Proposed Plan Meeting Issues Preparation

1. Does Allied impact Kalamazoo Well Field?
2. EQ Proposal
    a. No Response to EQ proposal
        i. Letter to city June 27, 2012
        ii. Share this letter with press?
        iii. In future copy other entities?
    b. Why EPA reject EQ proposal? Our explanation not enough
        i.
3. Other Landfills like this one
4. How will expense of work at Allied impact the river?
5. Who will make sure that the landfill is protective long-term?
6. Is the proposed remedy without a bottom liner legal?

Dear Bruce,

Below are EPA's responses to the questions that the City posed to EPA via your March 22, 2013 email. I have added our responses into the list of questions that you provided. If you have any follow-up questions, we can address them during our April 16, 2013 video-conference.

Thank you,
Michael

1. **Acreage of various portions associated with OU-1**

    a. **Landfill Area – current and future (based on implementation of Alternative 2B)**

    Response: The current acreage of the former Allied Paper property is 89 acres. The existing landfill footprint (including the Bryant HRDLs/FRDLs, Monarch HRDL, Type III Landfill and Western Disposal Area) is approximately 60 acres. Alternative 2B would leave a landfill of approximately 45 acres.

    b. **Panelyte**

    Response: The Panelyte property is approximately 22 acres in size. Only a small portion of the Panelyte property is currently included in OU1 — the Panelyte Marsh (approximately 1 acre).

    c. **Total acreage that will be available for development (based on implementation of Alternative 2B)**

Response: Implementation of Alternative 2B would allow for industrial/commercial reuse at the former Lyondell property north of Panelyte (3.5 acres) and parts of Monarch (approximately ½ of its 6.9 acres). Certain neighboring areas east of Portage Creek are also included in OU1 and will be sampled and addressed under Alternative 2B. Depending on what happens with the Panelyte property – see item 2) below – additional acreage could be available for development.

d. **Green space associated with Portage Creek/potential trail way**

Response: At this time we do not know the exact number of acres of green space associated with Portage Creek under Alternative 2B; however, implementation of Alternative 2B will increase green space along the Portage Creek corridor. Currently, there are fences restricting access to OU1 between Portage Creek and the adjacent residential properties to the east. Alternative 2B will increase green space, since the fence will be moved to the landfill perimeter west of Portage Creek, thus allowing access to Portage Creek.

2. **Panelyte Site**

a. **Availability of "comfort letter" to facilitate potential City ownership of site**
b. **Access to site – current and future**

Response: EPA has reviewed the Baseline Environmental Assessment for the Panelyte property dated March 2010 prepared by the Kalamazoo Brownfield Redevelopment Authority. Based on our review of that document, there are environmental concerns at the property. For example, contamination of the Panelyte property exceeds Michigan Part 201 commercial/industrial standards and access to the site needs to be restricted until further cleanup is achieved. EPA believes there are several options for addressing the Panelyte Property. We would like to discuss those options with you during our April 16, 2013 video conference.

3. **Western Disposal Area (WDA) of OU-1**

a. **Rationale behind assumptions that the Western Disposal Site does not pose significant future contamination risk**

Response: Large amounts of paper residuals are in the WDA. Based upon the sampling effort conducted as part of the Remedial Investigation and our understanding of the paper residuals at OU1, EPA found significant concentrations of PCBs and inorganics and low levels of SVOCs and VOCs in the WDA, similar to what is found in the HRDL and FRDL areas.

Consistent with all of the areas at the Allied site, the contamination is bound to the paper residuals and does not readily migrate to groundwater as further evidenced by groundwater monitoring results. Accordingly, EPA believes that the risks posed by materials in the WDA can be addressed in the same manner as the contamination in other parts of OU1. The engineered cap in Alternative 2B will mitigate the potential for human and ecological exposure to materials at OU1 containing COC concentrations that exceed applicable risk-based cleanup criteria, mitigate the potential for COC-containing materials to migrate, by erosion or surface water runoff, into Portage Creek or onto adjacent properties, and prevent surface water infiltration through the waste. Alternative 2B will prevent contaminated waste material at the OU1 landfill, including contamination in the WDA, from impacting groundwater or surface water.

b. Documentation supporting this rationale including:

Response: Information supporting these assumptions can be found in the 2008 Remedial Investigation (RI) Report. Section 4 of the RI discusses the nature and extent of contamination, including the WDA. Figure 5 of the RI shows the soil sampling locations and Figure 8 shows the groundwater sampling locations. Tables 4-2A (CD) through 4-4D (CD) (found in the electronic version of the RI report) show the constituents detected in the soil and groundwater with denotation of those samples collected in the WDA.

i. Soil borings

Response: PCBs and metals are both found in the WDA soil borings. PCBs range from non-detect to 2500 ppm. Metals range from non-detect to above the Michigan Part 201 Groundwater Surface Water Interface (GSI) soil screening levels in the WDA, but based upon EPA's TCLP testing at OU1, they are not characteristic hazardous waste. VOCs and SVOCs are infrequently detected in the WDA, although some of these detections exceed the Michigan Part 201 GSI screening levels.

