitoring.

**Comment on Section B:** Confirm that entering of all monitoring data and monitoring reports into Geotracker is day-forward, and clarify when data needs to be entered relative to submittal of the semi-annual and annual reports. Request that entry in Geotracker to occur within 30 days following submittal of reports to the Regional Board.

**Response:** Semi-annual reports, annual reports, and associated monitoring data shall be uploaded into GeoTracker by report due date.

**Comment on Section C.6:** Recommend deleting MW-228R, MW-233, and MW-235 as they are extraction wells and monitored for elevation only.

**Response:** Section C.6 remains unchanged. MW-228R, MW-233, and MW-235 are extraction

wells that shall also serve as detection monitoring wells because there are no other wells in the vicinity to monitor the shallow zone.