

**PUBLIC COMMENTS**  
PERTAINING TO PROPOSED ORDER NO. R3-2005-006  
GENERAL CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS  
FOR THE MANAGEMENT OF PETROLEUM-IMPACTED SOILS  
AT AUTHORIZED WASTE PILE MANAGEMENT FACILITIES  
ON ACTIVE OIL LEASES AND FEE PROPERTIES  
IN THE CENTRAL COAST REGION

# Energy Enterprises

August 7, 2005  
Via fax

Hector Hernandez  
RWQCB  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

05 AUG -9 PM 3:47

SAN LUIS OBISPO, CA 93401

Re: Beneficial Reuse Permits  
Comments on R3-2005-005 and -006

Dear Hector:

I have the following residual comments on the above two orders. I apologize for the delay as you wanted comments last week, but these are very minor and clean up the documents. I hope that you will take them under advisement.

A. Draft Attachment A- Beneficial Reuse (R3-2005-005).

1. Prohibitions, #21. The words "permanently inhabited" were to be added before "structures" (note this was done on the waste pile document, but not this one).
2. Provisions, D.7.l. The first word needs to be capitalized.
3. Provisions , D.18. The words "to anyone" should be deleted. It was picked up in D.20 of the Waste Pile order but missed here. Should the first sentence be "General Waiver" as opposed to simply "Waiver" to match the Waste Pile Order?
4. Provisions, D.18. I suggest deleting the defined term "NOT". It is not used anywhere else and makes bad grammar later ("failure to submit an NOT"). Just write out the entire term in the last sentence.

B. Draft Attachment A- Waste Piles (R3-2005-006).

1. I think Prohibitions 4 and 7 should be moved to the Beneficial Reuse prohibitions.

If you have any questions, please contact me at (805) 544-2153 or (805) 544-2159 (f). Good job.

Sincerely,



Bruce Falkenhagen

June 10, 2005

Hector Hernandez  
RWQCB  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

05 JUN 10 PM 1:55

895 AEROVISTA PLACE, SUITE 101  
SAN LUIS OBISPO, CA 93401

Re: Beneficial Reuse Permits  
Comments on R3-2005-005 and -006

Dear Hector:

Thank you for allowing the public to comment of the draft staff reports and guidelines for the beneficial reuse permits. You have done a very good job on a very difficult and complicated issue, as the target and problem always seems to be moving.

I am a very small oil producer and I represent a few other small producers. Our concerns deal with the cost to comply and also to make the program to where it encourages everyone to do the right thing. Excess paperwork, testing, monitoring all directionally drive the small producer to non-compliance and to hide. If high fees are established, many small operators will ignore the programs.

I have the following comments after the workshop you conducted on June 3, 2005. Please excuse the lack of continuity to these comments, as you are more familiar with the proposed resolutions you will be best to know where the comments should be included.

1. Prohibition #A.11- Time frame for presence of liquids. The requirements at this time do not allow any liquids to be present. Since the material is coming from crude oil, at some period of time it is liquid. I suggest that the requirements be modified to reflect the concept that the source material and the blended material may have free liquids present upon the initial introduction to the environment, but all free liquids need to be absorbed or removed within 48 hours of the source material being generated. This allows time for the vacuum truck to do its work and minimal risk if the possibility of rain is projected.

I suggest the word "The discharge of reuse materials..." be changed to "The application of reuse materials...". I suggest another sentence be added that "All free liquid shall be removed or blended within 48 hours of the release or generation. If rain is projected to occur within this period, the material shall be placed on plastic and covered."

2. Prohibition #A.15, Landowner's Permission, and How to Apply, paragraph F.1.i. Written permission by the landowner should not be included. For each of our leases, many years ago the landowner/mineral owner signed an agreement whereby he agreed to allow the oil company to produce the oil and gas and to use the land. These rights were given to the oil company in exchange for paying him an agreed royalty percentage on the oil and gas so produced. Now years later, along comes RWQCB saying that I need new landowner approval. This is unfair and is in violation of the contract we have. The landowner previously signed off on those rights to the company. Most likely the landowner has changed in the interim and the new landowner might not

be as agreeable as the original one was, however when he purchased the property, he got the rights to the ownership along with the obligations and liabilities the previous owner had. For him to now be able to change the deal we had is breaking that contract. Had I known that he would have this right in the future, I would have lowered the royalty percentage or made other changes in the lease. The Landowner gave up that right when the original lease was signed. RWQCB can not come in and grant the landowner rights that are not RWQCB's to give.

3. Specifications, new Specification- threshold levels. No where is there a threshold level showing the volume that is a concern or that triggers these projects. As will be shown by testing, the material is non-hazardous. After more than 100 years of oilfield operations, there have only been a small handful of issues which I do not believe were triggered by the beneficial use of material but rather by the act of an oil spill. I suggest that there needs to be an exemption depending on the size of the pile or the volume of material to be reused. Is a pile the size of a telephone trigger the Waiver? Of course not. How about the size of a loaf of bread? Again, there is no threat to public health or safety with that size. I believe that the Waiver definitely would be needed if the pile is the size of a moving van. My point is that there must be some size where, even though the concern is minor on the large piles (as suggested by the entire waiver program), the concern then becomes less than negligible for a small pile.

I suggest that that size break is around 15 cubic yards. I suggest that a first paragraph be added to this section that states something like:

"These specifications are applicable if the operator's blended material is reasonably expected to exceed 15 cubic yards at any time in the year. So long as the volume handled is less than this level at all times, then the public's concern is negligible and a Waiver is not necessary, however the RWQCB encourages operators utilizing this exemption to employ the procedures shown here. If the volume increases above this level, the operator is subject to the application requirements of the Waiver."

What this allows is that very small volumes do not make a major project, such as stuffing box leaks, small spills, or tank cleanings where there is less than 6" of sand and sludge in the bottom. For a large oil spill, large cleanup, or decommissioning, the Discharger will need to apply for the Waiver.

4. Specifications #B.2- Qualified professional. This condition is a deal killer for a small company. We are talking about a small volume of material, most likely from a stuffing box or minor leak. When this has occurred in the past, the material has been laid out right then for a berm around the wellhead or to fill potholes near the well, or to strengthen the dike. Don't you think that requiring a "qualified professional"; to oversee me taking a shovel full of material and carrying it 15' to a pothole may be a little overkill.

In the situation where we have tank bottoms that are to be blended and used for roads, again, where is the need for a professional? For the past 105 years on one lease (where I have managed it for 12 years), the material has been spread and used in an acceptable manner for our purposes and we have had no complaints. No plans are needed; one simply takes the material with the backhoe, mixes in some loads of native material, blend it on the road and lay it down. Periodically we will blade it. Very simple, understandable, quick, inexpensive, and with no issue of a threat to water quality, health and safety, or erosion over many decades. We are the only ones using the roads and

berms and have done so very well in the past. Why develop a new, "professional engineer" welfare program now? If the road is to be used by the general public, then I could see the need, but my client's and my usage is not for the general public.

I suggest that this paragraph be reworded to not require a qualified professional (of course, if a company wishes to use one they are welcome to use them). As to the specifications and plans signed by a principal executive officer, since plans are not necessary in most cases, requiring him to sign on the annual submittal of where the work was done should be adequate.

5. Specification #B.6, Frequency of Testing. Some of my clients would like to test their crude oil prior to any spill or problem to show that it meets RWQCB guidelines. By pre-testing, then, if and when a spill or maintenance occurs, all parties know that the base material is fine to use for berms and roads. We avoid the situation and risk of having to stockpile the material and wait for 3 months for testing and approval from one incident. I believe those delays are what contribute to the erosion and impacts problem that staff is concerned with. Therefore, I suggest adding a condition stating, "An operator may test its native production at the time of applying for the Waiver to determine if future reuse materials generated from the produced oil is acceptable prior to the waste being generated. This pre-testing would be on a field by field basis and submitted as part of the application package. Pre-testing would allow the operator to immediately mix and spread and reuse spill material without further testing, approvals, or oversight."

6. Specifications #B.6, Testing. I suggest that the testing be split into two different testing routines. One testing routine would be for stuffing box, oil spill, and tank bottom material where one is dealing with natural production, then the second type of testing would be for sump material, which has the potential to have other wastes, manmade chemicals, PCB's, old tires, etc. Each is a different animal, and the one size of testing fits all approach is inappropriate.

Testing- crude oil. For crude oil material, there is no reason to test for TPH or full range TPH. We know it is crude oil and to get a beneficial reuse, one needs a good level of TPH in the sample to allow it to bind. That level is based on the type of mix material and the length of carbon chains in the oil. One crude may need at least 1,000 ppm TPH to be acceptable for reuse, another may need 20,000 ppm. The answer is not known until the mixing is complete. The question staff should ask is "if I require TPH testing, what am I going to do with the results?" If there will be no threshold level of acceptance, there is no reason for the test. To me, the driving criteria (prohibition 13) are that on the hottest summer day, the material does not "pump" when driving on it and that no hydrocarbons migrate from the placed location (the paint filter test).

I would delete the listing of ignitability. Since liquids are not allowed to be used, why list a test for liquids?

I suggest deleting the PCB testing; PCB's are a manufactured product and would not be found in crude oil.

I also suggest deleting the metals testing. If the product came from the ground, there should be no metals, and if so, they are natural. Any metals found

will come from the soil used to mix the material, hence it was already there, and it is not part of the waste mix.

The PAH's listed here should be shown as testing only for the speciation of those PAH's included on the DTSC's list of cancer causing PAH's. Asphalt is one gigantic blob of PAH's, the vast majority of which are not toxic. Does this make asphalt unable to be used as road or berm material? Of course not. But let's focus on the problem, not a shotgun approach to test everything.

This would reduce the testing for crude oil from spills and tank bottoms to be pH, Biotoxicity, and cancer causing PAH's. I agree that all of these could be a threat to the public now or some time in the future.

Testing- sump material. All of the testing listed should be done for sump material; however I suggest that the ignitability test should be deleted.

Testing- results. It is fine to put in the proposal the testing, but RWQCB also needs to add the threshold levels of acceptance; i.e., pH between 6-8, negative bioassay, and PAH's being below the DTSC level of significance.

7. Specification #B.7, Decommissioning. The way I read this, when it comes time to decommissioning, either all reuse materials are removed if they are above the cleanup levels, or if they are below the cleanup levels, then it either is covered with asphalt with the landowner's approval or not covered with asphalt which does not take the landowner's approval. Please confirm that this interpretation is correct.

8. Provisions #D.1, Records. I suggest that the words "weights and volumes" be changed to "weights or volumes". If the material is generated at the lease and used on the lease, we have no easy way to determine the weight. I think that the volume is a better indicator of the amount of reuse anyway.

9. Provisions #D.2, Detail of Reuse Plan. This reuse plan is too paperwork intensive for a small operation with only a backhoe load of material to reuse. It fits for a large oil company with a large staff abandoning many sumps and forces accountability and planning for those people, but for a small operation, this is too much. I suggest that the second sentence be modified as follows: "The level of detail of the Reuse Plan shall depend on the size of operation and the volume of the material proposed for beneficial reuse. The following types of information should be considered by the Discharger for inclusion in the Plan, such as shall include detailed information concerning the design specification..."

In the case of an operation where an Operator would apply now for a Waiver with the test data and the road locations where we would reuse the material when it occurs, much of the data requested is not appropriate.

10. Provisions #D.11 and #D.12- Transfer of ownership. The last statement of the first paragraph states that written notice must be provided at least 90 days prior to the effective date of a change in ownership. This is unrealistic. When an oil property sells, it may close in 1-2 weeks or 1 month, not 3 months. These two paragraphs state that the waiver is not transferable except after notice and subject to the approval of the EO. Why does the EO have any right to approve or disapprove a transfer of ownership?

In paragraph 12, it says that the EO may disapprove a change of ownership or responsibility. I believe that this could be construed as restraint of free trade or discrimination. What criteria is the EO bound by to accept a transfer? What is to keep the EO honest and not discriminate against a new operator?

I suggest that the Waiver should be transferable upon notice to the RWQCB with the data and statements listed in a-c appropriate. Paragraph 12 should be deleted. The second sentence is not necessary because if the Waiver is being transferred, then the succeeding owner or operator knows about it, because that is the entity submitting the transfer notice.

11. Provisions, paragraph D.17, Changes in Reports of Discharge. Except for those operators working under a detailed Reuse Plan for removing a large sump or other major project, a normal operator is not going to know 4 months before if a change is going to occur. The change occurs because a road is washed out due to rainstorms, or the operation is changed whereby only the light oil wells are being produced because of unfavorable pricing for the heavy oil, etc. I suggest that the "...120 days prior to..." be changed to "...60 days after...".

12. Provisions, paragraph D.18, Maintenance Activities. This will be a nightmare by the agency implementing this paragraph because to be fully compliant, every operator would have to phone every day for every lease because who knows what will spill will occur or what stuffing box will blow out 2 days before it blows out? (If I knew it was going to occur, it would be changed before it leaked, making it a moot point. Although I would like one, we don't have crystal balls!!). Again, if the material is non-hazardous (hence the ability to utilize a Beneficial Reuse route), then why does RWQCB need to monitor the most minor of jobs that occur continually? No notification should be made on the small tasks.

I would, however, leave in item #c.

13. Provisions, paragraph D.23, Access. Please remove the "at any time and without prior notification". First, this is unprofessional and borders on Gestapo tactics. It isn't hard to phone up the operator or its agent and make an appointment. It is simple courtesy. If RWQCB thinks that an illegal activity is occurring, present the information to a judge and get a search warrant. If it is not an illegal activity, we all are very busy people and most of us are not sitting around waiting for government callers. It is just courtesy.

14. Provisions, paragraph D.24, Local Offices. Some operations do not have an on-site office that would allow the Waiver to be available "at all times". I suggest deleting the words "at all times".

15. Management Practices, paragraph E.1, Applicability. In the workshop, we discussed at length the data RWQCB is relying upon to arrive at the conclusion that the entire oilfield has a problem. My leases have been there for over 100 years, oil has been produced for 104 years. The most recent well of the first batch drilled was drilled in 1927 after 92 others had been drilled; that is over 75 years of continual operations. The second lease I own consists of wells drilled 30-40 years ago. I have no indication that in all that time there has been any threat to groundwater; there have been no discharges to the waters of California, even in the very heavy rains of this last year. There have been

no erosion problems that have threatened the waters of the State, even though we have had extensive erosion problems where there is no reinforcement with beneficial reuse material.

This is all with our own internal practices for 100 years, not the list of make work projects provided here. Where is the data to support asking me to prepare this list? Is this like an ISO 9000 program?

Again, I suggest that the MP Plan listed here be shown as guidelines; that if an operator does have a problem, then he must comply with every aspect of this listed Plan.

