

Regional Water Quality Control Board
Central Valley Region

Response to Written Comments for
Tentative Waste Discharge Requirements
for
County of Fresno
Coalinga Solid Waste Disposal Site, Fresno County

This document contains the responses to written comments received from interested parties regarding the proposed tentative Waste Discharge Requirements (WDRs) for the County of Fresno, Coalinga Solid Waste Disposal Site, Fresno County for closure and post-closure maintenance. The Tentative WDRs, R5-2014-XXXX, were prepared to incorporate closure and post-closure maintenance requirements. Currently, WDRs Order 5-00-233 regulate the Facility.

The Tentative WDRs were circulated on 15 January 2014 for public comment, ending on 14 February 2014.

Comments submitted during the comment period were received from the following:

- A. James W. Babcock, ARCADIS, on behalf of the County of Fresno, 10 February 2014

RESPONSE TO COMMENTS

The proposed additional language in underlined and the proposed deletion of language is shown in ~~strikethrough~~ format.

Comment 1:

Finding 1: The first sentence of the finding states, “*Chevron USA, Inc., (a Pennsylvania Corporation)...*”

Comment: We believe Chevron USA, Inc. is now a Delaware Corporation. We confirmed with Mr. Terry Davis of Chevron that Chevron USA is a Delaware Corporation. Please change the first sentence in Finding 1 to read ...”*Chevron USA, Inc., (a Delaware Corporation)...*”

Response 1:

Comment acknowledged. Finding 1 will be revised as follows:

The County of Fresno operates and Chevron USA, Inc., (a Delaware ~~Pennsylvania~~ Corporation) (landowner)...

Comment 2:

Finding 10: The Coalinga Disposal Solid Waste Disposal Site is approximately one mile south of the City of Coalinga and one-half mile east of Warthan Creek.

Comment: In the first sentence delete the third word “Disposal” because it appears in the correct word order three words later. There are two oil fields, the landfill is within the Jacalitos oil field and the Coalinga oil field is immediately northwest and north of the landfill (See Figures 4 and 5). We believe the site description should be more detailed and suggest adding the following after the first sentence: *The facility is within the active Jacalitos Oil Field and south and*

southeast of the active Coalinga Oil Field as they are defined by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR).

Response 2:

Comment acknowledged. Finding 10 will be revised as follows:

The Coalinga Disposal Solid Waste Disposal Site is approximately one mile south of the City of Coalinga and one-half mile east of Warthan Creek. The facility is within the active Jacilitos Oil Field and south and southeast of the active Coalinga Oil Field as they are defined by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR).

Comment 3:

Finding 11: Land uses within one mile of the facility include irrigated farmland to the north, and undeveloped grass-covered rolling hills to the south, east, and west.

Comment: Land uses within one mile of the facility have changed. Therefore, we suggest changing the finding to: *Land uses within one mile of the facility include oil field wells and associated oil field operations to the south, west, northwest and north,, irrigated farmland to the north and northeast, industrial commercial development to the northwest along State Highway 198 west of the City of Coalinga.*

Response 3:

Comment acknowledged. Finding 11 will be revised as follows:

Land uses within one mile of the facility include oil field wells and associated oil field operations to the south, west, northwest and north, irrigated farmland to the north and northeast, industrial commercial development to the northwest along State Highway 198 west of the City of Coalinga. ~~and undeveloped grass covered rolling hills to the south, east, and west.~~

Comment 4:

Finding 12: Five municipal, domestic, industrial, or agricultural groundwater supply wells have been identified within one mile of the facility.

