CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS
ON THE REISSUANCE OF NPDES PERMIT FOR:
General Waste Discharge Requirements for Discharge or Reuse of Extracted and Treated Groundwater resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOC), NPDES Permit No. CAG912003

I. LFR, Inc. – May 22, 2009
II. Golder Associates Inc. – June 16, 2009
III. Tamalpais Environmental Consultants, on behalf of Cityview Plaza – June 17, 2009
IV. IT Environmental Liquidating Trust – June 17, 2009
V. Univar, USA, Inc. –June 17, 2009

Note: The format of this staff response begins with quotes from or paraphrases of the party's comments shown in *italics*, followed by staff's response. In some cases, similar comments were combined. The roman numeral(s) indicated in the parenthesis after each comment refers to the person(s) providing that comment.

Interested persons should refer to the original letters to ascertain the full substance and context of each comment. As needed, text changes are shown using underline for added text and ~~strikethrough~~ for deleted text. Nonsubstantive editorial changes were also made to the Tentative Order in response to other comments received that are not described below for brevity.

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1) ***Comment (V): "There appears to be contradictory or unclear statements regarding triggers levels and what actions are required by exceedences of trigger levels. The order states '…triggers are not effluent limitations, and must not be construed as such. Instead, they are levels above which additional investigation is required to determine further action.' The order later asks for '… a description of plans underway to address the previous exceedance, such as details of source elimination, changes in operation of existing treatment units, or the re-design of any Univar USA Inc. treatment unit.' Actions such as the redesign of treatment systems due to an exceedance of a trigger level implies the existence of an effluent limitation. As has been documented in previous Univar submittals, the effluent stream from Univar's site has 1,4-dioxane and nickel concentrations above the respective trigger levels. Univar has undertaken the investigatory actions required including sampling of the receiving water body at locations 50 feet upstream and 50 feet downstream of the point of***

discharge to the receiving body. The analytical results showed no degradation in the receiving water quality. Specifically, results of the receiving water sampling showed nickel at 5.2 and 4.8 ug/L in the upstream and downstream samples, respectively. Also, the 1,4-dioxane concentration was 0.7 ug/L in the upstream sample and less than the 0.5 ug/L reporting limit in the downstream sample. For 1,4-dioxane treatment, Univar has ordered an advanced oxidation unit which uses ultraviolet light (UV) and hydrogen peroxide for 1,4-dioxane destruction. The unit is expected to be online in Fall 2009. In this case, a proven technology was available and Univar had run bench scale tests to show that 1,4-dioxane at the site could be treated using advanced oxidation. The p.15, VI.C.10, section of the permit is specific to actions required related to 1,4-dioxane trigger levels. As mentioned above, Univar is procuring a treatment unit to specifically reduce 1,4-dioxane concentrations. The treatment unit is expected to be online in Fall 2009, well before the December 10, 2010 deadline. The order states that facilities shall `…remove 1,4-dioxane to maximum extent practicable.` Univar welcomes a pragmatic approach when working to reduce 1,4-dioxane concentrations. However, how will `practicable` be interpreted and by who. Univar believes that a free dialogue, using site-specific data and actions, between Univar and the RWQCB would be beneficial in defining what is practicable."

Response: No changes are necessary in response to this comment. However to reiterate, there is no effluent limit proposed for 1,4-dioxane. The trigger level proposed is designed to trigger the actions currently being undertaken by Univar in lieu of effluent limits. During the next permit reissuance in 2014, we are committed to work with all dischargers including Univar to develop a performance-based 1,4-dioxane effluent limit if necessary. If dischargers are able to treat 1,4-dioxane in their effluent to a level below the trigger value in the interim, then an effluent limitation may not be required. In this Revised Tentative Order, we are not proposing an effluent limitation for 1,4-dioxane because it is infeasible to do so, as there are no treatment performance data for 1,4-dioxane.

We appreciate Univar's proactive efforts in investigating the treatability and/or source of its triggered pollutants in the effluent. We also applaud Univar's plan to install an advanced oxidation unit for 1,4-dioxane treatment about a year before the due date listed in the Revised Tentative Order.

