



February 2, 2006

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Re: Arkema Inc. Administrative Order on Consent for Removal Action  
U.S. EPA Region 10, Docket No. CERCLA 10-2005-0191  
Disputed Directed Changes to Arkema Draft EE/CA Work Plan

Dear Lori and Sean:

Pursuant to Section XVI., Paragraph 48 of the above-captioned Administrative Order on Consent (AOC), Arkema Inc. (Arkema) hereby invokes the dispute resolution process. Specifically, Arkema disputes the following directed changes required by the U.S. Environmental Protection Agency, Region 10 (EPA) in its January 13, 2006 letter to Mr. Larry Patterson:

**Directed Change No. 16:** Additional surface water baseline data.

**Directed Change No. 458:** MCLs as ARARs.

**Directed Change No. 420:** Perchlorate isopleths.

**Directed Change No. 47:** Dockside worker ingestion assessed by MCLs and PRGs.

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Please find Arkema's specific objections to the Directed Changes below. For your convenience, we have restated from EPA's January 13, 2006 letter each EPA comment, Arkema's response, EPA's reply which became the Directed Change, and Arkema's rebuttal. As stated in Claudia Powers' January 25, 2006 memorandum to you, many of the issues related to these new Directed Changes are currently part of the formal dispute filed by Arkema on January 5, 2006. This submission will address only those issues that were not briefed in the January 5 submittal.

***EPA COMMENT NO. 16.*** *Additional surface water baseline data should be collected to establish existing values for all COCs. These will be useful in determining which alternative to select, and later to serve as a measure of baseline conditions pre-dredging, etc.*

**Arkema Response (12/2/05).** Please clarify. We assume this is a request for additional sampling of Willamette River surface water. Selected LWG Portland Harbor surface water sampling data will be included in the pooled data table summary and data dredging, etc. screening. This request was made in a Category 1 comments [sic] as well (e.g., #256). Arkema knows of three surface water samples collected within the boundaries of the site as part of the Portland Harbor RI. Arkema is also proposing to collect surface water in support of the water quality testing associated with dredging and capping alternatives (Refer to Section 6 of the Draft Work Plan). Arkema has also collect [sic] stormwater samples as part of the stormwater source control evaluation. These data will also be used to evaluate baseline conditions prior to additional stormwater source control remedies.

**EPA DIRECTED CHANGE NO. 16 (1/13/06).** *Three samples from basically one location are inadequate. Arkema shall propose a comprehensive, site specific surface water sampling regime to establish baseline conditions; this is to include multiple locations during varying weather/flow conditions. This [sic] data will be used for cleanup alternative discussion as well as a baseline for short term impact discussion in the EE/CA and in the Biological Assessment during design. Stormwater is a separate issue.*

**Arkema Rebuttal.** Arkema disputes the two primary issues included in this Directed Change: (1) using COCs instead of COIs; and (2) the adequacy of existing surface water data. With regard to the first issue, all of Arkema's Rebuttal to Directed Change No. 2 in its January 5, 2006 submittal related to data presentation, and screening is incorporated herein by this reference. Based on that discussion, any additional surface water sampling conducted by Arkema would be based on COIs as defined in the accompanying screening approach (Tab 1), not COCs.

With regard to the second issue, adequacy of the existing data, EPA has requested additional detailed sampling of surface water because, in its opinion, the proposed use of the existing surface water database is inadequate. This database was developed under the Administrative Order on Consent for Remedial Investigation/Feasibility Study, U.S. EPA Docket

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Number CERCLA-10-2001-0240 (LWG AOC). The LWG AOC surface water data collection efforts (to date) include transect sampling both upstream and downstream of the Arkema site (RMs 11 and 6.25). In addition, surface water has been collected with XAD resins at a point sample station located between Docks 1 and 2. In addition, point surface water sample stations are located both immediately upstream (in the Willbridge embayment) and downstream (at the BNRR railroad bridge) of the Arkema site. Sample data are (or will be) available for surface water sample events in November 2004, March 2005, and July 2005. Additional surface water sample events are planned by the LWG for 2006-7. The list of chemical analytes from these sample events is extensive.