Comment: Wells within one mile of the facility have changed. Therefore, we suggest changing the finding to: *Four municipal or agricultural groundwater supply wells have been identified within one mile of the facility in addition to four oil wells to the west and northwest.*

Response 4:

Comment acknowledged. Finding 12 will be revised as follows:

Four municipal or agricultural groundwater supply wells have been identified within one mile of the facility in addition to four oil wells to the west and northwest. ~~Five municipal, domestic, industrial, or agricultural groundwater supply wells have been identified within one mile of the facility.~~

Comment 5:

Finding 13: The facility is located along the eastern edge of the Coast Ranges adjacent to the southern San Joaquin Valley. The Tulare and San Joaquin Formations are exposed at the site. The Plio-Pleistocene Tulare Formation is exposed in the northern half of the site and consists generally of stream deposited, crossbedded silty sandstone and conglomerate. Some thin-bedded sandstone, clays, and limestones representing lake deposits are also present in this formation. The base of the Tulare Formation consists of diatomaceous white silty clay located just above a pelecypod deposit containing *Mya* species. The Pliocene San Joaquin Formation is exposed in the southern half of the site and consists of marine deposited, fine-grained silty sandstone, silt, and clay. The base of the San Joaquin Formation is comprised of the Cascajo Conglomerate layer, which is blue colored conglomerate and sandstone averaging about 50 feet in thickness. The formations dip approximately 17 degrees to the north.

Comment: The bedrock geology of the site is complex and there are at least two versions of geologic mapping for the Jacilitos Hills containing the site (Figures 4 and 5). The site is on the northeast flank of an anticline. The Thomas Dibblee (Dibblee, 1971) version, prepared as a US Geological Survey (USGS) Open-File Report, records rock unit strikes and dips on the map. The rock units near the site generally strike in a northwest or north-northwest direction with dips ranging in the teens. We recommend modifying the second sentence to read: *The Tulare and San Joaquin Formations are exposed at the site on the northeast flank of a northwest plunging anticline.* We recommend modifying the sixth sentence to read: *The underlying Pliocene age San Joaquin Formation is exposed in the southern half of the site and consists of marine deposited, fine-grained silty sandstone, silt, and clay.*

Response 5:

Comment acknowledged. Finding 13 will be revised as follows:

The facility is located along the eastern edge of the Coast Ranges adjacent to the southern San Joaquin Valley and on the northeast flank of a northwest plunging anticline. The Tulare and San Joaquin Formations are exposed at the site. The Plio-Pleistocene Tulare Formation is exposed in the northern half of the site and consists generally of stream deposited, crossbedded silty sandstone and conglomerate. Some thin-bedded sandstone, clays, and limestones representing lake deposits are also present in this formation. The base of the Tulare Formation consists of diatomaceous white silty clay located just above a pelecypod deposit containing *Mya* species. The underlying Pliocene age San Joaquin Formation is exposed in the southern half of the site and consists of marine deposited, fine-grained silty sandstone, silt, and clay. The base of the San Joaquin Formation is comprised of the Cascajo Conglomerate layer, which is blue colored conglomerate and sandstone averaging about 50 feet in thickness. The formations dip approximately 17 degrees to the north.

Comment 6:

Finding 21: Surface drainage is toward the north in the Kettleman Hydrologic Area. The closest surface water body is Warthan Creek, an intermittent stream, about one half mile from the waste management facility boundary.

Comment: The current WDRs No. 5-00-233 (Finding 14) correctly identifies the facility located on bedrock in the Jacilitos Hills as part of the Juniper Ridge Hydrologic Area (559.20) west of Pleasant Valley. The entire Pleasant Valley Groundwater Basin, a part of the Kettleman Hydrologic Area (558.50), is within the Pleasant Valley Water District. The Pleasant Valley Water District boundary coincides with the Recent age alluvial floor of the valley and the Pleasant Valley Groundwater Basin does not extend off the valley floor into the Jacilitos Hills. (See Figures 1 through 3) We recognize that the facility is adjacent to the Pleasant Valley Basin (Tulare Lake Basin Detailed Analysis Unit 245) and also was recognized by the RWQCB in the first sentence in Finding 20 of the current WDRs No. 5-00- 233 that states “The site is adjacent to Pleasant Valley.” Warthan Creek is the closest surface body to the facility however the waste management facility is designed to capture and retain all stormwater on site. We propose the following change to Finding 21: *Near the facility, surface drainage in the Jacalitos Hills, part of the Juniper Ridge Hydrologic Area (559.20) is to the north towards Warthan Creek. Warthan Creek, is the closest surface water body about one half mile from the waste management facility boundary. Warthan Creek is an intermittent West Side Stream that flows from the Juniper Ridge Hydrologic Unit into Pleasant Valley, a part of the Kettleman Hydrologic Area.*