2) ***Comment (V): "Univar has been pursuing effective technologies for nickel treatment at low concentrations. Nickel levels in the effluent stream has been found to be on the order of 40 micrograms per liter (ug/L) which is above the proposed trigger level of 19 ug/L. Univar***

has performed field pilot tests using 10 different resins or adsorbents for reduction of nickel, but has not to-date found an adsorbent that has a sufficiently long breakthrough time. Univar has added a carbon vessel for polishing the effluent from the air stripper and is using an acid-washed carbon which can reduce nickel concentrations. However, the acid-washed carbon effectiveness is on the order of weeks. Traditional precipitation-type treatments are effective for nickel of the milligrams per liter range (mg/L), but not necessarily viable in the ug/L range. Univar will continue to pursue alternative nickel treatment options, however it is unclear from the wording of the draft permit what actions, if any, will be required. The order is `gray` in the area of what level of reduction is required. Is this eventual long term approach to nickel reduction and allowable discharge concentrations something that can be mutually agreed upon based on the specifics of the Univar site? Again, the order uses the term trigger to values that initiate further investigation and are not discharge limits."

Response: The Tentative Order has been revised to reference the appropriate saltwater nickel trigger value, and additional language has been added to the annual report requirement to assist dischargers in their efforts. Site specific objectives for nickel adopted by our Board have recently become effective and replace the California Toxics Rule (CTR) criteria. We revised Table 3 of the Tentative Order and Table F-6 of the Fact Sheet to reflect that the Basin Plan site specific objectives supersede the CTR criteria for copper and nickel. The revised nickel trigger applicable to Univar's discharge would be 27 ug/L (instead of the19 ug/L referenced in the Tentative Order distributed for comment). In assessing how much nickel reduction the Water Board would require to comply with this general permit, we would consider the following factors: (1) site-specific background groundwater nickel concentrations, (2) types of treatment available for nickel, and (3) costs of treatment systems. For clarity, we added the following sentence at the end of Provision VI.C.8.a:

> *Specifically, the annual monitoring reports shall include site-specific background groundwater concentrations, types of treatment available, and costs of treatment systems for each triggered inorganic pollutant.*

3) ***Comment (V): "p.13, VI.C.3: Triggers, Table 3 – Trigger Pollutants. Note 1 in the table states `Criteria for metals based on a hardness value of 100 mg/L as CaCO3. Criterion based upon the most stringent of the fresh and salt water, or human health criterion.` If the trigger values are a function of the hardness of the receiving waters, then the permittee should have the option of measuring the hardness and deriving a project-specific criteria for metals. Also, the NPDES***

permits issued prior to 2004, contained mass-based rather than concentration-based allowable levels for metals such as nickel. Univar suggests that an option of applying mass-based levels (e.g. lb/year) be reconsidered. When discussing the rationale for nickel levels, the Fact Sheet on page F-20 of the tentative order states, `…The discharge volume and effluent concentrations of inorganic compounds discharges from facilities regulated by this permit are low. In the Regional Water Board staff's judgment, the Bay-wide loading of inorganic compounds from VOC cleanup discharges -- representing a very small portion of total inorganic compounds loadings from sources within the Region (including municipal and industrial point-source discharges and stormwater discharges) -- will cause no impairment of beneficial uses or potential exceedances of inorganic compounds objectives in receiving waters.` Univar asks that the above statement regarding the low impact of nickel from facilities such as Univar's be weighed when evaluating what actions, if any, will eventually be required for future nickel treatment at the site."

Response: In general, hardness is a factor when determining freshwater metals criteria. In this case, hardness does not significantly influence the value of the nickel trigger. The nickel trigger is derived based upon the most stringent of the fresh water, salt water, or human health criterion. Because the nickel saltwater criterion is much lower than its freshwater criterion, hardness (used in freshwater criterion) has little effect on the trigger value. Therefore, the nickel trigger of 27 ug/L is derived from the salt water criterion that is not a function of hardness of the receiving water. See also Response to Comment No.3.

4) ***Comment (V): "`Attachment E, pp.E-2 & E-3, Monitoring Requirements in E.IV.C, "…In this case, both the initial and confirmed results are violations. However, if the confirmation effluent sampling shows compliance, we will consider only the initial exceedance as a violation.` A confirmation sampling event should be just that, an approach to confirming whether an effluent limit has been exceeded. It should not be viewed as a separate event that would warrant a second violation. Also, latitude should be given to address false positives of the initial event such as laboratory errors. If the confirmation sampling confirms that the initial event gave erroneous values, then no violation should be determined."***

Response: We disagree. The confirmation sample would be taken on a subsequent day and, if above the limit, would represent a separate discharge violation. However, if a discharger has evidence to suggest that the sample is a false positive, that evidence should be discussed in the monitoring report. No enforcement will be taken on false positive results.

It is an element of proper operation for dischargers to practice appropriate quality assurance/quality control (QA/QC) to avoid laboratory errors and false positives.