I suggest the following wording changes: "RWQCB provides the following list of management practices (MPs) for guidance to the Dischargers in preparing its waiver application, the inclusion of any point is up to the Discharger based on its internal MPs and the appropriateness of the point for its operation. If a Discharger has an event where there is a discharge to the waters of the State or there has been significantly more than expected erosion of the reuse material, then upon notice from RWQCB, the Discharger shall be required to implement all of the following management practices (MPs) to ensure that reuse activities do...".

16. How to Apply, Fees, paragraph F.1.g, Fees. For a small operator wanting to use this waiver for the occasional leaking stuffing box or reuse of tank bottom material, the fee must be reasonable. We all want compliance, a high fee discourages compliance. I suggest that since it appears that the efforts by RWQCB on a submittal will be minimal, the fee should be on the order of \$100 or so, reflecting a couple of hours of work to take in and file the application. I understand that this is to be a one-time fee, not an annual fee. For a submittal where the Discharger is planning on using sump material, the fee should be \$500 or so, because I would anticipate some onsite inspections. If multiple sumps are to be removed, it means a multi-year full time project. In this event, the fee should be an annual fee. Again, we want to encourage the operators to avail themselves of the program, not to hide the reuse material.

17. General, Grouping of facilities. There was much discussion at the meeting regarding the potential grouping of facilities. I suggest that a company be allowed to group facilities by County. The same County agency will do all inspections, so it makes sense to allow a company to submit one application/county.

18. Monitoring and Observation Schedule, B. Rainfall Data. The proposed monitoring asks the Discharger to provide the rainfall information from the most proximate atmospheric station. To my understanding, the most proximate station in Santa Maria is at the airport. This would cover all of Cat Canyon, Los Alamos, Orcutt Hill, Guadalupe, and Santa Maria. We have 20 separate Dischargers all providing the same information when it comes from the same governmental source. I suggest that in the Management Practices, the Discharger state where the station is, and if that data is ever needed by RWQCB, then it or the County can request it directly from NOAA. Let's not make a lot of duplicative work.

19. Reporting Schedule, paragraph A. I suggest the reporting period to be changed to coincide with the government's rainfall period, which I believe is July 1<sup>st</sup> to June 30<sup>th</sup>. That way future data analysis will be on the same basis. Also, please allow 60 days for the reporting, as opposed to 30. The beneficial reuse is not the reason we



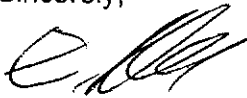
are in business and all other agencies allow 60 days, so it would be appreciated if that same courtesy is extended here.

20. Reporting Schedule, paragraph A.11, Letter of Transmittal. The data is being submitted. Why does RWQCB need a letter summarizing the information? Can't staff read the data itself? If a translation is necessary for a transmittal letter, then delete the request for the data.

21. Reporting Schedule, paragraph A.13, Reporting of Lab Results. While it is a very minor matter, I strenuously object to providing the data on CDROM in MS-EXCEL format. First, please explain the need for this. Then, please explain why MS-EXCEL. That is an archaic program that is very unusable. I use Lotus 1-2-3 and am not very interested in learning how some other program works and spending hours of time entering data. MS-EXCEL is not a good program for analyzing data, I can run circles around the MS-EXCEL users with Lotus, and there won't be enough data to send to even justify the cost of a CDROM. Please delete the requirement.

If you have any questions, please contact me at (805) 544-2153 or (805) 544-2159 (f)

Sincerely,



Bruce Falkenhagen

## Hector Hernandez - WSPA Comments on Beneficial Reuse

---

**From:** "Bob Poole" <bpoole@wspa.org>  
**To:** "Sheila Soderberg (E-mail)" <ssoderberg@waterboards.ca.gov>, "Hector Hernandez (E-mail)" <hhernandez@waterboards.ca.gov>  
**Date:** 6/15/2005 11:14 AM  
**Subject:** WSPA Comments on Beneficial Reuse

---

Sheila and Hector,

As per my telephone conversation today with Hector, I am herewith forwarding additional comments on behalf of WSPA regarding the Beneficial Reuse issues. We look forward to another constructive working session on the 22nd and appreciate your ongoing efforts. Based on recent conversations, I feel comfortable I am speaking for all industry participants (in addition to our WSPA members) that it is critical we get a workable program, regardless of whether the Water Board considers the matter in July or September.

Bob <<WSPA Comments to RWQCB 6 15 05.doc>>

Bob Poole  
Coastal Coordinator  
Western States Petroleum Association  
(805) 966-7113 Tel.  
(805) 963-0647 Fax.  
P.O.Box 21108  
Santa Barbara, CA 93121-1108



**Western States Petroleum Association**  
Credible Solutions • Responsive Service • Since 1907

June 15, 2005

Mr. Hector Hernandez  
California Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**SUBJECT: COMMENTS REGARDING BENEFICIAL REUSE ORDERS  
R3-2005-005 and -006**

Thank you for the opportunity to comment on the proposed general Waste Discharge Requirements (WDR's) and Waiver of WDR's for application of reuse materials to oilfield roads, berms, etc. We have attempted to use other General WDR's and Waivers adopted by the Board to compare and contrast the documents prepared for the proposed oilfield reuse activities with similar low-risk industrial activities conducted in the Region.

**Resolution R3-2005-006 - Processing Facility General WDR's**

Regarding the proposed general WDR's for operation of treatment/processing areas for oilfield reuse materials, we have relied most heavily on the "General Waste Discharge Requirements for Fertilizer and Pesticide Handling Facilities in the Central Coast Region, Order No. R3-2005-0001" since it also emphasizes the need for management practices and monitoring programs to protect beneficial uses of surface and groundwater. However, unlike the proposed Oilfield Reuse WDR's, the general Order for fertilizer and pesticide facilities does not classify the enrolled facilities as waste management units with the subsequent application of Title 27 requirements such as those listed in item number 6 of the draft Order No. R3-2005-006. Additionally, the monitoring and reporting program for the fertilizer and pesticide facilities appear to be substantially more streamlined than the current oilfield proposal while still meeting the Board's need for data to support a finding that the operation of the facilities covered by the general order is protective of water quality.

We believe that a similarly constructed oilfield reuse general WDR and monitoring program would provide the board with sufficient information pertaining to the construction, operation, and maintenance of processing areas in oilfields. As discussed at the June 3, 2005 public hearing, we would also respectfully recommend that the Staff consider a "Small Producer" waiver from the General Order similar to the "Wineries, Order No. R3-2002-0084" which would still inform the Board and other interested agencies that smaller facilities are being operated, but relieve the operators from the annual monitoring and reporting requirements while still subjecting them to the prohibitions, recommendations and specifications contained in the general Order.

P.O. Box 21108, Santa Barbara, California 93121  
(805) 966-7113 • Fax: (805) 963-0647 • Cell: (805) 252-6778 • bob@wspa.org • www.wspa.org

If the application for coverage or waiver goes to the other interested agencies (DOGGR, local jurisdictional agencies) then they can verify compliance with either the general Order or waiver during inspections by their personnel. As part of either DOGGR or local lease restoration, closure of the processing facility to the satisfaction of the Board could be a milestone under either or both of the other agency's enforceable lease restoration programs.

### **Resolution R3-2005-005 - Reuse on Active Leases and Fee Properties**

We have used the "General Conditional Waiver of Waste Discharge Requirements - Timber Harvest Activities in the Central Coast Region - Resolution No. R3-2005-0066" for comparison when reviewing the proposed oilfield reuse waiver and determined that, once again, the waiver and monitoring programs are more streamlined while still meeting the Board's mandate to protect surface and groundwater. Of particular note, the Timber Order is silent on the removal or continued use of installed roads at the end of harvesting activities. Also, the Monitoring and Reporting program contains numerous references to a road inventory template and forensic (visual) monitoring features that are substantially easier for the applicant than those currently identified in the proposed oilfield Waiver.

We also believe that the applicable statutes and regulations offer sufficient flexibility for the Regional Board to structure appropriate vehicles to deal with this situation in an efficient, cost-effective manner - one that ensures protection of water quality. For example, waivers under Water Code § 13269, with reasonable monitoring and reporting requirements, would in our view clearly be in the public interest. In addition, Title 27 CCR § 20080(b) provides for "engineered alternatives" to the general construction and prescriptive standards. Finally, Title 27 CCR § 20090(h) (reuse and recycling) represents an apparent regulatory preference for use of an exemption for such activities as reuse of soil containing oil on a variety of roads.

We recognize that the changes described in this document are not a line-by-line revision of the current documents that you have prepared and that re-formatting the proposed general Order and Waiver could take longer than allowed if we hope to have them before the Board at the July 8<sup>th</sup> meeting. However, we remain committed to assisting the Staff with this worthwhile endeavor and restate our thanks for the time already invested by the Staff.

Sincerely,

**Bob Poole**  
Coastal Coordinator

## Hector Hernandez - Comments to Beneficial Reuse and Waste Pile DRAFT WDR's

---

**From:** "Underwood, Greg" <gcunderwood@unocal.com>  
**To:** "Hector Hernandez" <Hhernandez@waterboards.ca.gov>  
**Date:** 6/7/2005 12:51 PM  
**Subject:** Comments to Beneficial Reuse and Waste Pile DRAFT WDR's  
**CC:** "Terry, Ben F." <bferry@unocal.com>, "Hall, Robert" <rhall@unocal.com>, "Meyer, Chris" <cmeyer@unocal.com>

---

Hector,

The working group meeting regarding the DRAFT WDR's for both Beneficial Reuse and Waste Piles went well last week, I think it was quite productive. I have a few comments that the group discussed:

- The definition of a "waste pile" needs to be explained so we can determine exactly what is being regulated by the waiver.
- The board needs to present definitive testing parameters so that generators may determine when a pile or source poses a threat to ground or surface waters. This essentially is defining what is "inert" versus what poses a threat to waters and would require regulation.
- The discussion of a hydrocarbon waste versus a product. If it is run through a batch plant or a mixing table, when does it become a product and no longer carry the designation of a waste. How long does Title 27 apply and how in depth should it be applied? Remember the discussion regarding vineyard wastes. Does an engineered road or a road built to some industry standard require annual reporting?
- Need to define "active facilities". The County Petroleum Department mentioned that they perceive something as "active" when the pumps are operating but does not consider it "inactive" until the lease is fully abandoned (i.e. wells plugged, facilities demolished, sumps, roads and pipelines removed). Perhaps complete "lease closure", as defined by the County of Santa Barbara Petroleum Department, should be the definition of when an active oil field facility becomes inactive. The wells are always the first thing to be shut in and as such should not be the determining factor for defining "active". By defining "active sites" as any site that has not achieved complete lease closure, these waivers can be applied to sump restoration projects as well and additional waivers will not be required.
- The concept of "time" needs to be included in the definition of the waste piles and their handling (i.e. 30 days, 2 weeks, etc). If active restoration requires materials to be excavated from the subsurface and temporarily stockpiled adjacent to the excavation while they are being loaded out for offsite disposal, this should not be a regulated stockpile requiring the annual reporting and additional permitting as it is directly associated with the permitted restoration excavation under the oversight of the lead agency. Any such piles will be subject to the scrutiny of the grading permit conditions for Best Management Practices, applicable SWPPP BMP's and any agency approved site restoration plan or equivalent. This discussion is targeted towards restoration activities but would also apply to producing sites.
- Fee structures need to be discussed and applied appropriately taking into account project size and complexity.

Just to recap the next few steps; the deadline for public comment for the WDR's is June 17<sup>th</sup>. Following that date, the board will incorporate as many of the comments as possible then re-circulate the DRAFT WDR's in the public arena by June 22. If all goes well with this revised version and there are no objections, that version will be presented in front of the Board at the July 8<sup>th</sup> meeting in SLO and recommended for adoption.

Please let me know if you have any questions regarding the above. Otherwise, I look forward to seeing you at the June 22<sup>nd</sup> meeting.

Sincerely,

**Greg Underwood**  
**Peak Management Solutions, Inc.**  
**Office (805) 547-5441**  
**Cell (805) 459-8566**

**Hector Hernandez - RE: Workshop Notice**

---

**From:** "Bob Poole" <bpoole@wspa.org>  
**To:** "Hector Hernandez" <Hhernandez@waterboards.ca.gov>  
**Date:** 6/2/2005 4:10 PM  
**Subject:** RE: Workshop Notice  
**CC:** "Bob Poole (E-mail)" <bob@wspa.org>, "Deanna Lewotsky (E-mail)" <lewotsky@co.santa-barbara.ca.us>, "Ed Brannon (E-mail)" <ebrannon@consvr.ca.gov>, "Kate Sulka (E-mail)" <kate.sulka@sbcfire.com>, "Kristy Bosard (E-mail)" <kristy.bosard@sbcfire.com>, "Pam McNulty (E-mail)" <pmcnult@co.santa-barbara.ca.us>

---

Hector,

As follow-up to my voicemail today, I want to forward you information regarding several minor comments WSPA wishes to provide. We can address them at tomorrow's meeting.

In addition, we would like to raise the issue of fees: both from the perspective of multiple sites and the use of the land disposal unit vs. waste management unit fee structures.

See you tomorrow morning at the workshop

Bob

Bob Poole  
 Coastal Coordinator  
 Western States Petroleum Association  
 (805) 966-7113 Tel.  
 (805) 963-0647 Fax.  
 P.O.Box 21108  
 Santa Barbara, CA 93121-1108

-----Original Message-----

**From:** Hector Hernandez [mailto:Hhernandez@waterboards.ca.gov]  
**Sent:** Thursday, May 12, 2005 10:55 AM  
**To:** jzhao@ci.santa-maria.ca.us; ebrannon@consvr.ca.gov; Jim@Diani.com; JoeP@Diani.com; David.White@gcinc.com; maz@grekaenergy.com; sekirby@hbsb.com; tcgibbons@jtccorp.com; Barbara.Fontes@sbcfire.com; kate.sulka@sbcfire.com; kristy.bosard@sbcfire.com; paul.mccaw@sbcfire.com; ron.gutier@sbcfire.com; steve.nailor@sbcfire.com; Tom.Rejzek@sbcfire.com; Wayne.Hamilton@shell.com; Dan@TRACER-EST.com; "Greg Underwood" <gcunderwood@unocal.com>; Joe Mello; Bob Poole; vpaulson@wziinc.com; "File" <smobley@wziinc.com>  
**Cc:** Harvey Packard; Sheila Soderberg  
**Subject:** Workshop Notice

Interested Persons,

Attached is a copy of a "Notice of Public Meeting" announcement that was mailed out to all interested persons concerning a proposed Reuse Waiver and General Order pertaining to oil field facilities and fee properties. This is being e-mailed to you because you appear on our e-mail list concerning oil field issues.