Response 6:

An analysis of the facility location was performed using the Watershed Mapper (an online tool) and ArcMap 10.2 (GIS), which was not available at the time the previous WDRs were developed. This analysis indicates that the facility is completely within the Kettleman Hydrologic Area (558.50) (See attached Figure 1). The boundary for the Juniper Ridge Hydrologic Area is over 0.5 miles south of the site. Finding 21 is adequate and will not be modified.

Comment 7:

Finding 22: The designated beneficial uses of surface water in the Kettleman Hydrologic Area (558.50), as specified in the Basin Plan, are agricultural supply; industrial service supply; industrial process supply; water contact recreation; noncontact water recreation; warm fresh water habitat; wildlife habitat; rare, threatened and endangered species; and groundwater recharge.

Comment: The current WDRs No. 5-00-233 (Finding 15) correctly identifies the facility in the Jacilitos Hills as part of the Juniper Ridge Hydrologic Area (559.20). Figures 1 and 2 from the Tulare Basin Plan show the location of the landfill. The appropriate designated beneficial uses of surface water located in Hydrologic Area 559 is listed in Tulare Lake Basin Plan page II-4 in Table II-1 under West Side Streams. It should be noted that the waste management facility is designed to capture and retain all stormwater on site so there is no surface flow to any off-site surface drainage. We request the original language in WDRs No. 5-00-233 (Finding 15) be inserted as the new Finding 22.

Response 7:

Please see Response 6. Beneficial uses of surface water in the Kettleman Hydrologic Area (558.50) (558 Valley Floor Waters), as specified in the Basin Plan are: agricultural supply; industrial service supply; industrial process supply; water contact recreation; noncontact water recreation; warm fresh water habitat; wildlife habitat; rare, threatened and endangered species; and groundwater recharge. Finding 22 is correct and will not be modified.

Comment 8:

Finding 24: Monitoring data indicate groundwater quality within the Tulare Formation has electrical conductivity (EC) ranging between 3,630 and 4,800 micromhos/cm, with total dissolved solids (TDS) ranging between 2,900 and 3,800 milligrams per liter (mg/L). Monitoring data indicate groundwater quality within the San Joaquin Formation has EC ranging between 690 and 742 micromhos/cm, with TDS ranging between 415 and 474 milligrams per liter (mg/L).

Comment: As correctly stated in the Tentative WDRs, the range of electrical conductivity (EC) and total dissolved solids (TDS) is very important to establish the poor water quality in the uppermost geologic unit, the Tulare Formation. Also, we believe it is important to present the average concentrations of EC and TDS because they show that over many years groundwater background values in the Tulare Formation far exceed secondary maximum contaminant levels (MCLs) and they are similar to values reported in groundwater from the Pleasant Valley groundwater basin.

Response 8:

Comment acknowledged. Finding 24 will be revised as follows to refine this finding's general characterization of groundwater quality:

Monitoring data from the past 10 years based on monitoring well CMW-1 indicate groundwater quality within the Tulare Formation has electrical conductivity (EC) typically ranging between 3,800 and 4,800 micromhos/cm, with total dissolved solids (TDS) ranging between 3,100 and 3,800 milligrams per liter (mg/L). Monitoring data based on monitoring well CMW-4 indicate groundwater quality within the San Joaquin Formation has EC typically ranging between 690 and 800 micromhos/cm, with TDS ranging between 450 and 520 mg/L.

Comment 9:

Finding 26: The facility is in Detailed Analysis Unit (DAU) 245 of the Tulare Lake Basin Plan. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal water supply, agricultural supply, and industrial service supply.