EPA has stated that more surface water quality data are needed to complete the evaluation of different removal alternatives on surface water quality in the Willamette River; however, the baseline surface water data will not be useful in evaluating future impacts from potential removal actions, such as dredging. Other water quality tests, such as the DRET and Column Settling tests (that were proposed in the draft EE/CA Work Plan) will be used to evaluate the potential impacts of dredging and disposal. The surface water quality data that are collected *before* any removal action will only be useful in providing information on existing baseline surface water conditions at the site. The surface water sampling data that have been generated or that are planned by the LWG are more than adequate for that purpose.

EPA also has stated that it believes more surface water data are needed to evaluate baseline water quality conditions for use in the Biological Assessment (BA). Arkema disagrees. Arkema has proposed using the LWG data set in its analysis of existing conditions and for the BA, and does not find any law or policy that would require more.

It is important to emphasize that Arkema believes that surface water sampling data are important in the assessment of baseline conditions. The fundamental difference between Arkema's and EPA's positions at this time is the magnitude of sampling that is being requested. For the purposes of establishing background conditions within the river in the vicinity and immediately upstream and downstream of the Arkema site, the existing data set is adequate and complete. As set out in the draft EE/CA Work Plan, surface water quality monitoring will be an element of any active removal action (e.g., capping or dredging) that is conducted at the site. Surface water quality monitoring conducted during a removal action would include both upstream and downstream monitoring to monitor and evaluate any potential impacts from the removal action activity.

In summary, given the extent of both the existing and proposed data sets, Arkema does not understand why EPA believes it is inadequate to establish baseline conditions. Arkema believes that the level of additional data collection being requested by EPA far exceeds the data collection required for an EE/CA and is more consistent with (or may exceed) the level of effort required for a full-blown CERCLA RI/FS for the Arkema site.

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***EPA COMMENT NO. 458.*** Section 3.5.1 and 3.5.2 – For human health, the following values should be used for screening of groundwater, TZW, and surface water: (1) EPA's WQC and ODEQ WQC for fish consumption assuming consumption rates of both 17.5 and 175 grams per day and (2) EPA's MCLs and Region 9 tapwater PRGs. This includes the use of a tapwater PRG of 3.6 ug/l [sic] for perchlorate. For impacts to ecological receptors for screening of groundwater, TZW and surface water, the following values should be used: (1) EPA's and ODEQ's 2004 chronic WQC and Oak Ridge National Laboratory's Tier II SCVs. Language referring to principal threats should be deleted.

**Arkema Response (12/9/05).** Arkema has proposed to EPA a revised screening approach which includes a comparison to the JSCS values listed in this comment (November 30th proposal). However, MCLs and tapwater PRGs assume a lifetime of drinking water ingestion exposure, which is not consistent with the AOC SOW.

**EPA DIRECTED CHANGE NO. 458 (1/13/06).** Response not accepted -- See EPA response to 11/30 Arkema proposal. MCLs are consistent with the SOW (see RAOs section). MCLs shall also be included as an ARAR. Tapwater PRGs shall also be used in the screening process.

**Arkema Rebuttal.** Arkema disputes Directed Change No. 458. Several issues arise from this Directed Change: (1) it demonstrates a major shift from the original comment, which suggested using MCLs as screening criteria, to the Directed Change, which requires using MCLs as ARARs; (2) it rejects Arkema's approach to data presentation and screening; (3) it conflicts with the Removal Action Objectives in the AOC/SOW; and (4) it requires Arkema to use MCLs as ARARs, which is inconsistent with the ongoing work for the Portland Harbor Superfund Site.

Initially, EPA suggested using MCLs and Region 9 tapwater PRGs as screening values for human health criteria in Sections 3.5.1 and 3.5.2 of the draft EE/CA Work Plan. Those sections of the Work Plan present criteria used to select benchmarks for evaluating historical data and the RAA boundary. However, without explanation, EPA is now requiring that MCLs be used as ARARs for the Arkema early action (we assume for TZW, surface water, and groundwater). Arkema believes such a requirement at this stage of the work is inappropriate, inconsistent with Arkema's proposed screening approach and inconsistent with the work being conducted under the LWG AOC. It is inappropriate because the initial comment has changed into a new comment, suggesting a different intent or a new issue; i.e., the focus has changed from screening to cleanup. It is inconsistent with Arkema's screening approach (see Tab 1), and it is inconsistent with the LWG AOC because MCLs are not ARARs under the EPA-approved Programmatic Work Plan.