Regards,

Hector

Hector Hernandez  
Water Resources Control Engineer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906  
(805) 542-4641  
(805) 788-3530 (fax)



## **Comments to RWQCB – General WDR's and WDR Waiver**

### **I. General WDR's**

**Perhaps “Waste Pile” could be universally replaced with Waste Management Unit**

- **Draft Staff Report**

**On page 1 – Paragraph beginning “Waste Pile Facilities”, should the portion of the sentence that reads “are not required to be permitted include “under the General NPDES Stormwater Regulations” [unless the industrial.....**

**On page 3 “Comments” Insert space after comma in May 4, 2005**

- **Draft Order**

**On page 1 – Purpose Section #1 – Replace “applicable land disposal” with applicable waste management unit – The Order prohibits disposal in Prohibition # 8.**

**On page 5 - # 24 – same comment regarding NPDES stormwater permitting**

**On page 10 – Prohibition # 5 – We need to be able to discharge “liquids” perhaps we need some language about a limited a real extent facility per Title 27 20090.**

**On page 13 – Provisions # 7 – This language regarding acceptable ways to leave roads intact is preferred to the more prescriptive language in the Road Mix waiver.**

**On page 14 – (a) – Second sentence add “of the waste pile facility” after [The map...**

- **Draft Monitoring Program**

**On page 3 - # 8 – I believe the provision in the Order is F.9, not F.10**

### **II. Reuse Waiver**

**General Comment – replace oil-degraded with oil impacted**

- **Draft Staff Report**

**On page 2 – Second full paragraph – Consider deleting from October 22 to “an adequate field presence”. The loss of the MOU didn't really affect the Regional Waiver(s) that had been previously adopted and next sentence explains that the Regional waiver(s) would have (and did) die on 1/1/03.**

On page 2 – Proposed Waiver Conditions – 2<sup>nd</sup> paragraph – Consider replacing 1<sup>st</sup> sentence with “Reuse will only occur on properties with ongoing production activities”.

On page 2 – Comments – Should May 2 be May 4<sup>th</sup>, the same day as the General WDR

- Draft Resolution

# 1 – Consider replacing with “Oil production results in large volumes of petroleum-impacted (or oil-impacted) soils. Petroleum-impacted soil is useful... If Management Practices are followed, reuse of non-hazardous crude oil impacted....

- Draft Attachment A

A. Prohibitions

Item # 11 – No free liquids makes sense here but not at the processing area.

Item # 12 – Roads go where they go, the 5 foot prohibition doesn't make sense here like it does at the mixing area.

Item # 22 – Consider placing “inhabited” in front of structures, a covered parking awning could be considered a structure.

B. Specifications

Item # 2 – A vice-president has to sign a road building plan?

Item # 7 – The language in the draft General Permit is preferable.

D. Provisions

Item # 12 – Can the Executive Officer legally act in this capacity? Are other low threat WDR's and waivers conditioned similarly?

Item # 18 – Not sure of the purpose of this condition, these are the lowest threat activities of a process that is sufficiently low threat to warrant a waiver.

- General MRP

Items 3 – 7, Are these an artifact of an earlier draft?

## **Hector Hernandez - RE: Regional Board Transition, General Permit, & Reuse Waiver**

---

**From:** "Bob Poole" <bpoole@wspa.org>  
**To:** "Sheila Soderberg " <SSoderberg@waterboards.ca.gov>  
**Date:** 3/23/2005 3:22 PM  
**Subject:** RE: Regional Board Transition, General Permit, & Reuse Waiver  
**CC:** "Hector Hernandez" <Hhernandez@waterboards.ca.gov>, "Harvey Packard" <Hpackard@waterboards.ca.gov>

---

Sheila,

As promised, I am forwarding our candid thoughts regarding WSPA's concerns. Even though our frustrations are clearly being expressed, please take the comments constructively, as this is how they are intended.

Ron Chambers (Aera), Aaron Allen (ChevTex), Steve Kirby (WSPA's legal advisor for this issue) and I will be in attendance at our upcoming meeting.

See you then,

Bob

To: Harvey Packard  
Sheila Soderberg  
Hector Hernandez

After more than 2 1/2 years without a Beneficial Reuse program in place and continuous good faith efforts to achieve reinstatement, what appears to have resulted is a program that the Integrated Waste Board specifically exempted from Title 27 which is now effectively being turned turn into a Title 27 activity. Frankly industry is unable to grasp if something qualifies for a waiver how/why can it need more than 80 conditions?

From an historical perspective: During a meeting at the CCRWQCB in May, 2003 (Roger Briggs, Harvey Packard, Jennifer Soloway, Aaron Allen, Steve Kirby, Ron Chambers [via teleconference] and myself were in attendance), it was agreed: 1). Beneficial reuse of soils containing petroleum hydrocarbons is a practice to be encouraged; and, 2). to utilize the March 1999 Cal/EPA Final Report on Oilfield Road Mix as the basis for developing a workable Beneficial Reuse program for existing oilfields on the Central Coast.

I have herewith attached this report for your reference. Its conclusion follows:

"---The RMWG [Road Mix Work Group] recognizes that road mixing is a practice that has been ongoing in the Central Valley for decades. The RMWG finds no evidence of nonhazardous road mix contributing to or being implicated in environmental problems. The RMWG further recognizes that the beneficial use of road mix contributes to reduction of road dust and PM10 and enables all-weather access to remote sites for vehicles , , ,"  
Excerpted from: "Final Report: Cal/EPA Exploration and Production Regulatory Task Force: Beneficial Reuse of Non-Hazardous Oil Field Road Mix, March 1999."

Without a workable beneficial reuse program (more specifically, having road mix on roads in the Region) what can result are the unintended consequences of higher than necessary sedimentation of stream channels adjacent to unpaved oilfield roads, loss of access to remote well sites that can result in delayed detection of spills and leaks, less safe driving conditions for employees and agency personnel. Preventing these potential occurrences must surely be of primary concern.

There have been two sets of WDR waivers for road mixing adopted by this Board. None of them were anywhere

near as complicated as the "reuse" waiver and Attachment A. The drafts being submitted are no less complicated than those being recommended for adoption for hazardous waste pits and Class III landfills. This is especially difficult to understand given that staff indicates that road mixing, done properly poses little risk to water quality and oilfield "waste piles" (meaning road mix facilities) which have been around for years and exempted from regulation by the CCRWQC Board itself on two separate occasions.

At this point, it is our assessment the program being proposed does not achieve a realistic and workable Beneficial Reuse opportunity.

In closing, we do look forward to meeting with you next Tuesday. I have also provided specific additional concerns and questions below:

Respectfully,

Bob

Specific Concerns/Questions:

- The waste pile analyte list is based on residential PRGs and not from industrial categories, which are protective of groundwater quality.
- The program now includes the requirement of NPDES stormwater monitoring at locations that haven't triggered the requirement to file a NOI
- It's unclear once a project is completed and all of the soil reused (ex. road base, parking lot), whether ongoing stormwater monitoring is required? Will the WDR be closed and all monitoring requirements cease? Or would we have to collect stormwater runoff samples indefinitely?
- The approval requirement of the property owner if reuse is to that place on leased sites. Requirement for deed recordation or deed restrictions to permit that activity.
- Ongoing landowner maintenance requirements.
- According to the text, industrial is applicable if the soil is reused greater than 3500 feet from current or future "human occupancy structures". That could be interpreted as either a residential home or an office building. Given urban growth in parts of the Central Coast, it may be tough to guarantee that people structures will not be built within 3500 feet of a reuse location, especially if it's road base ("if you build it, they will come"). If the intent for industrial reuse is to not have people living within 3500 feet, then it should be worded as "residential structures". Still, with future land development uncertainty, we may end up relying on the residential reuse standard just to be sure that we don't have to pick up the soil again some day.
- Collecting storm water samples within "the first hour of discharge from the first storm event of the wet season".
- Fees for the reuse and waste pile activity based on threat to groundwater and complexity of the specific site.

Bob Poole  
Coastal Coordinator  
Western States Petroleum Association  
(805) 966-7113 Tel.  
(805) 963-0647 Fax.  
P.O.Box 21108  
Santa Barbara, CA 93121-1108

-----Original Message-----

From: Sheila Soderberg [<mailto:SSoderberg@waterboards.ca.gov>]

Sent: Friday, March 18, 2005 1:08 PM

To: Bob Poole

Cc: Hector Hernandez; Harvey Packard

Subject: RE: Regional Board Transition, General Permit, & Reuse Waiver

Hi Bob-

I'm afraid the meeting would only include Hector, Harvey, & I in attendance on March 29th (Roger is unavailable that day). Roger's schedule is pretty tight until the 2nd week of April.

You mentioned that WSPA's concerns were significant. Without knowing the specifics, I still believe that a discussion with Harvey, Hector and I on March 29th could resolve some of those concerns. I'm just worried about time restrictions (based on our board meeting schedule) and addressing your concerns in a timely fashion. I appreciate all your efforts to get WSPA's comments to us by March 23rd.

Thanks,  
Sheila

>>> "Bob Poole" <bpoole@wspa.org> 03/18/05 10:45AM >>>  
Sheila,

I have confirmed WSPA can attend a meeting at 1:00 pm on March 29th. Aaron Allen (ChevTex) and Ron Chambers (Aera Energy) have confirmed their attendance. Glenn Oliver (Plains Exploration) may also attend. I am assuming this date is good for Roger Briggs as well. It is our expectation to obtain definite clarity from the CCRWQCB on the foundational issues I will provide before the close of business, Wednesday, March 23rd and feel it is essential he be in attendance.

Thank you in advance for your help.

Bob

Bob Poole  
Coastal Coordinator  
Western States Petroleum Association  
(805) 966-7113 Tel.  
(805) 963-0647 Fax.  
P.O.Box 21108  
Santa Barbara, CA 93121-1108

-----Original Message-----

From: Sheila Soderberg [mailto:[SSoderberg@waterboards.ca.gov](mailto:SSoderberg@waterboards.ca.gov)]  
Sent: Thursday, March 17, 2005 9:52 AM  
To: Bob Poole  
Cc: Hector Hernandez; Harvey Packard  
Subject: Re: Regional Board Transition, General Permit, & Reuse Waiver

Hi Bob-  
Afternoon of March 28th or 29th will work for us.  
Sheila

>>> "Bob Poole" <bpoole@wspa.org> 03/17/05 09:39AM >>>

Sheila,

Thank you for the quick response.  
Unfortunately, March 21 or 22 are bad.  
How about the following week on the 28th or 29th?

Yes, we will provide comments and questions ahead of time.

I want to stress the significance of our concerns and ask that we do work with Roger's schedule as we feel it essential to get final closure on this issue.

Let me know

Thanks

Bob



**FINAL REPORT**

**Cal/EPA Exploration and Production  
Regulatory Task Force**

**Beneficial Reuse of Nonhazardous Crude Oil  
Containing Materials for Road Mix**

**Clarification of Issues and Regulatory Roles**

**Report and Findings of the Road Mix Working  
Group**

December 1996

**Cal/EPA Exploration and Production Regulatory Task Force  
BENEFICIAL REUSE OF NONHAZARDOUS CRUDE OIL CONTAINING  
MATERIALS FOR ROAD MIX  
Clarification of Regulatory Issues**

**Road Mix Working Group**

**Industry:**

California Independent Petroleum Association  
Independent Oil Producers Agency  
Western States Petroleum Association  
ARCO  
CalResources  
Chevron USA, Inc.  
M.H. Whittier Corporation  
McFarland Energy, Inc.  
Mobil Exploration and Production  
Texaco USA, Inc.

**Agencies:**

California Air Resources Board  
California Department of Conservation, Division of Oil, Gas and Geothermal Resources  
California Department of Fish & Game  
California Department of Toxic Substances Control  
California Environmental Protection Agency  
California Integrated Waste Management Board  
Office of Environmental Health Hazard Assessments  
Regional Water Quality Control Board - Central Valley  
San Joaquin Valley Unified District Air Pollution Control District  
State Water Resources Control Board  
U.S. Bureau of Land Management  
U.S. Department of Energy



## Preface

This report was compiled by Jeffrey Eppink of the ICF Kaiser Consulting Group based on information provided by the Working Group participants. Funds for compilation of the report were provided by the Office of Fossil Energy of the U.S. Department of Energy (DOE).

# Table of Contents

	<u>Page</u>
Executive Summary	2
I. Introduction	5
II. Strategy and Process of the RMWG	7
Goals	7
Objectives	7
Focus	7
Process	8
III. Issues Analysis	9
Industry's Road Mix Report	9
Industry's Proposed Guidelines	10
Additional Issues Identified by Regulatory Agencies	10
IV. Conclusions and Findings	15
References	16
Appendix I Acronyms and Abbreviations	17
Appendix II Road Mix Working Group Mailing List	18
Appendix III-A Road Mix Working Group Meeting May 10, 1993	23
Appendix III-B Road Mix Working Group Meeting July 3, 1993	28
Appendix III-C Air Issues Sub-Group, Road Mix Working Group Meeting August 13, 1993	36
Appendix III-D Road Mix Working Group Meeting August 16, 1993	43
Appendix III-E Road Mix Working Group Meeting November 6, 1996	50
Appendix IV Proposed Guidelines for Oilfield Road Mix Operations	53

## *List of Tables*

	<u>Page</u>
Table 1 - Boundary Conditions Definitions/Topics as Determined by the Road Mix Working Group	11
Table 2 Summary of Non-Hazardous Oilfield Road Mix Jurisdictions	14

## Executive Summary

This report focuses on cooperative efforts by industry and government as follow-up to the California Environmental Protection Agency (Cal/EPA) Exploration and Production (E&P) Regulatory Task Force Waste Working Group. The E&P Task Force is a joint effort among local, state and federal regulatory agencies and the industry to improve the cost-effectiveness of environmental regulatory compliance by streamlining. In the Cal/EPA report (Task Force, 1995), the Waste Working Group identified as an issue the regulatory oversight of the exploration and production industry's practice of the beneficial re-use of nonhazardous, crude oil-containing material for road base, also known as road mix.

Road mixing is a practice that has been ongoing in California for most of this century with no evidence of nonhazardous road mix contributing to or being implicated in environmental problems. Road mix is prepared by the petroleum industry for use in developing production areas including roads, parking areas, staging areas and berms, and for control of PM<sub>10</sub> (a regulated air pollutant defined as particulate matter less than 10 microns in diameter). Further, the beneficial use of road mix contributes to the reduction of road dust and enables all-weather access to remote sites for vehicles. These attributes explain why industry engages in the practice; without road mixing, industry would be forced to consider significantly higher cost alternatives such as paving with commercial products and would be left with a disposal responsibility for the nonhazardous materials that comprise road mix. It was for these reasons that the issue of road mix was originally presented to the Cal/EPA Task Force.

The Waste Working Group recommended that Cal/EPA take the lead in the formation of a Road Mix Working Group (RMWG) comprising industry representatives and policy and technical level staff from regulatory agencies to address the road mix issue. Further, it was recommended by the Interstate Oil and Gas Compact Commission (IOGCC) in its review (IOGCC, 1993) of California's E&P waste management program, that a working group be formed to address the road mix issue.

