Legacy Site Services LLC

24 July 2007

Mr. Matt McClincy
Oregon Department of Environmental Quality
Northwest Region
2020 Southwest 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Subject: Former Arkema Portland Plant
Responses to DEQ/EPA Comments on the Draft Groundwater Source Control Evaluation
ECSI No. 398

Dear Matt,

This document provides responses to comments received from the Oregon Department of Environmental Quality (DEQ) and United States Environmental Protection Agency (EPA) on 29 May 2007 related to the April 2007 *Draft Groundwater Source Control Evaluation*, prepared by Integral Consulting (Integral) for Legacy Site Services LLC (LSS), agent for Arkema Inc. These comments were further discussed during the DEQ, LSS, Environmental Resources Management (ERM), and Integral 27 June 2007 meeting. Each of the DEQ/EPA comments is provided below in italic font, followed by LSS's response.

Responses to General Comments

Comment 1 - EPA is using the DEQ/EPA JSCS screening level values (SLVs) as preliminary remedial action objectives for the purposes of meeting the removal action objectives identified in the Arkema/EPA Administrative Order on Consent for Removal Action Statement of Work. This translates into EPA's expectation that groundwater that is expected to discharge to the river above JSCS SLVs needs to be carried into the groundwater source control focused feasibility study (FFS).

Based on this EPA position, DEQ requests that the groundwater source control FFS evaluate options for treating and/or controlling the migration of groundwater from Lots 1 – 4 to the Willamette River that contains contaminants above JSCS SLVs. This includes groundwater that is attributable to off-site sources.

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LSS does not agree with EPA or DEQ that SLVs are appropriate as preliminary Remedial Action Objectives (RAOs) for the site. The use of SLVs as RAOs is in direct contradiction to the Joint Source Control Strategy (JSCS). SLVs, by their definition, are *screening* values only. The JSCS clearly states that:

> "SLVs are not cleanup levels; they are comparisons used to establish priority for potential source control." (emphasis added)

Furthermore, the JSCS calls for comparison of contaminant concentrations to the SLVs and allows performance of a weight-of-evidence evaluation. The JSCS further states that:

> "an exceedance of an SLV does not necessarily indicate the upland source of contamination poses an unacceptable risk to human or ecological receptors, but does require the further consideration of source control efforts using a weight-of-evidence evaluation." (emphasis added)

This weight-of-evidence evaluation was provided in the *Draft Groundwater Source Control Evaluation.*

In addition, neither the *Arkema/EPA Administrative Order on Consent for Removal Action* nor the attached *Statement of Work* require SLVs to be used as RAOs. In fact, neither document makes specific reference to SLVs or the Joint Source Control Strategy. Rather, the RAOs identified in the *Statement of Work* include a broad objective to "reduce contaminant flux from uplands, riverbank, and sediments so that recontamination of any sediment or riverbank caps put in place does not occur."

LSS has repeatedly questioned the appropriateness of using generic literature-based SLVs to evaluate the site-specific risk presented by upland groundwater and to determine the adequacy of source control activities, most recently in LSS's March 27, 2007 letter to EPA regarding *Response to February 15 Meeting Discussion and Materials Provided* and in LSS July 13, 2007 letter to EPA regarding *Response to June 26 Meeting and Proposed Resolution of Key Technical Issues*. LSS also notes objections to the use of generic look-up values such as those SLV's provided in the JSCS as Preliminary Remediation Goals (PRGs), rather than site-specific risk-based values, raised by the National Academy of Sciences:

> "Overall, the committee was surprised at the minimal extent to which EPA used the [Environmental Risk Assessment] in subsequent decision making. Preliminary remediation goals (PRGs) (concentrations of metals intended to protect organisms) developed for fish, benthic invertebrates, small mammals, plants, amphibians, and birds other than waterfowl are based on national regulatory criteria, literature-derived values, or background concentrations.

> PRGs derived in that fashion are highly uncertain and have questionable value for guiding remediation decisions."[1] (emphasis added)

It should also be noted that, as discussed in the DEQ-approved *Scoping Technical Memorandum, Groundwater Source Control Interim Remedial Measures* (ERM 2006), as appropriate, LSS intends to utilize the process identified in the JSCS to screen and identify COI's which will be carried forward in the RI/FS process (and in the Groundwater FFS), in particular the fate and transport analysis and the site specific risk assessment.

Regarding off-site sources, it is LSS's position that if any of the groundwater contaminants are attributable to off-site sources, ODEQ and EPA should require those Responsible Parties to control these sources to the river. A requirement to remediate contamination attributable to an off-site source is in contradiction to DEQ's Contaminated Aquifer Policy which states:

> "Where hazardous substances in groundwater have come to be located at a property, solely as the result of subsurface migration from a source or sources outside the property, DEQ will not take enforcement action against the owner or operator of the impacted property to require the performance of remedial actions or the payment of remedial action costs associated with the contaminated groundwater." (emphasis added)

Comment 2 - EPA further determined that the portion of the Rhone-Poulenc (RPAC) groundwater plume that crosses the Arkema site will need to be controlled at the Arkema riverbank on a schedule consistent with the Arkema Early Action. This decision was made based on EPA's conclusion in the May 11, 2007 EPA Arkema Early Action Engineering Evaluation/Cost Analysis (EE/CA) Work Plan that the down stream boundary of the principle threat material (i.e., sediment evaluated for removal in the EE/CA) extends to the railroad bridge.