Comment: As we have commented earlier for Finding 21, the current WDRs No. 5-00-233 (Finding 14) correctly identifies the facility located on bedrock in the Jacilitos Hills as part of the Juniper Ridge Hydrologic Area (559.20) west of Pleasant Valley. The facility is adjacent to the Pleasant Valley Basin (Tulare Lake Basin Detailed Analysis Unit 245) not in it (See Figure 3). The Tulare Lake Basin Plan correctly identifies the facility in the Juniper Ridge Hydrologic Area (559.20) and Hydrologic Area 559 does not have a Detailed Analysis Unit. It is inappropriate to incorrectly place the landfill in the Kettleman Hydrologic Area (558.50) or state that it is in the Pleasant Valley Detailed Analysis Unit 245 so that the RWQCB can cite beneficial uses of groundwater listed for DAU 245. For our discussion, we refer to the Tulare Lake Basin Plan. The Tulare Lake Basin Plan on page I-2 states: "Surface water hydrologic units with the Tulare Lake Basin have been defined and numbered by the Department of Water Resources, as shown on Figure II-1. ...Westside streams are surface waters in hydrologic units 556 and **559**... All natural surface waters within the Basin have designated beneficial uses (See Table II-1)" Groundwater

beneficial uses are listed in Table II-2 of the Tulare Lake Basin Plan. Figure II-2 titled Tulare Lake Basin – Detailed Analysis Units (DAU) shows the location, geographic extent, and DAU numbers. Figure II-2 shows the Juniper Ridge Hydrologic unit including the Jacalitos Hills without a DAU number an indication that it is a mountainous recharge area within the Tulare Lake watershed. Referring to Table II-2 an apparent hydrologic unit designation on the bottom of page II-6 is the “All Other Ground Waters” designation. That indicates that MUN was the only groundwater beneficial use in 1993. The mountainous recharge area of Jacalitos Hills and the Juniper Ridge Hydrologic unit can clearly be seen in the topographic relief map of the DWR California Water Plan Update 2009 (Figure TL-2 on page TL-10) in contrast with the groundwater basins including Pleasant Valley.

Response 9:

An analysis of the facility location was performed using California Department of Fish and Wildlife BIOS viewer 5.14.18 (an online tool) and ArcMap 10.2 (GIS). Based upon this analysis, the northern portion of the facility is in the Detailed Analysis Unit (DAU) 245 (Pleasant Valley Basin) of the Tulare Lake Basin Plan. However, the southern portion is not in a DAU and would be considered as “All Other Ground Waters” (See Figure 2). The boundary appears to be consistent with the contact between the Tulare Formation (within DAU 245) and the San Joaquin Formation (not in a DAU). Therefore, the beneficial uses of groundwater in DAU 245 (Pleasant Valley Basin), as specified in the Basin Plan (Table II-2, Page II-5), are: domestic and municipal water supply, agricultural supply, and industrial service supply.

The southern portion of the facility (San Joaquin Formation) is not in a DAU and is considered “All Other Ground Waters” with the beneficial uses, as specified in the Basin Plan (Table II-2, Page II-6), of MUN (Domestic and Municipal Water Supply). However, page II-2, second column, paragraph 5 of the Basin Plan states, “*In addition, unless otherwise designated by the Regional Water Board, all ground waters in the Region are considered suitable or potentially suitable, at a minimum, for agricultural supply (AGR), industrial supply (IND), and industrial process supply (PRO).*” Based upon the water quality data for the San Joaquin Formation in Finding 24, it too would support these additional beneficial uses. Therefore, Find 26 will be revised to read:

The northern portion of the facility (Tulare Formation) is in Detailed Analysis Unit (DAU) 245 (Pleasant Valley Basin) of the Tulare Lake Basin Plan (Basin Plan). The designated beneficial uses of groundwater, as specified in the Basin Plan, are: domestic and municipal water supply, agricultural supply, and industrial service supply.