The RMWG was subsequently formed, comprising numerous oil companies and agencies. This document presents the findings of the RMWG regarding the issue of road mix including clarification of the regulatory roles concerning the beneficial use of road mix in oilfields.

The goals of the RMWG, as determined in their initial meeting, were to define the appropriate level of regulatory oversight for road mix, emphasizing administrative or non-permit mechanisms and avoiding unnecessary new levels of regulation. It was further decided by the RMWG that the geographic focus of this effort would be the San Joaquin Valley, as about two-thirds of California's oil is produced in that region. The RMWG anticipated that other regions of the state would be considered at a later date.

The RMWG was active over a period of eight months from May through December 1996. A subgroup was also formed to focus on air issues related to road mix. Water and waste issues associated with road mix were considered by the RMWG as a whole. Throughout the process, the intent has been to have industry and government interact to address the road mix issue, with the regulatory agencies providing input on existing regulatory requirements and opportunities for potential improvements.

The RMWG initially focused on the industry's road mix study and proposed operational

guidelines to determine the context for the road mix issue. The Western States Petroleum Association (WSPA) commissioned a study (WSPA 1993a) which reviewed and evaluated the practice of road mix. The study was an effort to define the methods, specifications, volumes and emissions associated with the petroleum industry's practice of beneficially using crude oil-containing materials from various oilfield operations for road paving purposes. Currently, the petroleum industry produces road mix from nonhazardous tank bottom cleaning residuals, crude oil-stained soils from cleanup operations and nonhazardous petroleum-containing soils from sump or pit excavations.

Industry's proposed guidelines (WSPA 1993b) supplement the road mix report. The guidelines recognize that hydrocarbon containing materials for use in oilfield road mix must be characterized as nonhazardous and recommends that generators self-certify materials as nonhazardous based on operator knowledge or analytical testing. The guidelines also contain procedures for recordkeeping regarding material characterization and operational documentation.

Industry provided a tour of a continuously-operating road mix facility in the Kern River Oilfield for the RMWG. Agency representatives were provided an opportunity to see the manufacturing process, travel on roads paved with oilfield road mix and ask questions regarding manufacturing, testing, and application practices.

The RMWG identified topics and definitions that were designated as "boundary conditions" concerning the beneficial uses of road mix. These topics and definitions were established by the group as a mechanism to allow regulatory participants to describe those events which would trigger regulatory action. Determinations of areas of oversight were made for the California Department of Toxic Substances Control (CDTSC), California Integrated Waste Management Board (CIWMB), California Division of Oil, Gas, and Geothermal Resources (CDOGGR), Central Valley Regional Water Quality Control Board (CVRWQB), San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), and California Air Resources Board (CARB).

The RMWG defines the appropriate level of regulatory oversight as the continuation of current practices within the constraints of the operational guidelines published by the industry and the clarification of regulatory agency roles presented in this document. Further, the RMWG determines the following findings:

- Industry has developed data and procedures to address the interests of each agency. These were reviewed and commented upon by the agencies.
- CDOGGR and the Regional Water Quality Control Board (RWQCB), have roles in oilfield road mixing oversight activities in concert with other regulatory agencies. The RMWG recommends that, within oilfield boundaries, CDOGGR be the oversight agency; outside of oilfield boundaries the RWQCB should take lead responsibility.
- CIWMB does not regulate manufacturing where nonhazardous petroleum contaminated (NHPC) soil is used as a raw material in making a finished product that is distinct from soil, or where the RWQCB or local oversight agency does not see the need to regulate the use as a waste. This applies to the use of NHPC soil as road mix on any land. The CIWMB also does not regulate disposal and transfer or processing of NHPC soil from a single E&P company to property owned or leased by the same company. The CIWMB determined that these activities were already adequately regulated by other regulatory programs and do not require CIWMB

involvement.

- CDTSC does not regulate oilfield road mixing operations provided that representative samples of the materials used to make road mix have been accurately determined to be nonhazardous in accordance with the requirements in California Code of Regulations (CCR) Title 22 Section 66262.11.
- Utilizing trade organizations, the U.S. Bureau of Land Management and CDOGGR, industry should educate all industry operators regarding the road mix guidelines (WSPA 1993b).
- Industry, CARB, and SJVUAPCD will continue to address road mixing as part of the SJVUAPCD Ozone Air Quality Attainment Plan. The SJVUAPCD has placed road mixing operations in the "For Further Study" section of the Air Quality Attainment Plan. Industry and the agencies (CARB and SJVUAPCD) have agreed to meet as an ad-hoc subcommittee to discuss the road mix issue. Recommendations include a survey addressing volumes and locations of road mix practices. Additionally, industry is aware of current SJVUAPCD regulations pertaining to Permit to Operate requirements for activities with non-*de minimis* emissions.

## I. Introduction

In California, there is a growing awareness that existing environmental compliance requirements may not adequately balance costs and benefits. This report focuses on cooperative efforts by industry and government to reduce this imbalance and represents follow-up activities to the Cal/EPA Exploration and Production (E&P) Regulatory Task Force Waste Working Group (Task Force, 1995). The E&P Task Force is a joint effort among local, state and federal regulatory agencies and the industry to improve the cost-effectiveness of environmental regulatory compliance by streamlining. In the Cal/EPA report, the Waste Working Group identified as an issue the regulatory oversight of the industry's practice of the beneficial re-use of nonhazardous, crude oil-containing material for road base, also known as road mix.

Road mixing is a practice that has been ongoing in California for most of this century with no evidence of nonhazardous road mix contributing to or being implicated in environmental problems. Road mix is prepared by the petroleum industry for use in developing production areas including roads, parking areas, staging areas and berms, and for control of PM<sub>10</sub> (a regulated air pollutant defined as particulate matter less than 10 microns in diameter). Further, the beneficial use of road mix contributes to the reduction of road dust and enables all-weather access to remote sites for vehicles. These attributes explain why industry engages in the practice; without road mixing, industry would be forced to consider significantly higher cost alternatives such as paving with commercial products and would be left with a disposal responsibility for the nonhazardous materials that comprise road mix. It was for these reasons that the issue of road mix was originally presented to the Cal/EPA Task Force.

In the Cal/EPA report, the Waste Working Group developed the following problem statement:

The crude oil E&P industry produces road paving materials, commonly referred to as "road mix," from crude oil tank bottoms and other crude oil-containing materials. The petroleum industry uses road mix as a cost effective, beneficial use of nonhazardous materials to improve oilfield lease roads for light duty vehicle access and for controlling dust in production areas. Regional agencies have inconsistent positions regarding the oversight of these E&P nonhazardous road mix operations. Industry believes that the net benefit and multi-media aspects of road mix have not been considered in regional policies.

The Waste Working Group also determined the following findings:

- (1) In order to respond to concerns raised by regulatory agencies, the E&P industry, through the Western States Petroleum Association (WSPA), commissioned a study (WSPA 1993a) to characterize the nature of material used in road mixing operations and to evaluate the environmental affects of road mixing operations. The E&P industry's report indicates that San Joaquin Valley crude oil tank bottoms and crude oil containing soils are nonhazardous. The E&P industry has extensive data regarding substantiation of the low toxicity of crude oil-containing materials compared to refined petroleum product-containing materials.

- (2) The E&P industry has also developed draft guidelines for road mix operations (WSPA 1993b, also see Appendix IV). The industry's road mix study concludes that there is no evidence of significant impact to any environmental media when road mix operations are conducted in accordance with the proposed draft road mix operation guidelines.
- (3) Some local air districts consider road mixing to be covered by their cutback asphalt rule. Industry is concerned that the test specified in these rules for measuring volatile organic compound (VOC) emissions was not designed for emission measurements and is inconsistent with Method 8240 and emissions testing protocols currently in use by air districts to determine VOCs.
- (4) The alternative to road mixing is to landfill this routinely generated, non-hazardous material. Based on historical estimates and a landfill cost of \$75 per ton, landfilling of materials that could otherwise be safely used as road mix will unnecessarily cost the E&P industry millions of dollars per year.
- (5) The E&P industry road mix report includes a net benefit analysis comparing the environmental trade-offs and multi-media aspects of road mixing versus landfilling. Environmental impacts of landfilling include: (i) filling up valuable landfill space with non-hazardous materials; (ii) foregoing the beneficial re-use of road mix materials as an effective substitute for commercial products; and (iii) foregoing opportunities for PM<sub>10</sub> reductions if it is not cost effective to pave oil field roads with commercial products.

The Waste Working Group recommended that Cal/EPA take the lead in the formation of a Road Mix Working Group (RMWG) comprising industry representatives and policy and technical level staff from regulatory agencies to address the road mix issue.

Further, it was recommended by the Interstate Oil and Gas Compact Commission (IOGCC) in its 1993 review of California's E&P waste management program (IOGCC, 1993), that a working group be formed to address the road mix issue. The purpose of the working group would be to:

- Evaluate an E&P industry's road mix report (WSPA, 1993a), available data, and proposed operational guidelines to determine what, if any, procedures not contained within the operational guidelines need to be in place to ensure protection of beneficial uses of waters of the State, environmental media, and public health and safety. The economic and environmental benefits of road mix operations were recommended to be considered.
- Determine the best approach for regulatory oversight of oilfield road mixing activities.

The RMWG was subsequently formed, comprising numerous oil companies and agencies. This document presents the findings of the RMWG regarding the issue of road mix including clarification of the issues and regulatory roles concerning the beneficial use of road mix in oilfields.

## II. Strategy and Process of the RMWG

The RMWG was initially convened on May 10, 1996 where its strategy in terms of goals, objectives, and focus was developed.

### *Goals*

As stated in the initial meeting of the RMWG (see Appendix III-A for a participants list and meeting notes), the goal was to:

- Recommend the appropriate level of regulatory oversight, emphasizing administrative or non-permit mechanisms.
- Avoid unnecessary regulation.

### *Objectives*

Several objectives were also developed by the RMWG:

- Evaluation of the industry's road mix report (WSPA, 1993a), available data, and the proposed operational guidelines (WSPA, 1993b) to determine what, if any, procedures need to be in place to ensure environmental protection.
- Recommendation of the best approach for regulatory oversight of road mix activities.
- Education of industry by industry – guidelines are to be used by industry for industry education. It was suggested that industry revise/develop guidelines that are applicable to everyone, minors/independents and majors, so that everyone is "on the same page."
- Operator self-certification that road mix activities are being conducted in a manner consistent with the proposed road mix operational guidelines (WSPA, 1993b) is a fundamental concept in considering or developing appropriate level(s) of regulatory oversight.
- Consideration of how to handle waste/water issues vs. air issues – it was recognized that the waste/water and air issues are different and may require separate regulatory consideration. At the same time, concern was expressed about losing opportunities or creating a regulatory scheme for one media that might negatively impact the regulatory scheme of the other.

### *Focus*

It was decided by the RMWG that the geographic focus of this efforts would be the San Joaquin Valley, as about two-thirds of California's oil is produced in that region. The RMWG anticipated that other regions of the state would be considered at a later date.

### *Process*



The RMWG was active over a period of eight months from May through December 1996 (see Appendices III-A through E for meeting notes), to discuss and achieve the above-mentioned goals and objectives. A subgroup was also formed to focus on air issues related to road mix (Appendix III-C). Water and waste issues associated with road mix were considered by the RMWG as a whole. Throughout the process, the intent has been to have industry and government interact to address the road mix issue, with the regulatory agencies providing input on existing regulatory requirements and opportunities for potential improvements.

### III. Issues Analysis

The RMWG initially focused on the industry's road mix report and proposed operational guidelines to determine the context for the road mix issue. The group subsequently determined the regional significance of the issue. Regulatory agencies within the RMWG identified events and circumstances concerning the use of road mix which would trigger regulatory action.

#### *Industry's Road Mix Report*

The petroleum industry's road mix report (WSPA, 1993a) is a study that was commissioned by the Western States Petroleum Association (WSPA) to review and evaluate road mix process. The study was an effort to define the methods, specifications, volumes and emissions associated with the petroleum industry's practice of beneficially using crude oil-containing materials from various oilfield operations for road paving purposes. Currently, the petroleum industry produces road paving material, referred to as road mix, from nonhazardous tank bottom cleaning residuals, crude oil-stained soils from cleanup operations and nonhazardous petroleum-containing soils from sump or pit excavations. Road mix is prepared by the petroleum production industry for use in developing onsite roads, and for control of dust and PM<sub>10</sub> in production areas including roads, parking areas, staging areas and berms.

Conclusions from the WSPA study established the following:

- The production of road mix provides a net benefit to the environment:
  - by reducing the volume of materials that would otherwise be disposed of in landfills.
  - by reducing PM<sub>10</sub> emissions from unpaved roads. [PM<sub>10</sub> reduction is required by the SJVUAPCD Nonattainment Plan as required by the Federal Clean Air Act.]
  - because it produces negligible reactive organic hydrocarbon compound emissions as compared to landfill disposal.
  - because it has low hydrocarbon and metals leachability and is nonhazardous based on California Code of Regulations (CCR) Title 22, Article 11 criteria.
- Raw materials used in road mix production generally have low volatile hydrocarbon levels due to the lower American Petroleum Institute (API) gravities (heavier oil production) produced in the San Joaquin Valley area.
- Current SJVUAPCD prohibitory regulations apply only to cutback asphalt prepared from refined materials, and are therefore not applicable to road mix production and application. Current SJVUAPCD permitting regulations require Permits to Operate for activities with non *de minimus* emissions.
- Road mix is not equivalent to cutback asphalt or emulsified asphalts. Asphalt experts disagree on which categorization best describes oilfield road mix.
- Finished road mix materials and laboratory prepared samples meet or exceed the most relevant cold mix specifications for (cutback and emulsified) asphalts, and are

suitable for their intended use in construction of onsite roads and PM<sub>10</sub> control.

- The compliance monitoring method (American Society for Testing and Material [ASTM] Method D-402) currently used for volatile emissions, is not applicable to the practice of road mix because:
  - Required volatile levels conflict with minimum ASTM specifications for road paving materials.
  - The SJVUAPCD Cutback Asphalt Rule is not consistent with the methodology or measurement of volatiles of concern normally considered by air quality districts, which generally consider reactive organics and hydrocarbons with molecular weights below C<sub>9</sub> and boiling points below 3500 F.
  - ASTM Method D-402 was not developed or intended as a method for the measurement of volatile emissions.
  - ASTM Method D-402 has minimum detection limits of 0.25 to 0.50 percent, and in actual laboratory practice may exceed 1 percent.
  
- Soils and surface impoundment (sump) material used in road mix production displayed similar emissions and physical characteristics as compared to the tank bottom residuals and similarly produced acceptable road mix materials.

### ***Industry's Proposed Guidelines***

Industry's proposed guidelines (WSPA, 1996) supplement the industry road mix report (WSPA, 1993). The guidelines also address the review of California oil and gas regulations by the IOGCC (IOGCC, 1993). The guidelines indicate the settings in which oilfield road mix may be used, including light duty roads, well and tank locations, spill prevention and control berms, and similar applications. The guidelines recognize that hydrocarbon containing materials for use in oilfield road mix must be characterized as nonhazardous per CCR Title 22, Division 4.5, Chapter 11.