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Arkema requests that EPA provide an explanation for this directed change. We need to understand the technical and legal basis for EPA's change of direction and the reason EPA has interjected such a Directed Change in the section of the draft EE/CA Work Plan that addresses screening criteria. It appears that EPA is setting cleanup criteria for the RAA, or at a minimum, requiring consideration of the feasibility of the removal action to achieve MCLs. Please note that according to the *CERCLA Compliance with Other Laws Manual*, Section 121 of CERCLA (setting forth cleanup standards) generally applies as a matter of law only to remedial actions. OSWER EPA/540/G-89/006 (August 8, 1988) at 1-3. In a removal action, ARARs will be identified and attained to the extent practicable. *Id.* Arkema's AOC SOW requires the identification of *potential* ARARs and To Be Considered (TBCs) for the Arkema RAA. (Emphasis added). Section 2, Paragraph 1 of the SOW at 4. Arkema believes it has identified the major and most appropriate sources for potential ARARs in the draft Work Plan. *See* Section 1.2 of the Draft EE/CA Work Plan at 1-3.

Arkema does not believe MCLs are appropriate ARARs for this project. If EPA in its Directed Change intended to require Arkema to use MCLs for TZW, Arkema can find no law, regulation, policy or precedent for applying MCLs to TZW.

If EPA intended to require Arkema to use MCLs as ARARs for surface water, in this case the Lower Willamette River, Arkema does not find that MCLs are legally applicable, for among other reasons, the Lower Willamette River is not being used as a drinking water source. Arkema also does not believe MCLs are relevant and appropriate for the Lower Willamette River. In order to find an ARAR relevant and appropriate, EPA is required to consider a number of factors under federal regulations. One of those factors most relevant to this case is the "use or potential use of affected resources in the requirement and the use or potential use of the affected resource at the CERCLA site." 40 C.F.R. § 300.400(g)(2). Consideration of the use of the Willamette River, within the boundaries of the Initial Study Area, as a potential drinking water source was not included in the Arkema early action AOC SOW. (*See* Section I, Removal Action Objective No. 3: "Reduce human health risks to acceptable levels from direct contact with and *incidental ingestion* of water with COCs within the RAA." (Emphasis added)). Since EPA and Arkema entered into the AOC, there have been no new developments regarding the likelihood of the Portland Water Bureau considering the Willamette River within the boundaries of the ISA as a potential drinking water source. Arkema asserts that to now include this exposure pathway/cleanup standard in the EE/CA Work Plan is technically unsupportable in light of known information on long-term water supply planning for the Portland metropolitan area. At this time, the Portland Water Bureau relies on the Columbia South Shore Well Field and the Bull Run Reservoir to ensure annual water delivery to its customers (Portland Water Bureau 2005). Also, significant in-stream water rights and flow targets on the Lower Willamette River from Oregon City to the confluence with the Columbia River are established by the Oregon Water Resource Department's Willamette Basin Program. These in-stream water rights are senior to existing municipal rights, and it is highly unlikely that additional municipal uses of the Lower

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Willamette water will be possible in the future. Even if there were enough water to use for drinking water purposes, it would be subject to treatment pursuant to Safe Drinking Water Act (SDWA) requirements prior to distribution and use. Therefore, untreated surface water as a potential future source of drinking water supply is unrealistic under either current or future scenarios.

Finally, if EPA intended to direct Arkema to apply MCLs as ARARs for groundwater, Arkema believes this application of MCLs is inappropriate until Arkema knows what groundwater EPA is targeting, what beneficial uses have been designated for that groundwater, and what point of exposure is relevant to the inquiry.

To the extent Directed Change No. 458 addresses how data from various media is screened, all of Arkema's Rebuttal to Directed Change No. 2 in its January 5, 2006 submittal related to data presentation and screening is incorporated herein by this reference. Recall that Arkema's November 30, 2005 proposal for presenting and screening data includes comparing groundwater, TZW and surface water with all of the DEQ/EPA Portland Harbor Joint Source Control Strategy, Final December 2005 (JSCS) criteria, including MCLs and tapwater PRGs. The November 30 proposal has been updated and expanded. (*See* Tab 1).