5) ***Comment (III): "In order for the Water Board to have slightly more flexibility in discharge requirements, Tamalpais Environmental Consultants (TEC) proposes to add a footnote for Table 2 with the following intent: The Water Board caseworker shall have the authority to allow a foundation dewatering system to bypass a treatment system if the influent concentration is below the Maximum Daily Effluent Limitation (1.6 ~g/L for Tetrachloroethylene (PCE) in Column A). This comment would provide the Water Board the flexibility to discontinue treatment of the waters discharged through the East Sump. Significant expenditures are required to maintain the treatment system for this sump with the average influent concentration of only 1.0 ~g/L. Regular carbon replacements have been required due to mineral fouling of the carbon and breakthrough of PCE above 0.8 ~g/L. Ongoing monitoring could be conducted to confirm that PCE concentrations in the sump were below the threshold. Furthermore, in order to perform maintenance on a treatment system for a foundation dewatering system, TEC proposes to add a footnote for Table 2 with the following intent: The Water Board caseworker shall have the authority to allow a foundation dewatering system to bypass a treatment system for up to 48 hours providing the water discharged is below the Maximum Daily Discharge in Column B (5.0 ~g/L for PCE) and sufficient notice is provided to the Water Board. This comment would allow the replacement of some sections of the treatment systems, such as the manifold piping and flow meter for the West Sump Treatment System, which could not be replaced or repaired while the treatment system is in operation."***

   Response: In general, the dischargers authorized under this general permit have no need to bypass except as provided for in the conditions stated in section I.G of the Attachment D. However to further clarify the above prohibition and accommodate the above special case, the following sentences have been added to the end of Prohibition III.F and Provision I.G.2 of the Attachment D and "40 CFR 122.41(m)(ii)(2)" has been added to the Fact Sheet IV.A.3.F.:

   Added at the end of Prohibition 3.F: *"…except as provided for in the conditions stated in section I.G of the Attachment D".*

   Added at the end of Provision I.G.2 of Attachment D: *"The Discharger may also allow any bypass to occur which does not cause exceedances of effluent limitation, but only if it is for essential*

maintenance to assure efficient operation. In this case, weekly monitoring results of pollutants of concern shall be reported in the quarterly monitoring reports."

6) ***Comment (I): Can analytical laboratories achieve the detection limits for 2,3,7,8-TCDD "trigger level" of 1.3E-08 µg/L (Table 3 on page 14 of 91 of the draft permit)?***

Response: To clarify the minimal levels for the trigger values, we revised the Tentative Order Table 3 to include:

Note 7: If a discharger is reporting non-detect monitoring data with a reporting level higher than the trigger, the reason for the higher detection level shall be consistent with the SIP Appendix 4 required minimum levels (please refer to our web site for the latest version of SIP) and must be explained within the monitoring report.

We also deleted the 2,3,7,8-TCDD trigger from Table 3 of the Tentative Order and Table F-6 of the Fact Sheet because none of the dischargers authorized under this general permit reported 2,3,7,8-TCDD to be present in their influent or effluent.

7) ***Comment (II and IV): Specify units for turbidity, odor, foaming agents, and color (Table 3 on page 14 of 91 of the draft permit).***

Response: We have revised Table 3 of the Tentative Order 3 to include the unit "NTU" for Turbidity. The unit for the others is already provided in either in the row or the column heading of Table 3. We also deleted the "color" trigger from Table 3 of the Tentative Order and Table F-6 of the Fact Sheet because none of the dischargers authorized under this general permit reported colored influent or effluent.

8) ***Comment (IV): Are there specific monitoring requirements for odor, sulfate, foaming agents, and color?***

Response: There are no specific monitoring requirements for odor, sulfate, and foaming agents. We removed color as a pollutant of concern (see response to comment No. 7 above). However, if a discharger is aware that any other pollutants such as odor, sulfate, or foaming agents are present in the influent, then the discharger shall monitor for them. We have revised Table E-2 of the Attachment E by adding a row at the end of the Table with the following monitoring requirements:

Sampling Station	*Minimum Sampling Frequency for Influent INF-001*	*Minimum Sampling Frequency for Effluent EFF-001 or Effluent for Reuse REU-001*	*Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D*	*Required Analytical Test Method Number, Technique, SM, USEPA Report Number, 40 CFR Part (or equivalent)*
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	*Grab*	*Grab*	*Grab*	
Other pollutants such as non VOC-related odor, sulfate, and foaming agents (See Footnote 1)	*D/Q*	*D/M*	*V*	*SM*

Note 1: if known to be present in the influent

9) ***Comment (II): Permit, Page 2 - General Comment: "Considering all of the acronyms used in the permit and attachments, it would assist dischargers if there was a single table with all of the acronyms used. Attachment A accomplishes that to some extent, but does not do a comprehensive job. Additionally, moving Attachment A to the beginning of the document would also help the reader to get familiar with the definitions and the acronyms."***

Response: We added a table in Attachment A listing all acronyms used in the Revised Tentative Order.