The guidelines recommend that generators self-certify materials as nonhazardous based on operator knowledge or analytical testing as appropriate, as indicated in CCR Title 22, Section 66262.11. The guidelines also contain procedures for recordkeeping regarding material characterization and operational documentation. The guidelines are reproduced as Appendix IV.

At a joint meeting of the Road Mix and Oil Spill Reporting Working Groups of the Cal /EPA Task Force, industry provided a tour of a continuously-operating road mix facility in the Kern River Oilfield on March 27, 1996. Agency representatives were provided an opportunity to see the manufacturing process, travel on roads paved with oilfield road mix and ask questions regarding manufacturing, testing, and application practices.

### ***Additional Issues Identified by Regulatory Agencies***

As part of the interaction between the industry and regulators, the RMWG identified topics and definitions that it determined as "boundary conditions" concerning the issue of the beneficial uses of road mix (Table 1). These topics and definitions were established by the group as a mechanism to allow regulatory participants to describe those events which would trigger regulatory action.

**Table 1 - Boundary Conditions**  
**Definitions/Topics as Determined by the Road Mix Working Group**

- **Bounded by San Joaquin Valley**
  - ⇒ SJVUAPCD represents jurisdictional boundary
  
- **Crude oil from production operations**
  - ⇒ eliminates refined product
  - ⇒ petroleum E&P is focus
  - ⇒ normal process treatment chemicals included (E&P RCRA determination)
  
- **Sources of Road Mix (includes hydrocarbons and aggregate)**
  - ⇒ tank bottoms
  - ⇒ crude spills (no refined products)
  - ⇒ sump cleaning
  - ⇒ added aggregate
  
- **Characterization as non-hazardous**
  - ⇒ lab tests should be on feedstock and not on the road mix itself
  - ⇒ CCR Title 22, Division 4.5, Chapter 11 hazardous waste characterization required
  - ⇒ any added aggregate must be nonhazardous
  
- **Must be of beneficial use**
  
- **Uses: vehicle access — road paving, parking, staging areas, berms, road subgrade**
  - ⇒ issues of concern (streambeds, lakes)
  - ⇒ paving operations to be pursuant to Section 1603 Fish & Game Code
  - ⇒ operators need to be sensitive to fact that new roads may trigger agency oversight and regulations
  
- **Onsite: source and placement from same owner, same company**
  - ⇒ within administrative boundary of oilfield
  - ⇒ farms are sometimes owned by oil companies
  - ⇒ may involve differing agency jurisdictions
  - ⇒ sites are not necessarily contiguous
  
- **Non-commercial – onsite**
  - ⇒ crude feedstocks under control of company
  - ⇒ crude feedstocks not taken from other operators

As a result of information presented in Table 1, agency determinations of events beyond the boundary conditions which would trigger regulatory action were made and are presented below.

- **California Division of Oil, Gas, and Geothermal Resources (CDOGGR)**

CDOGGR has broad statutory and regulatory authority to regulate oilfield operations. CDOGGR's Environmental Regulations are contained in Subchapter 4 of Division 2, Title 14 CCR. Division inspectors can halt operations which conflict with the "housekeeping" requirements contained in the regulations and refer suspected violations of other environmental regulations to the appropriate state or local agencies. CDOGGR authority does not extend beyond the administrative boundary of the oilfield, consequently oversight of road mixing facilities or application sites outside the oilfield must be performed by other agencies.

- **Central Valley Regional Water Quality Control Board (CVRWQCB)**

The CVRWQCB regulates the discharge of waste to land in accordance with Title 23, CCR Section 2510 and following (Chapter 15) in order to protect the beneficial uses of the waters of the state. Concerns regarding the application of crude oil-containing soils as road mix, center on basically the following issues: hazardous constituents or concentrations in the waste; application procedures and, consideration of current state statutes and regulations regarding waters of the state, human health and the environment. These concerns do not end with a non-hazardous determination, but include potential threats of impacts to the beneficial uses of waters of the state, not limited to drinking water supply.

Where the proponent would apply road mix material on his own property within an oilfield boundary, material analytical characterization would be necessary as a self-certification process. This would include sampling; maps showing location of application(s); and record-keeping such that an audit could ascertain the character of the materials, the location, and other pertinent data. Where the intent is to conduct a commercial recycling facility with the subsequent sale to the general public, a proponent would need to apply for waste discharge requirements and comply with the California Environmental Quality Act (CEQA). Varying degrees of control or oversight of road mix applications are needed in the field. CDOGGR staff would provide oversight within the established oilfield boundaries.

The recycling and reuse of unrefined San Joaquin Valley crude oil containing soils as road mix, when applied in accordance with the industry practice as detailed in the study completed by WSPA (WSPA 1993a), appears to result in no threat to water quality. Any potential surface or groundwater quality impacts could result in regulatory action.

- **California Integrated Waste Management Board (CIWMB)**

CIWMB regulates nonhazardous solid waste in the state. Last year, the CIWMB adopted regulations (Title 14, CCR, Sections 17360 to 17366, effective April 24, 1996) that clarify CIWMB oversight of nonhazardous petroleum contaminated (NHPC) soil. These regulations make clear that the CIWMB does not regulate manufacturing where NHPC soil is used as a raw material in making a finished product that is distinct from soil, or where the RWQCB or local oversight agency (LOA) does not see the need to regulate the use as a waste. This applies to the use of NHPC soil as road mix on any land.

Should the RWQCB or LOA determine that the road mix activity is actually a discharge of waste to land that requires regulation, then the CIWMB would regulate the activity as disposal. However, if the road mix is being applied on lands leased or owned by the generator of the

NHPC soil, and even though it is determined by the RWQCB or LOA to be disposal, the CIWMB would not regulate the activity. Title 14 CCR 17362.1 provides that disposal of NHPC soil from a single petroleum exploration and production company to property owned or leased by the same company is excluded from meeting the requirements of the NHPC soil regulations. Transfer or processing of NHPC soil on lands owned or leased by the generator are also excluded from CIWMB regulation. In developing the regulations, the CIWMB determined that disposal and transfer or processing of NHPC soils on lands owned or leased by the generator were already adequately regulated by the RWQCB and/or LOA under other regulatory programs and do not require CIWMB involvement.

The regulations state that even though the above activities would be excluded from CIWMB regulation, they are still subject to inspection by a local enforcement agency or the CIWMB to verify that the activity is being conducted in a manner that qualifies as an excluded activity.

If the road mix contains other wastes in addition to the NHPC soil, the above regulations would not apply and the CIWMB might still regulate the activity depending on the particular circumstances involved. However, in all likelihood, the CIWMB will not regulate manufacturing activities where the waste is being used as a raw material in making a finished product that is distinct from the waste material. The NHPC soil regulations apply only to soil that contains designated or nonhazardous concentrations of petroleum hydrocarbons, such as gasoline and its components, diesel and its components, virgin oil, motor oil, or aviation fuel, and lead as an associated metal.

- **California Department of Toxic Substances Control (CDTSC)**

The CDTSC regulates all facets of hazardous waste management in California. CDTSC's oilfield road mixing operations is minimal provided that representative samples of the materials used to make road mix have been accurately determined to be non-hazardous in accordance with the requirements of CCR Title 22, Section 66262.11. Industry guidelines (Appendix IV) address these requirements in the Recommended Material Testing Schedule contained in the Material Characterization section of that document.

- **San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and California Air Resources Board (CARB)**

The SJVUAPCD is responsible for regulating stationary sources of pollutants in the San Joaquin Valley. Along with CARB, the SJVUAPCD and Industry are in the process of determining the degree to which road mixing needs to be addressed under a permitting program and/or the Air Quality Attainment Plan prepared by the SJVUAPCD. It is anticipated that a survey of road mix volumes and locations will be made.

Table 2 summarizes some of the regulations applicable to road mixing.

**Table 2**  
**Summary of Non-Hazardous Oilfield Road Mix Jurisdictions**

Regulatory Agency	Onsite Usage of RM
California Department of Oil, Gas and Geothermal Resources	Title 14, Division 2, Chapter 4
Regional Water Quality Control Board	Porter-Cologne Water Quality Control Act (California Water Code)  California Health & Safety Code  Title 23, California Code of Regulations, Section 2510 et seq. (Chapter 15)
California Integrated Waste Management Board	Section 17360 et seq. Title 14, CCR
California Department of Toxic Substances Control	Not applicable if non-hazardous. Full permit or variance if hazardous waste, or may qualify for a recycling exclusion.
Local Air District	Regulates stationary sources of pollutants. Determining effect of road mix on Air Quality Attainment Plan.
California Air Resources Board	Provides oversight to Local Air District

## IV. Conclusions and Findings

The RMWG recognizes that road mixing is a practice that has been ongoing in the Central Valley for decades. The RMWG finds no evidence of nonhazardous road mix contributing to or being implicated in environmental problems. The RMWG further recognizes that the beneficial use of road mix contributes to reduction of road dust and PM<sub>10</sub> and enables all-weather access to remote sites for vehicles—attributes which explain why industry engages in the practice of road mixing. It was for these reasons that the issue was originally presented to the Cal/EPA E&P Task Force (Task Force, 1995).

The RMWG defines the appropriate level of regulatory oversight as the continuation of current practices within the constraints of the operational guidelines published by the industry (WSPA, 1993b, Appendix IV) and the agency roles described in the previous section. Further, the RMWG determines the following findings:

- Industry has developed data and procedures to address the interests of each agency. These were reviewed and commented upon by the agencies.
- CDOGGR and the Regional Water Quality Control Board (RWQCB), have roles in oilfield road mixing oversight activities in concert with other regulatory agencies. The RMWG recommends that, within oilfield boundaries, CDOGGR be the oversight agency; outside of oilfield boundaries the RWQCB should take lead responsibility.
- CIWMB does not regulate manufacturing where nonhazardous petroleum contaminated (NHPC) soil is used as a raw material in making a finished product that is distinct from soil, or where the RBC or local oversight agency does not see the need to regulate the use as a waste. This applies to the use of NHPC soil as road mix on any land. The CIWMB also does not regulate disposal and transfer/processing of NHPC soil from a single E&P company to property owned or leased by the same company. The CIWMB determined that these activities were already adequately regulated by other regulatory programs and do not require CIWMB involvement.
- CDTSC does not regulate oilfield road mixing operations provided that representative samples of the materials used to make road mix have been accurately determined to be nonhazardous in accordance with the requirements in California Code of Regulations (CCR) Title 22 Section 66262.11.
- Utilizing trade organizations, the U.S. Bureau of Land Management and CDOGGR, industry should educate all industry operators regarding the road mix guidelines (WSPA 1993b).
- Industry, CARB, and SJVUAPCD will continue to address road mixing as part of the SJVUAPCD Ozone Air Quality Attainment Plan. The SJVUAPCD has placed road mixing operations in the "For Further Study" section of the Air Quality Attainment Plan. Industry and the agencies (CARB and SJVUAPCD) have agreed to meet as an ad-hoc subcommittee to discuss the road mix issue. Recommendations include a survey addressing volumes and locations of road mix practices. Additionally, industry is aware of current SJVUAPCD regulations pertaining to Permit to Operate requirements for activities with *non-de minimis* emissions.



## References

- Task Force, 1995: *Report to the California Environmental Protection Agency, Volume 1, Environmental Streamlining, Findings and Recommendations Regarding the Exploration and Production Industry, Exploration and Production Regulatory Reform Task Force*, April, 1995
- IOGCC, 1993: *California State Review*, IOGCC/EPA State Review of Oil and Gas Exploration & Production Waste Management Regulatory Programs, Interstate Oil and Gas Compact Commission, May, 1993.
- WSPA, 1993a: *Evaluation and Review of the Petroleum Industry's Road Mix Process*, Prepared for the Western States Petroleum Association by Environmental Solutions, March 1993.
- WSPA, 1993b: *Proposed Guidelines for Oilfield Road Mix Operations*, Prepared for the Western States Petroleum Association by Environmental Solutions, March 1993, see Appendix IV.

## Appendix I Acronyms and Abbreviations

APCD	Air Pollution Control District
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
BLM	(U.S.) Bureau of Land Management
Cal/EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCR	California Code of Regulations
CDF&G	California Department of Fish and Game
CDOGGR	California Department of Conservation Division of Oil, Gas, and Geothermal Resources
CDTSC	California Department of Toxic Substances Control
CEQA	California Environmental Quality Act
CIPA	California Independent Petroleum Association
CIWMB	California Integrated Waste Management Board
CRWQCB	California Regional Water Quality Control Board
CVRWQCB	Central Valley Regional Water Quality Control Board
DOE	(U.S.) Department of Energy
E&P	Exploration and Production
EPA	(U.S.) Environmental Protection Agency
IOGCC	Interstate Oil and Gas Compact Commission
IOPA	Independent Oil Producers' Agency
LOA	Local Oversight Agency
NHPC	Non Hazardous Petroleum Contaminated (soil)
OSPR	Office of Spill Prevention and Response
PCS	Petroleum Containing Soil
PM <sub>10</sub>	Particulate Matter, 10 microns or less in diameter
RCRA	Resource Conservation and Recovery Act
RM	Road Mix
RMWG	Road Mix Working Group
SJVUAPCD	San Joaquin Valley Unified Air Pollution Control Department
SWRCB	State Water Resources Control Board
Task Force	Cal/EPA Exploration and Production Regulatory Task Force Waste Working Group
VOC	Volatile Organic Compound
WSPA	Western States Petroleum Association

## Appendix II Road Mix Working Group Mailing List

Louie Allen  
Mobil  
P.O. Box 9989  
Bakersfield, CA 93389-9989  
Ph: (805) 665-7360  
Fax: (805) 665-7437

Steve Arita  
Western States Petroleum Association  
901 Tower Way, Suite 300  
Bakersfield, CA 93309-1585  
(805) 321-0884

Steve Boljen  
Berry Petroleum  
Post Office Bin X  
Taft, California 93268  
Ph: (805) 769-8811

Peter Bontadelli  
Department of Fish & Game/Office of Spill  
Prevention and Response  
P.O. Box 944209  
Sacramento, CA 94244-2090  
Ph: (916) 653-7664  
Fax: (916) 324-8829

Denis Brown  
Texaco U.S.A. Inc.  
26251 Hwy. 33  
Fellows, CA 93224  
Ph: (805) 392-2335  
Fax: (805) 392-265

Charlotte Campbell  
Torch Energy  
1800 30th Street  
Suite 200  
Bakersfield, CA 93301  
Ph: (805) 395-5477

Fax: (805) 395-5297

Ron Chambers  
CalResources  
P.O. Box 11164  
Bakersfield, CA 93389  
Ph: (805) 326-5641  
Fax: (805) 326-5202