The requirement in Directed Change No. 458 to use MCLs as ARARs is in direct conflict with the AOC SOW. Removal Action Objective (RAO) Number 3 in Section I., Paragraph 3 of the SOW states, "Reduce human health risks to acceptable levels from direct contact with and *incidental ingestion* of water with COCs within the RAA." (Emphasis added). At the time Arkema and EPA entered into the AOC, it is clear that neither party considered that drinking water was an appropriate pathway for site receptors. Moreover, MCLs (and tapwater PRGs) assume a lifetime of drinking water ingestion exposure, which is not consistent with RAO Number 3 in the SOW.

***EPA COMMENT NO. 420.*** *Figure 4-4. The ammonium perchlorate plume in the Acid Plant Area should be shown on the figure. The riverward extent is uncertain and can be qualified with question marks.*

**Arkema Response (12/13/05).** Perchlorate in Acid Plant area groundwater did not exceed the groundwater concentration of 20 mg/L that was used as the definition of the perchlorate boundary. To provide additional information on upland groundwater plumes that are being addressed by IRMs, Arkema intends to include the revised upland RI report as an appendix to the EE/CA Work Plan. Narrative will be included in the EE/CA Work Plan to help locate appropriate information and figures in the upland RI report.

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**EPA DIRECTED CHANGE NO. 420 (1/13/06).** *EPA does not agree in the use of 20 ppm as the perchlorate boundary. Depending on the presentation of the figures, additional revisions may be required. Arkema shall provide this data in a figure that shows isopleths of wherever perchlorate has been detected, including detections below 20 ppm.*

**Arkema Rebuttal.** Arkema disputes Directed Change No. 420. All of Arkema's Rebuttal to Directed Change No. 2 in its January 5, 2006 submittal related to data presentation and screening is incorporated herein by this reference.

Arkema's November 30 proposal identifies a process to develop a list of COIs. (See Tab 1). Perchlorate likely will be included as a COI for groundwater. Arkema has proposed that it will provide figures for both acute and chronic criteria for COIs in various media across the site. Based on EPA's direction provided in the January 24, 2006 teleconference with Arkema, we understand that EPA wants Arkema to provide figures to display a comparison of groundwater and surface water concentrations and soil and sediment concentrations. Perchlorate groundwater concentrations for both acute and chronic concentrations can be presented on a figure as well.

**EPA COMMENT NO. 47.** *Page 4-8: It is stated that Dockside worker ingestion of groundwater is considered negligible. This pathway should be evaluated for future workers given the hexavalent chromium and perchlorate groundwater plumes on the site. Please provide further discussion as to why the ingestion of groundwater pathway is not addressed.*

**Arkema Response (12/13/05).** See Response to comment 458.

**EPA DIRECTED CHANGE NO. 47.** *Response not accepted. Dockside worker ingestion shall be considered and addressed by comparison to MCLs and to tapwater PRGs. See EPA reply comment to #458.*

**Arkema Rebuttal.** Arkema disputes Directed Change No. 47. Arkema's Response (12/13/05) and Arkema's Rebuttal to Directed Change No. 458 are incorporated herein rebuttal by this reference.

As previously discussed, Arkema's November 30 proposal identifies a process for data screening that includes comparing groundwater to the JSCS, which includes MCLs and tapwater PRGs. However, both the original EPA Comment and Directed Change No. 47 imply that groundwater will be used as a drinking water source. It is Arkema's understanding that drinking water supply has not been determined to be a beneficial use of groundwater in the area. In fact, it has been determined by ODEQ that drinking water is not a beneficial use of groundwater in this area.

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The minimum depth to groundwater in the Acid Plant Area and the Chlorate Area of the property is at least 15 feet. Without the installation of a drinking water well, there is little likelihood that dockside workers could have any exposure to groundwater, much less drink it.

Arkema reserves the right to clarify or supplement this submittal as appropriate. As a general matter, Arkema also reserves and does not waive any rights, privileges or defenses that it may have. We look forward to an opportunity to resolve these issues in a mutually satisfactory manner. Thank you.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Doug Loutzenhiser".

Doug Loutzenhiser

Enclosure