The southern portion of the facility (San Joaquin Formation) is not in a DAU and is considered “All Other Ground Waters” with the beneficial use, as specified in the Basin

Plan, of domestic and municipal supply. However, based upon the water quality data in Finding 24, it too would support the beneficial uses of agricultural supply, industrial supply and industrial process supply.

Comment 10:

Finding 53: Based on the threat and complexity of the discharge, the facility is determined to be classified 2-B, as defined below: Category 2 threat to water quality, defined as, “Those

discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.” Category B complexity, defined as, “Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.”

Comment: We believe the Coalinga Solid Waste Disposal Site should not be classified as 2-B and it should remain classified as Category 3-B as determined by RWQCB letter dated March 30, 2011 concerning the Threat to Water Quality (TTWQ) for American Avenue Landfill and Coalinga Landfill.

Response 10: Comment acknowledged. Finding 53 contained a typographical error and should have been listed as a Category 3-B, consistent with previous determinations. Finding 53 will be revised as follows:

Based on the threat and complexity of the discharge, the facility is determined to be classified 23-B, as defined below:

Category 23 threat to water quality, defined as, “Those discharges of waste that could ~~impair the designated beneficial uses of the receiving water, cause short term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.~~ degrade water quality without violating water quality objectives, or could cause a minor impairment of designated beneficial uses as compared with Category 1 and Category 2.”

Category B complexity, defined as, “Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.”

Comment 11:

Provisions H-1: The Discharger shall maintain a copy of this Order at the facility, including the MRP R5-2014-XXXX and the SPRRs, and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel

Comments: The closed facility has no structures at the site. We recommend modifying Provision H-1 using language similar to Provision G-2 in WDRs R5-2010-0072, for the closed Tulare County Exeter Landfill. The suggested language is as follows: *The Discharger shall maintain a copy of this Order at the offices of the Fresno County Department of Public Works & Planning – Resources Division, including the MRP R5-2014-XXXX and the SPRRs, and make it available during working hours to facility maintenance personnel, who shall be familiar with its contents, and to regulatory agency personnel.*

Response 11:

Comment acknowledged. Provision H-1 will be revised as follows:

The Discharger shall maintain a copy of this Order at the offices of the Fresno County Department of Public Works & Planning – Resources Division, facility, including the

MRP R5-201X-XXXX and the SPRRs, and make it available during working hours to facility maintenance personnel, ~~at all times to facility operating personnel~~ who shall be familiar with its contents, and to regulatory agency personnel.

Comment 12:

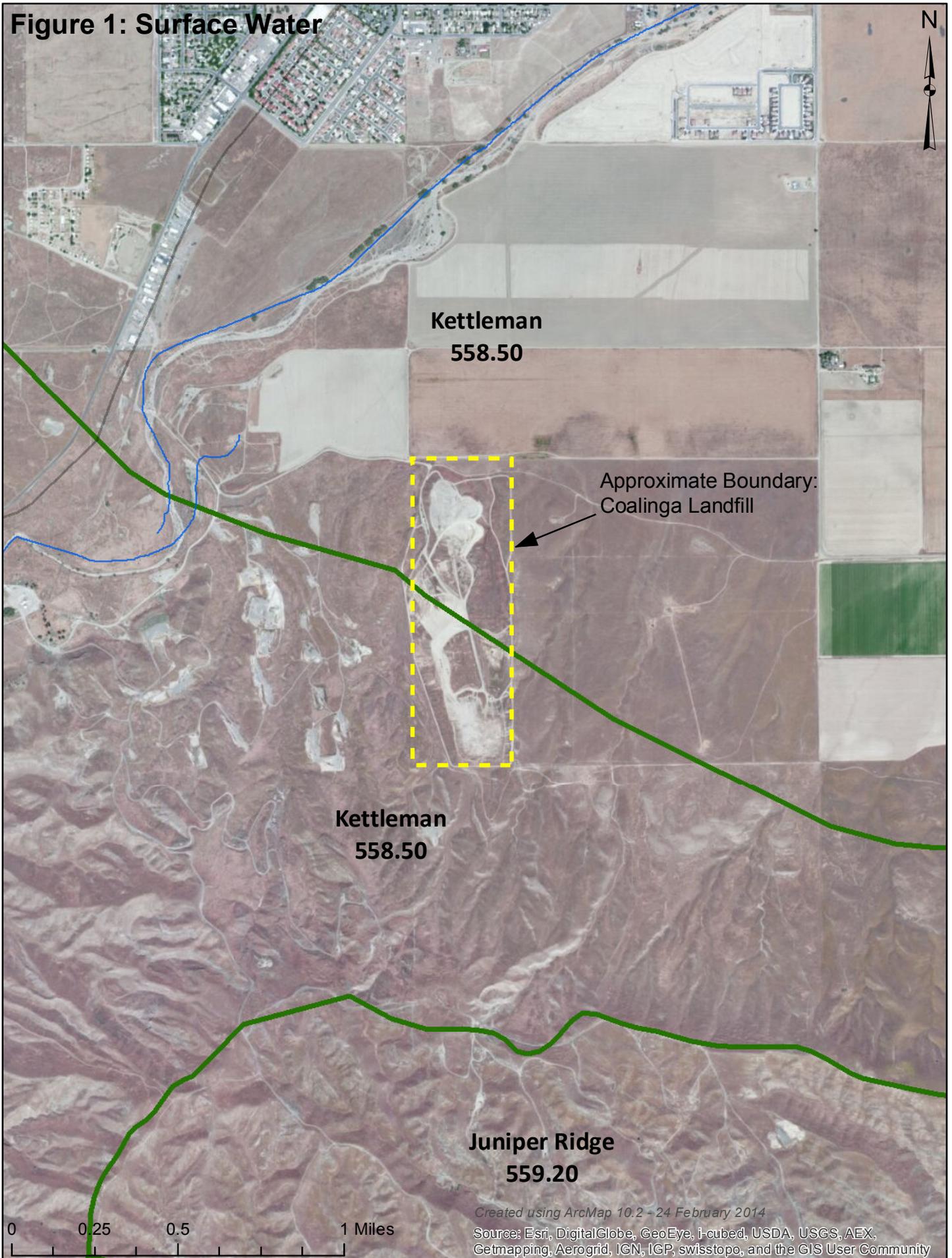
Attachment B – SITE MAP FOR COUNTY OF FRESNO AND CHEVRON USA, INC., COALINGA SOLID WASTE DISPOSAL SITE CLASS III LANDFILL, CLOSURE AND POST-CLOSURE MAINTENANCE, FRESNO COUNTY, WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2014-XXXX

Comments: The Site Map shows the waste management units and the boundary of the property. The east edge of both the waste management units shows that waste was inadvertently deposited off the property. We believe the intent of the tentative WDRs is to move the site into a Closure and Post-Closure Maintenance period. As such we believe the areas shown outside the property boundary should be identified as area where the waste will be repositioned inside the property during closure activities. We request that the map be edited to include an additional item in the explanation block that identifies a pattern that indicates waste areas on the map with that pattern will be relocated into the WMU(s) during closure activities.

Response 12:

Figure 2 (Site Plan) contained in the *Final Closure and Post-Closure Maintenance Plan*, dated January 2013, was used to illustrate the boundary of the property for Attachment B as well as the limit of existing waste. It was our understanding that the County may adjust the property boundary lines to include those areas of waste currently depicted outside the property boundary, or that waste would be removed to eliminate or decrease the size of the waste footprint outside of the property boundary. However, our Office has not received a revised Site Plan depicting the change in the facility boundaries nor revised plans indicating the proposed limits of waste.

Figure 1: Surface Water



0 0.25 0.5 1 Miles

Created using ArcMap 10.2 - 24 February 2014
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 2: Groundwater