Ralph Chandler  
Integrated Waste Management Board  
880 Cal Center Drive  
Sacramento, CA 95826  
Ph: (916) 255-2182

Les Clark  
M.H. Whittier  
4600 American Ave. West, #201  
Bakersfield, CA 93309  
Ph: (805) 833-3989  
Fax: (805) 833-4013

Dave Cohen  
State Water Resources Control Board  
901 P Street  
Sacramento, CA 95814  
Ph: (916) 657-0770  
Fax: (916) 654-8375

Mike Cotton  
Exxon  
P.O. Box 2180, Room 1485C  
Houston, TX 77752  
Ph: (713) 656-5881  
Fax: (713) 656-9430

Tam Doduc  
California Environmental Protection Agency  
555 Capitol Mall, Suite 525  
Sacramento, CA 95814  
Ph: (916) 322-8284  
Fax: (916) 322-6005

Bobbie Garcia  
California Integrated Waste Management Board  
Mailstop 11  
8800 Cal Center Drive  
Sacramento, CA 05826  
Ph: (916) 255-2425  
Fax: (916) 255-4207

John Donovan  
California Independent Petroleum Association  
5201 Truxton Avenue, Room 119  
Bakersfield, CA 93309  
Ph: (805) 633-3119  
Fax: (805) 633-3191

Rick Garcia  
Torch Energy  
1800 – 30th Street, 2nd Floor  
Bakersfield, CA 93301  
Ph: (805) 395-5426  
FAX: (805) 395-5297

Jeffrey Eppink  
ICF Kaiser  
9300 Lee Highway  
Fairfax, VA 22031  
Ph: (703) 934-3137  
Fax: (703) 691-3349

David Gilbert  
California Independent Petroleum Association  
5201 Truxton Avenue, Room 119  
Bakersfield, CA 93309  
Ph: (805) 633-3119  
Fax: (805)633-3191

Jim Erickson  
M.H. Whittier LLC  
801 Kern Street  
Taft, CA 32268  
Ph: (805) 768-4381  
Fax: (805) 763-2439

Shelton Gray  
Regional Water Quality Control Board  
3614 East Ashlan Avenue  
Fresno, CA 93726  
Ph: (209) 445-5508  
Fax: (209) 445-5910

Greg Frantz  
State Water Resources Control Board  
901 P Street  
Sacramento, CA 95814  
Ph: (916) 657-0770  
Fax: (916) 654-8375

William Guerard  
California Division of Oil & Gas and  
Geothermal Resources  
801 K. Street, 20th Floor  
Sacramento, CA 95814-3530  
Ph: (916) 323-1777  
Fax: (916) 323-0424

Roger Funston  
McFarland Energy, Inc.  
P.O. Box 3608  
Santa Fe Springs, CA 90670  
Ph: (310) 944-0181  
Fax: (310) 946-4608

Stan Holm  
Mobil Corporation  
3700 West 190th Street  
Torrance, CA 90509  
Ph: (310) 212-4587

Fax: (310) 212-4681

Frank Holmes  
Western States Petroleum Association  
121 Gray Avenue, Suite 205  
Santa Barbara, CA 93101  
Ph: (805) 966-7113  
Fax: (805) 963-0647

Allen Louie  
Mobil  
P.O. Box 9989  
Bakersfield, CA 93389-9989  
Ph: (805) 665-7360  
Fax: (805) 665-7347

Craig Jackson  
Texaco U.S.A. Inc.  
P.O. Box 5197X  
Bakersfield, CA 93388  
Ph: (805) 392-2495  
Fax: (805) 392-2595

Scott Mansholt  
Texaco U.S.A. Inc.  
P.O. Box 5197X  
Bakersfield, CA 93388  
Ph: (805) 392-2281  
Fax: (805) 392-2595

Dan Jernigan  
Chevron U.S.A. Inc.  
P.O. Box 1392  
Bakersfield, CA 93302  
Ph: (805) 633-4452  
Fax: (805) 633-4423

Tim Martin  
Mobil  
25401 Hwy. 33  
Fellows, CA 93224  
Ph: (805) 768-3137  
Fax: (805) 768-3102

Paul Langland  
ARCO Oil & Gas Company  
P.O. box 147  
Bakersfield, CA 93302  
Ph: (805) 321-4221  
Fax: (805) 321-4081

Greg Meisinger  
CalResources  
P.O. Box 11164  
Bakersfield, CA 93389  
Ph: (805) 326-5386  
Fax: (805) 326-5202

Mike Lewis  
Monterey Resources, Inc.  
5201 Truxtun Avenue  
Bakersfield, CA 93309  
Ph: (805) 633-3132  
Fax: (805) 633-3193

Claudia Moore  
Department of Toxic Substances Control  
P.O. Box 806  
Sacramento, CA 95812-0806  
Ph: (916) 322-4742  
Fax: (916) 327-4495

Maria Lima  
San Joaquin Valley Unified Air Pollution  
Control District  
1999 Tuolumne, Suite 200  
Fresno, CA 93721  
Ph: (209) 497-1075  
Fax: (209) 233-0140

Scott Nester  
San Joaquin Valley Unified Air Pollution  
Control District  
1999 Tuolumne, Suite 200  
Fresno, CA 93721  
Ph: (209) 497-1075  
Fax: (209) 233-0140

Kim Nguyen  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812  
Ph: (916) 327-1513  
Fax: (916) 445-5023

Joe O'Donnell  
Mobil E&P USA Inc.  
P.O. Box 9989  
Bakersfield, CA 93389-9989  
Ph: (805) 665-3709  
Fax: (805) 665-3789

Pete Phillips  
California Department of Fish and Game  
Environmental Services Division  
1416 9th Street, Room 1341  
Sacramento, CA 95814

Ted Rauh  
Department of Toxic Substance Control  
400 P Street  
Sacramento, CA 95814  
Ph: (916) 324-7193  
Fax: (916) 324-1788

Catherine H. Reheis  
Western States Petroleum Association  
1115 11th Street, Suite 150  
Sacramento, CA 95814  
Ph: (916) 498-7752  
Fax: (916) 444-8997

Jim Robinson  
Monterey Resources, Inc.  
5201 Truxtun Avenue  
Bakersfield, CA 93309  
Ph: (805) 633-3132  
Fax: (805) 633-3193

Michael Scholl  
Texaco U.S.A. Inc.  
P.O. Box 5197X  
Bakersfield, CA 93388

Richard Scholl  
Texaco  
State Rt. Box 42  
San Ardo, CA 93450  
Ph: (408) 627-3230  
Fax: (408) 627-3220

Jeff Sickenger  
Western States Petroleum Association  
1115 11th Street  
Suite 150  
Sacramento, CA 95814  
Ph: (916) 444-9981  
Fax: (916) 444-8997

Val Siebal  
Cal/EPA  
555 Capitol Mall, Suite 235  
Sacramento, CA 95324  
Ph: (916) 324-3917  
Fax: (916) 322-6005

David Siesal  
California Environmental Protection Agency  
555 Capitol Mall, Suite 525  
Sacramento, CA 95814  
Ph: (916) 324-7584  
Fax: (916) 322-6005

Mervyn Soares  
Texaco Cogen and Power Co.  
P.O. Box 81438  
Bakersfield, CA 93380  
Ph: (805) 392-2643  
Fax: (805) 392-2990

Michael Sowby  
Department of Fish and Game/Office of Spill  
Prevention and Response  
1700 J Street  
Suite 25  
Sacramento, CA 95814  
Ph: (916) 324-7629  
Fax: (916) 324-8829

Michael Stettner  
Geothermal Resources  
California Division of Oil, Gas and Geothermal  
Resources  
801 K. Street, 20th Floor  
Sacramento, CA 95814-3530  
Ph: (916) 323-1781  
Fax: (916) 323-0424

Mary Studlick  
Exxon  
P.O. Box 2180  
Houston, TX 77252-2180  
Ph: (713) 656-7209  
Fax: (713) 656-9430

Gene Toffoli  
Department of Fish and Game/Office of Spill  
Prevention and Response  
P.O. Box 944209  
Sacramento, CA 94244-2090  
Ph: (916) 324-9817  
Fax: (916) 324-8829

Kent Varvel  
Bureau of Land Management  
3801 Pegasus Drive  
Bakersfield, CA 93308-6837  
Ph: (805) 391-6138  
Fax: (805) 391-6040

Charlene Williams  
Department of Toxic Substances Control  
700 Pine Avenue – Suite 200  
Bakersfield, CA 94710

Bill Winkler  
California Division of Oil & Gas and  
Geothermal Resources  
801 K. Street, 20th Floor  
Sacramento, CA 95814-3530  
Ph: (916) 323-1777  
Fax: (916) 323-0424

Gary Yee  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812  
Ph: (916) 327-5986  
Fax: (916) 445-5023

**Appendix III-A  
Road Mix Working Group Meeting  
May 10, 1993**



**Road Mix Working Group Attendees  
May 10, 1996**

<b>Name</b>	<b>Affiliation</b>
Dan Jernigan	Chevron
Kim Nguyen	California Air Resources Board
Gary Yee	California air Resources Board
Catherine H. Reheis	Western States Petroleum Association
Roger Funston	McFarland Energy
Ron Chambers	CalResources
Claudia Moore	California Department of Toxic Substances Control
Bobbie Garcia	California Integrated Waste Management Board
Shelton Gray	Regional Water Quality Control Board
Michael Stettner	California Division of Oil, Gas, and Geothermal Resources
Cheryl Closson	State Water Resources Control Board
Kent Varvel	(U.S.) Bureau of Land Management
Del Fortner	(U.S.) Bureau of Land Management

## Road Mix Working Group May 10, 1996 Meeting Summary (Draft)

### I. *Opening Comments and Participants Introductions*

The meeting was opened shortly after 10 am with participant introductions (see attendance sheet attached). Representatives from the U.S. Bureau of Land Management (BLM) participated via telephone.

### II. *Background on Issue and Task Force Recommendation*

Roger Funston presented information on the Task Force's Waste Working Group recommendation and background on why the road mix issue was put forward by industry.

Discussion included:

- USEPA review of RCRA Subtitle C exemption for certain E&P wastes. USEPA released another report in 1995 on selected E&P wastes. WSPA made comments on the report in September 1995.
- IOGCC State reviews of waste management -- IOGCC reviews have been one vehicle for responding to USEPA on the RCRA Subtitle C exemption review.
- California Oil Survival Team (COST)
- Report and guidelines prepared for industry:
  - "Evaluation and Review of the Petroleum Industry's Road Mix Process (Volumes I and II)" March 1993
  - "Proposed Guidelines for Oilfield Road Mix Operations -- Western States Petroleum Association"
- Cal/EPA Oil Exploration and Production Regulatory Reform Task Force, and its Waste Working Group

### III. *Development of Working Group Focus, Goals, and Objectives*

Goal: appropriate level of regulatory oversight, emphasizing administrative, or non-permit mechanisms.

Note: Important to have some immediate "successes" to keep process going. Also do not want to create unnecessary new levels of regulation.

Focus: applications within the administrative boundaries of an oil field/lease; starting with San Joaquin Valley and then consider other parts of the state, etc.

Note: Consideration of regulatory oversight on a regional level vs. Statewide consistency was briefly discussed. It was agreed that regional review is appropriate, but will also check for opportunities to be consistent between regions, etc., as going through process.

Objective Discussion:

- (1) Develop a regulatory scheme through consensus, possibly following IWMB model/methodology -- IWMD program is attractive because want to establish that agencies made a decision. Issue in California is type of oil production.
- (2) Education of industry by industry -- Guidelines to be used by industry for industry education, etc.; Guidelines are not to be used by agencies to regulate practice. It was suggested that industry revise/develop Guidelines that are applicable to everyone, minors/independents and majors, so that everyone is "on the same page."
- (3) Operator self-certification as a fundamental concept in considering/developing appropriate level(s) of regulatory oversight.
- (4) Consideration of how to handle waste/water issues vs. air issues -- It was recognized that the waste/water and air issues are different and may require separate regulatory consideration. Yet, at the same time, concern was expressed about losing opportunities or creating a regulatory scheme for one media that might negatively impact the regulatory scheme of the other. It was decided to initially include consideration of both media and then establish parallel tracks for waste/water issues and air issues in considering/developing level(s) of regulatory oversight.

IV. *Development of Matrix of Practice Parameters and Regulatory Issues*

A draft matrix of regulatory issues was prepared by Ron Chambers -- the intent is to use the matrix format to list agency regulatory concerns.

Discussion:

The matrix is a presentation of a regulatory construct so included IWMB even though they do not regulate road mix activities (information given in matrix for IWMB is a "guesstimate" of how they might regulate practice). Can use matrix format to list regulatory concerns also, which would then exclude IWMB.

DTSC included in matrix because recognize obligation to be able to demonstrate that material is non-hazardous.

Air issues: no real boundaries (as seen in matrix) -- State and local air boards may need to just describe concerns in matrix whereas other agencies may be able to give specific requirements. Focus in air issues may be more toward cost/benefit aspects of practice. How marry goals of PM-10 reduction with waste VOC emission control. Maybe set up exemption levels based on volumes of road mix material.

What about situations such as non-commercial but offsite. (See action item #3.)

V. *Work Assignments and Future Meetings*

Next meeting to be schedule for early to mid June. Meeting will be held in Sacramento (location to be announced).

Action items:

- 1.) Cheryl will distribute the Industry Road Mix Study and Guidelines to all prior to meeting.
- 2.) Agency representatives will fill in matrix, or otherwise detail, what each agency's regulatory concerns are regarding road mix practices. This information should include, at a minimum, what type of information is needed by each agency to meet agency needs, etc.
- 3.) Dan/Ron will get examples of non-commercial, offsite road mix uses for consideration when looking at level of regulatory oversight.

Discussion:

May be able to get someone like ICF Kaiser to act as scribe for meetings and write report, etc.