10) ***Comment (II): Permit, Page 8, Table 2 – "Suggest adding Footnote [2] from Table F-5 (Pg. F-23) to clarify here when AMELs are applicable."***

Response: We unintentionally left in Table F-5, footnote [2] from the previous permit as it was not represented in the Tentative Order that went out for public comment. Footnote [2] is not consistent with our legal determination on compliance with monthly effluent limitations. We corrected the Fact Sheet by removing footnote [2].

11) Comment (II): Permit, Page 11 – ***Related to the receiving water limit of median for dissolved oxygen, "since IBM discharges to Canoas Creek only when it cannot recharge the water, what does it mean for Canoas Creek when we may only discharge for a short time period that is not even once a month let alone 3? Please clarify how this would apply and how do we determine this?"***

Response: The Tentative Order requires monitoring of dissolved oxygen in receiving waters when the discharger violates an effluent limit. After reporting the receiving waters dissolved oxygen level, the discharger may

be required to conduct additional monitoring pursuant to Provision VI.B.2 of the permit.

12) Comment (II): Does listing Cu Triggers for three segments of the bay mean that the Cu Triggers don't apply to a discharger if they don't directly discharge into San Francisco Bay or could they still apply to dischargers whose discharge enters San Francisco bay after passing through creeks/rivers e.g. Canoas and Guadalupe?

Response: The triggers apply to both direct and indirect types of discharges to the San Francisco bay.

13) Comment (II): Permit, Page 12 – "Since we already submitted our NOI, do the new NOI requirements result in our having to resubmit an NOI with the information now required that wasn't in our earlier NOI?"

Response: No. Although rearranged, the information required in Attachment B is the same as the draft Attachment B provided to all dischargers on December 2, 2008.

14) Comment (II): Does Note 1 apply to "[Semi] Volatile Organic Compounds except PAHs" in Table E.2 of Attachment E?

Response: We have revised Table E-2 of Attachment E of the Tentative Order to replace the reference to Note 2 with Note 1.

15) Comment (II): Permit, Page 14, Table 3 – "Some of the Trigger limits are too low and cannot be easily achieved by labs. Examples include limits for SVOCs and PAHs, especially since the lowest achievable detection limit obtained by the recommended analytical method 8270c is 0.5 ug/L. Adding something similar to Footnote [1], from Table 2 will be helpful."

Response: See Response to Comment No. 6.

16) Comment (II): Attachment E, Page E-13 – "There is no requirement for conducting start-up monitoring if the system is shut-down for more than 120 hrs. In our experience there is no benefit from requiring to do start-up after every system shut-down exceeding 120 hrs, since the effluent quality does not change significantly after the shut-down. Please confirm. Additionally, does the Board need notification of any planned shutdown?"

Response: Correct. The permit requires no start-up monitoring if the system is shut-down for more than 120 hours. Furthermore, the permit requires no notification of any planned shutdown.

17) ***Comment (V): "p.12, VI.C.3: NOI Review, As mentioned above, on January 16, 2009, Univar submitted the NOI requesting authorization for continued discharge after the current permit expires on July 21, 2009. Univar requests that the RWQCB send an acknowledgement of the receipt of NOI, and if possible, the RWQCB's tentative finding as to whether reauthorization will be granted in order that Univar may plan accordingly past the July 21, 2009 date."***

Response: We have received Univar's NOI and Univar may consider this document as an acknowledgement of receipt of the Univar NOI. We plan to review submitted NOIs and start preparing the authorization letters as soon as this permit is issued. In general, Dischargers who (i) were previously subject to Order No. R2-2004-0055, (ii) filed a complete NOI before the effective date of this permit, and (iii) have not yet received an Executive Officer authorization letter pursuant to the permit will be subject to the 2004 permit pending receipt of a new authorization letter. In the future, the Authorized Dischargers may refer to the last row of Table 1 of the permit for instructions on continuing its coverage.

18) ***Comment (V): "p.B-6, NOI Application Form, Item 9 `… document the annual fee (currently $6,970) has been paid.' How and when will this be billed? Will Univar be receiving an annual invoice? If so, during what month will invoices be sent?"***

Response: Normally, all of the Dischargers authorized under this general permit will receive invoices during the month of September.