DEQ will direct Starlink Logistics, Inc. (SLLI) to adjust their groundwater source control strategy and schedule to match up with the Arkema Early Action. DEQ will review the pending groundwater monitoring results from the April 2007 sampling and provide direction to both SLLI and Arkema regarding groundwater plume management, and the need for additional characterization if necessary.

See response to General Comment 1 regarding off-site sources.

It should also be noted that the *Arkema Early Action Engineering Evaluation/Cost Analysis (EE/CA) Work Plan* (EE/CA Work Plan) (May 2007) is in draft, and is currently under review and comment by LSS. Discussions with EPA regarding this draft are on-going. As stated in LSS's March 27, 2007 and July 13, 2007 letters to EPA, LSS does not agree with the EPA

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[1] *Superfund and Mining Megasites: Lessons from the Coeur d'Alene River Basin* (2005), Board on Environmental Studies and Toxicology

definition of "Principal Threat Material," and therefore does not agree that the downstream boundary of the Early Action extends to the railroad bridge.

Also, as you are aware, LSS has repeatedly requested SLLI to mitigate the flow of contaminants onto Arkema property. To date, SLLI has not been required by the agencies to cut-off the flow of contaminants onto Arkema property. In addition, LSS reminds DEQ that in spite of our concerns and objections, DEQ required SLLI to seal the City storm sewer along Front Avenue to stop the direct discharge of SLLI's COIs to City outfall 22B. LSS objected to the specified actions because they did not address the existing (and now exacerbated) flow of SLLI COIs onto Arkema property. These same COIs are continuing to flow onto Arkema property.

Responses to Specific Comments

In general, all of the following comments by EPA are based on the incorrect assumption that LSS agrees that using the SLVs presented in the EPA-revised draft EE/CA Work Plan are appropriate. As discussed above, LSS does not agree with EPA's definition of a Principal Threat Material, nor does LSS agree with the presumption that generic literature-based SLVs are appropriate as RAOs. In addition, EPA's comments are in direct contradiction to the JSCS and the CERCLA RI/FS process. Further specific comments are provided below.

Comment 1 - Section 2, Paragraph 2: Regarding the weight-of-evidence discussion, EPA noted that upland source control needs to be completed in accordance with the SLVs presented in the Arkema Early Action EE/CA Work Plan, dated May 11, 2007.

See response to General Comment 1. The weight-of-evidence evaluation was conducted in accordance with the JSCS.

Comment 2 - Section 2, Paragraph 2: Regarding carrying contaminants of interest forward into the RI/FS process, EPA noted that upland source control needs to be completed in accordance with the SLVs presented in the Arkema Early Action EE/CA Work Plan, dated May 11, 2007.

See response to General Comment 1.

Comment 3 - Section 2, Paragraph 4: Regarding additional risk evaluation tools for groundwater contaminants of interest, EPA noted that upland source control needs to be completed in accordance with the SLVs presented in the Arkema Early Action EE/CA Work Plan, dated May 11, 2007.

See response to General Comment 1. The use of risk evaluation tools to evaluate the risk presented by contaminant concentrations above the SLVs is consistent with the JSCS, previous conversations held with DEQ, and previously submitted and approved deliverables. For example, in DEQ's Specific Comment 5 on the *Scoping Technical Memorandum, Groundwater Source Control Interim Remedial Measures*, DEQ directed LSS to modify a portion of the text to read:

"Once finalized, the Source Control Screening evaluation will determine the areas of the site requiring active source control to achieve upland and in-water objectives, or areas of the site requiring further consideration (e.g., site-specific risk evaluations and contaminant fate and transport simulations) for upland groundwater source control."

Comment 4 - Section 2.4: Based on information provided in the draft groundwater source control evaluation, no additional weight-of-evidence evaluation (i.e., proposed step 2 MCL quotient analysis) is necessary. EPA noted that upland source control needs to be completed in accordance with the SLVs presented in the Arkema Early Action EE/CA Work Plan, dated May 11, 2007.

See response to General Comment 1. The weight-of-evidence evaluation presented by LSS is consistent with the JSCS. In fact, performance of a weight-of-evidence is *required* by the JSCS if SLVs are exceeded. LSS believes EPA's current proposed approach of ignoring the weight-of-evidence evaluation and using SLVs as RAOs is arbitrary and capricious as it stands in direct contradiction to the JSCS, the NCP, and the CERCLA RI/FS process. Discussions between EPA and LSS to resolve these matters are on-going.

Sincerely,

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