**Appendix III-B**  
**Road Mix Working Group Meeting**  
**July 3, 1993**

**Road Mix Working Group Attendees  
July 3, 1996**

<b>Name</b>	<b>Affiliation</b>
Ron Chambers	CalResources
Les Clark	M.H. Whittier
Dave Cohen	State Water Resources Control Board
Tam Doduc	California Environmental Protection Agency
Greg Frantz	State Water Resources Control Board
Roger Funston	McFarland Energy, Inc.
Claudia Moore	Department of Toxic Substances Control
Bobbie Garcia	California Integrated Waste Management Board
Shelton Gray	Regional Water Quality Control Board
Dan Jernigan	Chevron U.S.A. Inc.
Maria Lima	San Joaquin Valley Unified Air Pollution Control District
Greg Meisinger	CalResources
Scott Nester	San Joaquin Valley Unified Air Pollution Control District
Kim Nguyen	Air Resources Control Board
Catherine H. Reheis	Western States Petroleum Association
Michael Stettner	California Department of Conservation Division of Oil, Gas, and Geothermal Resources
Gary Yee	Air Resources Board
Jeff Eppink	ICF Kaiser/DOE

**Oil Exploration and Production Regulatory Reform Task Force  
Meeting — July 3, 1996**

Greg Frantz, Water Board (replaced Cheryl Clausen)

Introductions

C. Reheis

Review of status

- 2 years to date -- want to come to closure this year
- oil company management getting frustrated with process
- Cal/EPA report - still moving forward on 3 issues:
  - Road Mix
  - Tank Emissions
  - Spills

R. Chambers

Road Mix SJV

- oils -- asphathene, light duty paving
- most oilfield roads have road mix
- Road Mixing – IOGCC report recognizes oversight needed
  - confusion about oversight
  - issues brought forward through Cal/EPA to resolve
  - concern about over exaggeration of risk
  - report addresses environmental risk
  - determine agencies' concerns, data needs to result in guidelines
  - industry wants controls all can agree upon
  - matrix approach

R. Funston

- report gives impressions of permanent facilities, which is not valid
- independent small scale, interim activity are common
- look at scale of RM activities to determine

R. Chambers

- Santa Barbara - problematic, supports regulatory approach

C. Reheis

- statewide vs. SJV focus, SJV-regional?
- Air board representative to simultaneously submit additional air and water

R. Chambers

- RM doesn't fall under "cut back" operators of asphalt
- VOCs limited
- PM<sub>10</sub> - unpaved roads a concern policy – issues of PM<sub>10</sub> vs. RM

R. Funston

- Land fill -- emissions and transport; what is accomplished?

G. Frantz

- Water Board position -- RM not a big issue; air is of concern; Water Board doesn't regulate RM at all

S. Gray

- Air problem due to RM
- not a large concern, willing to help industry
- doesn't present a threat to H&E if done responsibly
- recognizes issue is with air -- Air Board issue

R. Chambers

- Matrix -- sets boundary conditions
- scope and magnitude of problem
- one company selling product -- fully permitted integrated waste management (Cal Resources)
- blank spaces of matrix need to be filled out

R. Funston

- Commercial requirements defined
- Other side is "intermittent"
- what are standards? -- notify DOG to notify the other agencies (DOG -- clearing house)
- ensuring compliance with all agencies?

S. Gray

- clearly we are dealing with unrefined crude oil only
- wants to avoid RM having refined products -- wants this to be clear

R. Funston

- on site, unrefined crude oil
- industry understands

S. Gray

- Committee will define guidelines

M. Stettner

- DOG willing to take lead as proposed by Water Board; develop MOU or attach to current MOU
- area has to be under lease to use RM

R. Funston

- DOG logical choice -- associated with oilfields

R. Chambers

- tiered reporting system
- committee to interpret
- analogous to farmers -- burn days
- intermittent activities notification process; one or two phone calls, a letter for continuous



- R. Funston
  - Notice of intent
- S. Nestor
  - Difference between continuous and commercial
- S. Chambers
  - difference is control of feedstock
  - commercial needs to be tested more for veracity
- S. Gray
  - Commercial RM goes outside for resources
  - waste streams from others; greater controls needed; documentation
- R. Chambers
  - variability of crude is low
  - screening: pH PCBs, onsite RM samples
- S. Gray
  - lower tier; auditable records
- R. Chambers & R. Funston
  - 90% of industry tests
  - training program -- pull in smaller operators
- L. Clark
  - small guys (1000 bbls/yr), self certification needed
- R. Chambers
  - industry wants to maintain a defensible position; testing cheaper than lawyers
- R. Funston
  - focused list of analysis
  - sensible testing frequency
- S. Gray
  - newly completed deeper zone e.g., mercury increase due to change in field operation
- B. Garcia
  - if tiered reporting, then regulation or ?
- R. Chambers
  - reference to existing regulations
  - guidelines will be sponsored by industry
- G. Frantz
  - industry guidelines ?
- C. Reheis
  - they exist (packet)
  - Matrix -- what is best structure? fill in box? (asked S. Grey)

S. Gray

- industry wants something in form of document to be satisfied, e.g., simple closure process
- struggling to come up with "official" document to satisfy industry and satisfy state agencies management
- but has no problem with filling out matrix

G. Frantz, G Yee

- want to have document to react to
- Air recommended changes from asphalt regulation process
- no RM rule developed yet
- where to assess emissions? - in RM prep or road?

R. Funston

- use soil aeration rule

G. Yee

- sees difference with soil

R. Chambers

- industry recognized these differences
- no solvents; not "cut-back asphalt"

C. Reheis

- industry recognizes air side is more complicated
- air box in matrix is difficult
- need to engage in that dialogue

G. Frantz

- wants matrix filled in by next meeting

C. Reheis

- industry is willing to work with agencies to fill out a more cohesive framework

R. Fauntos

- Industry reluctant to get specific: previously, RM report was too specific; want to wait for agencies reaction; avoid talking past each other

L. Clark

- testing etc., do not want to bankrupt independents
- financial limits

M. Lima (?) Cal/EPA

- regulatory reform is important
- Cal/EPA views RM industry position as reasonable
- should be lead agency, tier reporting; agencies need to voice "comfort level"
- regulatory agencies need to make commitment to fill in matrix
- what is needed to meet comfort level

D. Cohen

- MOA, MOU
- Water Board probably is not proper lead
- DOG lead?
- benign neglect is an alternative; status quo may be okay

S. Gray

- agrees
- does IOGC need something?
- Cal/EPA to write something?

C. Reheis

- that would do but it must be something; simpler is better

R. Chambers

- Cal/EPA/DOG to write letter; DOG is in field all the time handle waste
- air poses greater waste

C. Reheis

- letter to U.S. EPA would ease discomfort but not sure would be enough

S. Gray, M. Stettner

- Committee report (to be written by J. Eppink) could satisfy with sign-off cover page would work

C. Reheis

- matrix needs to be filled out
- would be documentation of existing practice

M. Stettner

- Committee report (with matrix) would work

R. Funston

- have a check list
- DOG implements check list

D. Cohen

- statewide? no regional (Reheis)
- SJV regulation reform

B. Garcia

- commercial to be left on matrix?

R. Chambers

- commercial is only a boundary condition
- commercial would not be part of final matrix

C. Reheis

- respond to IOGCC, attach RM committee report

M. Stettner

— This would probably satisfy IOGCC and likely EPA

Group: RM report would be reviewed by agencies for "agenda"

G. Yee and S. Nester

— need practices memorialized

— may need larger spectrum (matrix)

C. Reheis

— should have industry/agency meeting to fill out matrix

M. Stettner

— IOGCC will have second review to see if RM practices have been improved; this is time for Committee to act

G. Frantz

— next meeting to discuss matrix August 9, next Committee meeting August 16

**Appendix III-C  
Air Issues Sub-Group,  
Road Mix Working Group Meeting  
August 13, 1993**

**August 13, 1996  
Air Issues Sub-Group  
Road Mix Working Group Attendees**

<b>Name</b>	<b>Affiliation</b>
Steve Arita	Western States Petroleum Association
Ron Chambers	CalResources
Maria Lima	San Joaquin Valley Unified Air Pollution Control District
Scott Nester	San Joaquin Valley Unified Air Pollution Control District
Kim Nguyen	California Air Resources Board
Catherine H. Reheis	Western States Petroleum Association
Gary Yee	California Air Resources Board
Jeff Eppink	ICF Kaiser/DOE

**Road Mix Meeting — Air Issues Working Group  
August 13, 1996**

**C. Reheis**

- Intro
- Respond to IOGCC report
- Background
  - RM originally surfaced under "cut back" asphalt rule
  - sump closure rule
  - was no fit with these rules for RM
  - road mix is different
  - attainment plan 1993 completed WSPA report
- Today here to give industry perspective
- WSPA poses 2 questions
  - (1) Do emissions need to be controlled?
    - cost/benefit
  - (2) Any benefit to permitting?

**Ron Chambers:**

- RM - from oil spills
- Highest reading 9 ppm
- Less than the 50 ppm threshold
- 3 sources of feedstock
  - oil spills (soil aeration rule)
  - sumps - tertiary process sumps (sump rule)
  - tank clean-ups — tank rules (in process)
- Feedstock is being controlled now
- If feedstock is being adequately addressed, do you need permitting?
  
- If road mix is not produced other material would be required to be brought in with its associated issues
- >90% road mix production is low volume, intermittent
- Tanks cleaned about every 2-3 years
- Volumetrically small
- 10 - 40° API is range of crude produced (but most is heavy). Refined products are lighter — diesel 55° API. gasoline 75° API
- Commercial operations — 5 firms producing RM
- These operations include UST, diesel tank excavation feedstocks

G. Yee

- Industrial facilities — they must account for emissions for permitted facilities
- VOCs from waste — projection of emissions must be made

S. Nestor

- 2 emissions of concern — at plant-processing and when as road mix

R. Chambers

- throughput max — 80/20
- chromatography — BTEX analyzed

G. Yee/S. Nester

- Tank cleaning — need to look at steps and make sure an inventory accounting is made

R. Chambers

- We do have them quantified
- Tank cleaning — take off top floating oil first
- Bellridge field is 6-10% sand (is unique in this respect)
- Fire hose — wash sludge (fine particles)
- Lighter oil is not present
- 50 ppm is used as limit for monitoring
- Lighter crude not good for asphalt or RM so you wouldn't want it included

C. Reheis

- Tiered approach needed?
- >13° API (or there about) would be permitted

R. Chambers

- Could use permits for commercial operations
- Emissions — doubling of allowable throughput — down to 45,000 B/D from 105,000 B/D
- Steaming of reservoir — 85% recovery of oil
- Commercial — Terrane Technology
  - will accept other feedstock — takes all crude oil (not refined product)
  - all <50 ppm
- Asphalts 3 types
  - SE 3000 — very viscous, solid
  - SE 800 — most used; is simply SE 3000 cut with naphthene
  - SE 250 cut with diesel
  - RM not cut
- Uses: Farmers (dust control), wineries
- RM is coming out favorably for controlling PM<sub>10</sub>
- Control testing
- RM is cheaper
  - \$5-10/ton for RM
  - \$35-30/ton for asphalt

G. Yee



- Only 1 facility makes RM with refined product, so what is issue?

C. Reheis

- That's our question!!

S. Nestor

- Questions about (1) volume (2) difference between onsite and intermittent facilities

R. Chambers

- Terrane Technology only produces one product, RM
- RM not as durable as asphalt, but farm applications are not heavy duty

S. Arita

- Effective in reducing dust loading
- Landfill of RM does involve emissions

S. Nestor

- RM cost-effective as PM<sub>10</sub> control

R. Chambers

- UC Davis report — RM rated highest for cost-effectiveness compared to oil, water and magnesium chloride
- Estimated 5-10 years of RM usage in farm applications
- Usage rate is 500 tons/mile for 24' road (2 lane)
- Market is rural, secondary roads compares favorable with road oil H<sub>2</sub>O, mag chloride

G. Yee

- Virgin bottoms; appropriate test methods, how would these compare?

R. Chambers

- Highest readings in blind tests show 9 ppms for RM

G. Yee

- Specific VOC content?

R. Chambers

- D402 test at ½%
- 12½° API, crude boils at 350°F
- Crude starts to boil at C<sub>12</sub>
- D402 not a good emission quantification
- Tank washing process — sludge is C<sub>8</sub>+

C. Reheis

- Commercial vs. onsite?

S. Nestor

- Need to evaluate next step
- Look at volume, deal with largest first
- Cannot imagine anything beyond what permits require
- Would like to see what specific cases are and talk to administrators
- Policy process will weigh in PM<sub>10</sub>
- Benefits of dust control vs. not, for production of RM
- SJVUAPCD permits many industries; some intermittently

R. Chambers

- RM production is bimodal, most <10 days/year or >250 days/year

S. Nestor

- Wants name of 5 commercial facilities (Chambers to supply)

G. Yee

- Overall perspective needed
- Intermittent vs. continuous

R. Chambers

- Santa Barbara & Ventura require ASTM D402 to maximum; test on crude (not solids) & as such is overly stringent
- Smaller Shell installations only operate 1-2 times year
- Tanks are cleaned when cannot meet pipeline requirements
- Tank cleaning downtime is very limited

S. Arita

- Are concerns with use of D402 test clear to you? (directed to G. Yee)

G. Yee

- Yes

R. Chambers

- Tank cleaning slurry would clear soil aeration rule

S. Nestor

- At present SJV has no tanks de-gassing rule

R. Chambers

- 18-22° API crude is produced elsewhere in state; e.g., Brea crudes (lighter) are exempt

S. Arita

- Tank cleaning is insignificant
- Tank study can provide info

R. Chambers

- Most fields past peak production
- Volumes of 1975 to 86 were peak
- Volumes are significantly down regionally

C. Reheis

- WSPA can get information on production projections
- WSPA will take a stab at putting information together for Nestor & Yee

S. Nestor

*de minimus* limit is 2 lbs/day VOCs, No<sub>x</sub>,

**Appendix III-D  
Road Mix Working Group Meeting  
August 16, 1993**

**August 16, 1996**  
**Road Mix Working Group Attendees**

<b>Name</b>	<b>Affiliation</b>
Greg Frantz	State Water Resources Control Board
Bill Winkler	California Department of Oil, Gas, and Geothermal Resources
Ron Chambers	CalResources
Dan Jernigan	Chevron U.S.A. Inc.
Gary Yee	California Air Resources Board
Kim Nguyen	California Air Resources Board
Pete Phillips	California Department of Fish and Game
Les Clark	M.H. Whittier
Tam Doduc	California Environmental Protection Agency
Claudia Moore	California Department of Toxic Substances Control
Bobbie Garcia	California Integrated Waste Management Board
Jeffrey Eppink	ICF Kaiser/DOE

**Road Mix Working Group  
August 16, 1996  
Meeting Notes**

Introductions

R. Chambers

- Background and history
  - Beneficial use of tank bottoms as RM
  - Progress has been made in meeting agency concerns about RM practice
  - At conclusion of last meeting - a consensus of maintaining status quo
  - Agencies would evaluate practice on a case-by-case basis.
- Purpose of today
  - 1st blush-record progress of these meetings as a response to Federal EPA, IOGCC
  - IOGCC survey - noted lack of coordination efforts among agencies.
  - Conclusions: all agencies have role in oil field waste practices
  - Review matrix
  - take outline of report as written and record each agency's response.
- Prepared RM guidelines for industry
  - recorded testing frequency w/analytical data for self certification

C. Moore

- reviewed, didn't see any problem.

R. Chambers - would like "trigger event" threshold, so that operators know when to notify agencies.

- guidelines should reflect minimal guidance by agencies.
- is a threshold being violated?
- are operators starting to approach threshold.
- operators want to have guidance.

G. Yee - IOGCC response - will it be statewide? or SJV?

- issues vary from district to district
- SJV is farthest along
- concern is that SJV should not represent state

D. Jernigan

- IOGCC is asking "who is watching" this "stuff"
- report can be general

R. Chambers-

- not all district & water boards consider this issue (RM) significant
- IOGCC just wants to know agencies w/responsibility
- they want an idea of scope and practices
- need to know agency roles
- scope of this effort is strictly onsite
- if offsite RM usage is significant agency should so indicate

- the report will fulfill Cal/EPA & IOGCC requests — met “X” times discussed issues, these are agency positions.

G. Frantz - (to T. Doduc) - will this suffice for Cal/EPA?

T. Doduc - Yes it would

- would industry want other streamlining opportunities beyond setting a threshold for RM

R. Chambers -

- Industry would be satisfied w/outcome that says RM will not be eliminated - no additional streamlining is necessary.
- Industry just asking for clarification of policy, this would be the streamlining.

L. Clark - IOGCC wants to know solely what agencies “are keeping an eye on RM

- streamlining would be that only one main agency is in charge (DOGGR).
- would be satisfied w/RM as accepted practice under 1 agency.

R. Chambers -

- Report should indicate that DOGGR is agency with greatest presence & has sufficient oversight so that RM doesn't get out of hand.
- DOGGR would identify problems & notify proper agency as necessary.
- This is a compromise to having only one agency.
- DOGGR would be “eyes & ears” on RM issue.
- Air Board issues are more concise.

L. Clark

- Process of one of streamlining, IOGCC wants to know “who is keeping an eye on it”.
- but don't want situation to become restrictive.
- recognizes air board issues are separate.
- IOGCC response - can be done in 2-3 page document and backup.
- Clark meets w/IOGCC 2x/year, represents Gov. Wilson.
- RM practice is onsite; offsite is completely different.
- is comfortable w/agencies saying RM practice is OK and that basically DOGGR will keep an eye on it.

R. Chambers -

- recognize that MOUs between agencies would be difficult.

L. Clark

- talking for independents; - want to get this issue “behind us”.

R. Chambers -

- from his perspective wants “under these sets of conditions,” RM practices OK
- but as practices approach “other set of conditions” agencies must be notified
- e.g., donation of RM for little league parking lot.

T. Doduc - What should be the timeline going forward?

G. Frantz

- Agency comments w/in 1 month?
  - Comments should clarify
    - (1) where conditions OK for RM
    - (2) when RM not OK

C. Moore - Stresses that we are dealing with onsite RM

R. Chambers - Yes

- commercial was only included as upper bound.
- matrix was only a tool; it does not need to include commercial applications.

D. Jernigan - Clarification would be helpful in section-II of reports (Objective & Processes).

- want clarifications of boundary conditions.

G. Yee - Air doesn't need that level of detail

- API vs. gravity emission correlation have not been made.

R. Chambers - Purpose of today is get enough information to create report

- RM is a long-lived practice.
- landfilling of tank bottoms is objectionable.
- today's purpose is to review "draft summary overview" (was created by Chambers).
- reviews Aug. 13 meeting on air issues
- issue for SJVUAPCD was one of supplying data, emission are likely to be w/in acceptable levels.

G. Yee - SJVUAPCD is in agreement, but still some decision about threshold for emissions.

- emissions association w/an operation need be tracked, but this can be resolved.

At this point in the meeting, the group discussed boundary conditions

T. Doduc- timeline

- Aug. 23 -Sept. 20 - agencies to have comments to R. Chambers. Responses to be about 1 page. Early responses would be appreciated.
- Sept. 20 -Oct. 8 - preliminary report to be drafted for next meeting
- October 11 meeting to review report.



## Boundary Conditions Definitions/Topics

- Characterization as non-hazardous
- Bounded by SJV
- Crude oil from production operations
- Source: Tank bottoms, spills, sump clean up
- Use: Road paving
  - berms
  - road subgrade
- “Onsite” - source and placement from same owner, same company
- Non-commercial - onsite
- Must be beneficial usage
  
- Characterization as non-hazardous
  - lab results should be on tank bottoms (feedstock) for RM
  - criteria is material going into road mix not on road mix itself
  - Title 22 required
  - Non hazardous beyond E&P has a different connotation
  - sandblasting grit - non-hazardous
  
- Bounded by SJV
  - SJVUAPCD represents jurisdictional boundary
  
- Crude oil from production operations
  - eliminates refined product
  - petroleum E&P is focus
  - normal process treatment chemicals included (E&P RCRA determination)
  
- Sources of RM (includes hydrocarbons & aggregate)
  - tank bottoms
  - crude spills (no refined products)
  - sump cleaning
  - spent sandblasting grit
  
- Uses: Vehicle access: Road paving, parking, staging areas, berms, road subgrade
  - issues of concern (streambeds, lakes)
  - paving should be pursuant to Section 1603 F&G Code
  - operators need to be sensitive to fact that new roads may trigger agency oversight and regulations
  
- Onsite: source and placement from same owner
  - within administrative boundary of oilfield
  - farms are sometimes owned by oil companies
  - may involve differing agency jurisdictions
  - sites are not necessarily contiguous
  
- Non-commercial -- onsite

- crude feedstocks under control of company
  - crude feedstocks not taken from other operators
- Must be beneficial usage

**Appendix III-E**  
**Road Mix Working Group Meeting**  
**November 6, 1996**

**Road Mix Working Group Attendees  
November 6, 1996**

<b>Name</b>	<b>Affiliation</b>
Ron Chambers	CalResources
Tam Doduc	Cal/EPA
Greg Frantz	State Water Resources Control Board
Shelton Gray	Regional Water Quality Control Board
Dan Jernigan	Chevron U.S.A. Inc.
Maria Lima	San Joaquin Valley Unified Air Pollution Control District
Claudia Moore	California Department of Toxic Substances Control
Vajie Motra	California Department of Toxic Substances Control
Kim Nguyen	California Air Resources Control Board
Catherine H. Reheis	Western States Petroleum Association
Jessie Schnell	California Department of Toxic Substances Control
Michael Stettner	California Department of Conservation Division of Oil, Gas, and Geothermal Resources
Gary Yee	California Air Resources Board
Jeff Eppink	ICF Kaiser/DOE

**Road Mix Working Group  
November 6, 1996  
Meeting**

- The Working Group reviewed the draft version of this document

**Appendix IV**  
**Proposed Guidelines for Oilfield Road Mix Operations**

# Proposed Guidelines for Oilfield Road Mix Operations

## Western States Petroleum Association

### INTRODUCTION

1. The production and application of oilfield road mix is currently regulated and administered by a number of agencies including:
  - California Regional Water Quality Control Board (CRWQCB)
  - Local Air Pollution Control Districts (APCD)
  - California Division of Oil Gas and Geothermal Resources (CDOGGR)
  - California Department of Toxic Substances Control (DTSC)
  - U.S. Environmental Protection Agency (EPA)

Oilfield road mix facilities are required to conform with regulations for housekeeping, stormwater prevention and control programs, health and safety regulations, and as applicable, Hazmat inventory.

2. Members of the petroleum industry generally prepare and apply oilfield road mix using the procedures described in "Evaluation and Review of the Petroleum Industry's Road Mix Process" (Western States Petroleum Association, March 1993). In this process, hydrocarbon containing materials are mixed with road building aggregate, native onsite soils, or other materials using conventional construction equipment.
3. The following discussion of operational activities, Material Characterization and Reporting is supplementary to the "Evaluation and Review of the Petroleum Industry's Road Mix Process" and is in response to Interstate Oil and Gas Compact Commission (IOGCC) findings and recommendations during the review of California oil and gas regulations.

### OPERATIONAL ACTIVITIES

1. Members of the petroleum industry may use oilfield road mix for one or more of the following:
  - Light duty roads
  - Tank setting locations
  - Spill prevention and control berms
  - Well locations
  - Backfill for pipeline road crossings
  - Parking facilities or staging areas

This list does not represent all of the beneficial uses consistent with the physical properties of oilfield road mix.

### MATERIAL CHARACTERIZATION

#### MATERIAL ANALYSIS

1. Hydrocarbon containing materials for use in oilfield road mix must be characterized as nonhazardous per CCR Title 22, Division 4, Chapter 30, Article 11. Beneficial use materials are characterized as follows:
  - CAM Metals

- pH
  - Ignitability (liquids only)
  - Biotoxicity (fish bioassay)
  - PCBs
2. Spent abrasives for use as supplemental aggregate in oilfield road mix must be characterized as nonhazardous per California Code of Regulations (CCR) Title 22 67755(b)(3).

#### RECOMMENDED MATERIAL TESTING SCHEDULE

1. Generators may self-certify materials as nonhazardous based on operator knowledge or analytical testing as appropriate, as indicated in CCR Title 22, Division 4, Chapter 30, Article 11. Materials for beneficial use are characterized as follows:
- Routinely generated materials include tank bottom residuals or other materials produced (prior to washing out tank) on an ongoing basis, as part of production activities:
    - Materials are characterized as described above at least every two years, unless a significant change in petroleum source or process occurs, in which case, recharacterization is required.
  - Nonroutinely generated materials include residuals produced due to site closures, tank, or sump removals, and are not produced on an ongoing basis as part of production activities:
    - Materials generated infrequently by ongoing process are characterized on a yearly basis.
    - Materials generated by non-routine events are characterized individually, unless sufficient characterization data already exists (i.e., filter media, abrasives, etc.)
    - Solid generated by clean up operations (i.e., spills, sump removals, etc.) are characterized based on historical data or production data when available.

#### **RECORDKEEPING**

##### MATERIAL CHARACTERIZATION

1. Representative samples of the hydrocarbon containing materials will be obtained under Chain-of-Custody for material characterization. Analysis records for each oilfield road mix raw material are to be maintained for a minimum period equal to or greater than the testing schedule, or as indicated by the individual companies. Alternatively, records to support self-certification by the generators will be similarly maintained.

##### OPERATIONAL DOCUMENTATION

1. An inventory of the quantity of oilfield road mix produced and used is maintained by the company for each facility.



**Hector Hernandez - Proposed reuse waiver and general WDRS for waste piles**

---

**From:** "Brannon, Ed" <Ed.Brannon@conservation.ca.gov>  
**To:** <hhernandez@waterboards.ca.gov>  
**Date:** 3/10/2005 3:25 PM  
**Subject:** Proposed reuse waiver and general WDRS for waste piles

---

Hector:

Thank you for the opportunity to comment on these documents. My first impression is that this is a huge amount of monitoring work and a huge amount of RWQCB time to review the data. The magnitude is such that the RWQCB will not be able to perform its function timely and as such will find it impossible to engage in meaningful enforcement. The program is so big as to render it impossible to comply and most likely impossible to administer. You are going to get into the same fix you are now in. Not enough time to enforce so nothing gets done. My feeling is that this program needs to be simplified.

Question: Does this apply to each little pile of oily dirt created after a stuffing box leak? If so it is like hitting an ant with a sledgehammer.

The program might be feasible for a large remediation facility such as ChevronTexaco's in Cat Canyon or the one Aera may be proposing. It would be good for the huge piles in Greka leases. But a different program is necessary for small piles.

Suggestion: All small piles of contaminated material must be stored on impermeable materials and completely covered with impermeable material until removed to a central processing area or completely removed. Small piles may not remain in place longer than 30 days. Limit the number of central processing areas and really make sure the small piles are moved timely. This will substantially reduce the number of areas that may be threatened. It will also make it easier for other agencies, such as ours and the County Petroleum office, help you enforce the standards.

How are you going to identify central processing area? What about the large piles already on location in the various fields? How are you going to define a pile? For those areas already in place will the operator have to remove the material to an impermeable base?

How quickly do you intend to enforce your standards? Past practices have been forever. You need specific and easily understood standards so that you can easily enforce your program. A bunch of "if then, then that or maybe this or that" type of standards will doom your program to failure.

We need a simple, easily understood program that can be easily enforced. Without it, you do not have the staffing to even begin to address the industry needs.

What penalties will you impose? I believe your penalty schedule should be published. That way no one can say someone is being treated differently than others. If you are going to have a program, you must make it simple, easy to understand, easy to comply with, easy to enforce and easy to punish. Clean, quick and certain. When it takes years to enforce violations you lose the ability to control the program.

Except for the very big central processing areas, make the program simple by requiring small piles to be eliminated within a specified period of time. Then you only have to deal with the small number of areas that could truly present a threat to water quality. The small piles individually pose a negligible threat, but cumulatively may pose the worst threat. Eliminate this issue effectively and concentrate on the real problems.

Industry needs to get this program up and running pronto!! It will be good for them and good for the environment. Nothing will come of this though if you make the program so complicated that no one understands it, is unable to comply and you are unable to enforce it.

Why do you need a registered professional to stamp a plan. Either it meets your standards or it does not. Your agency will be the final judge. Even if a PE or RG stamps a document and you do not approve it then what was

the purpose of the RG? I think this is a nonsensical requirement left over from previous biases. A company is going to be judged according to compliance not according to who planned the project or who monitors it. If the project causes a threat to water quality it fails and enforcement action will be taken. A RG does not affect your ability to enforce your rules or prevent pollution. Each project is submitted to you for your approval regardless of who signs it. Why do you care who designed it. If it works and you approve it that it that. If it fails the operator is not going to come back and say "well you did not require an RG or PE so you can't blame me for failure". If the project fails your agency will take enforcement action. PERIOD!!!! This is an example of simplification. There is no reason for you to require a professional stamp. You are the ultimate approver regardless of who submits the plan.

I think new sites and old sites should be treated the same way. There is no need to differentiate. Simplification!!! New project, meets old standards all is well. They submit a plan, pay the fees and you review and approve or disapprove it period. Get rid of the bureaucratic process. Simplify.

Why are you worried about odors? This not your area of jurisdiction. The APCD will be active and has the expertise to cover this issue.

For the life of me I cannot figure out why you would care if a Holocene fault cuts through a project. This material is certainly not going to be well compacted so that if a Holocene fault 400 feet away displaces at the surface it is going to cause a heck of a lot of damage to the pile simply from shaking. This is such a tiny tiny problem I am totally perplexed why it is addressed. These piles will not be constructed to meet any seismic standards. They will fail in the event of a large earthquake, especially one that breaks the earth's surface. But the damage or threat to the environment is negligible. Why include it? Simplify.

Why do you care where material being processed at a waste site comes from? Remember, every cubic foot of material in a pile cost the operator money to process. Why would they secretly add to their pile and add costs? Are you expecting an operator to chemically characterize every load of material brought to central location or will you give waivers if material comes from a previously tested site? My point is, you care about water quality affected by a processing location. That is what you should be concern with. If water quality is not being threaten or damaged by the activity why do you care where materials come from or how much there is. If the operator is running a clean operation, that is all you should be concerned with. Simplify

Let the operators run their operations. If they screw up nail them with a substantial fine quickly. If they are running a clean shop let them go. Most importantly, remember they are ultimately improving the quality of the environment with these processes.

Thank you for the opportunity to comment.

Ed Brannon