ii. Groundwater monitoring

Response: Groundwater monitoring data does not indicate that a plume of PCBs, metals, SVOCs, or VOCs is migrating from the WDA at levels that pose a significant risk. VOCs and SVOCs are largely non-detect in the WDA groundwater samples and are not found above Michigan Part 201 screening levels. The concentrations of various metals in the WDA groundwater vary widely with many metals not being detected in many of the

samples. Only zinc, in a limited number of samples and possibly being related to well construction, appears to exceed the Michigan Part 201 GSI screening levels. PCBs are largely non-detect in the WDA groundwater samples, although a limited number do exceed the Michigan Part 201 generic GSI Protection Criteria. The wells with these exceedances are located within the waste. Further, implementation of Alternative 2B would further reduce the risk of contaminants migrating from the WDA via groundwater, as the material would be consolidated and have a better cap system.

iii. **Well logs/data**

Response: Boring logs for the WDA are included in Attachment B of the RI.

iv. Historical information/data associated with disposal of materials at this location

Response: There are historical anecdotes suggesting that drums were disposed in the WDA. Despite this anecdotal information, the extensive soil and groundwater investigations conducted to date did not show indications of drums or other wastes having been disposed in the WDA. The March 2010 Category N Baseline Environmental Assessment for Former Panelyte Property, and its appendices, documents the presence of drums in the Panelyte Marsh. As part of Alternative 2B, EPA will be sampling and excavating the Panelyte Marsh. If drums or other wastes requiring off-site disposal are encountered, EPA will dispose of those wastes properly. Additionally, if future monitoring identifies unmitigated risks associated with the WDA, EPA will address those risks.

4. Cork Street Landfill

a. Availability/Possibility of reducing groundwater monitoring frequency
b. Oversight by USEPA – long-term contacts, etc….

Response: Moving forward, EPA will be more responsive to the City of Kalamazoo regarding the Cork Street Landfill. As you know, the Cork Street Landfill site has been reassigned to Michael Berkoff. Having the same EPA project manager on both the Allied Landfill and the Cork Street Landfill will provide EPA with a more comprehensive and integrated picture of groundwater flow and conditions in Kalamazoo, and should improve communication and information-sharing between the City and EPA. Michael is currently becoming acquainted with the Cork Street

Landfill site and will be in contact with you regarding the City's desire to reduce the frequency of groundwater monitoring.

5. **Operational Costs**

   a. **Current Operation & Maintenance (O&M) costs associated with OU-1 (inclusive of groundwater management/monitoring)**

      Response: During 2012, the Trustee spent $451,861.24 for ongoing maintenance activities at OU1, including operation of the groundwater collection and treatment system. (See attached 2012 Financial Summary.)

   b. **Projected O&M costs (inclusive of groundwater monitoring) at OU-1 (based on implementation of Alternative 2B)**

      Response: Over a 30-year period, EPA estimates the costs for O&M of Alternative 2B (including gas and groundwater monitoring but not including groundwater collection and treatment) to be $3M.

   c. **Comparative O&M costs at other existing "waste in place" landfills such as King Highway, and 12th Street in Otsego**

      Response: O&M costs for 12th Street Landfill and King Highway Landfill (both OUs of the Allied Paper/Portage Creek/Kalamazoo River Site) are attached.

   d. **Locations of other similar "waste in place" PCB landfills outside of the State of Michigan (and associated O&M costs)**

      Response: EPA is still gathering examples of PCB landfills with conditions similar to those at the Kalamazoo Landfills and will get back to the City with examples.

   e. **Oversight of long-term maintenance**

      Response: At sites where EPA (not responsible parties) is implementing the cleanup, CERCLA Section 104(c)(3) requires that the State enter into a contract or cooperative agreement with EPA whereby the State must assure all future maintenance prior to implementation of the remedial action. In addition, EPA will be monitoring the protectiveness of the remedy at OU1 through the five-year review process. Section 121 of CERCLA requires EPA to review a remedial action that results in hazardous substances remaining at the site at least every five years. If during such a review EPA determines that the remedy ceases to be protective, EPA is authorized to take or require actions to address the risk.

f. **Long-term ownership of site**

Response: The Lyondell Environmental Custodial Trust owns the former Allied Paper property, which is most of OU1. The Lyondell Environmental Custodial Trust will own the property until it is sold. Please note that the Custodial Trust has a separate tax escrow account for the site.

6. **Bankruptcy Trustee Financial Information**

   a. **Current balance in OU-1 Site Trust**
   b. **Current and projected oversight costs associated with the Trust**
   c. **Access to ongoing Trust financial statements**
   d. **If these are not available directly, information on this information can be accessed**

   Response: EPA has attached a financial summary showing the balance of the Trust accounts as of 12/31/12. The financial summary also identifies the total billings during 2012. Please note that these costs include operation and maintenance of a groundwater pump and treat system that would be removed without replacement under Alternative 2B. The Trust is currently revising its 2013 costs for OU1. When EPA has these revised costs, EPA will share them with the City of Kalamazoo. EPA should be able to provide you with Trust statements moving forward.

7. **Status of tour of USEPA Research & Development (R&D) sites for Mayor Hopewell**

   Response: Attached is information regarding various EPA labs and research facilities and their research programs. Chuck Maurice of Region 5 would be happy to arrange appointments for Mayor Hopewell at any of these labs/facilities. Chuck can be contacted at Maurice.charles@epa.gov or (312) 886-6635.

Additional Questions based on April 12, 2013 Answers from USEPA-Region 5 to City of Kalamazoo Questions dated March 22, 2013

1. **Landfill Area**

   a. **What will be the estimated height of the new landfill area of approximately 45 acres if Alternative 2B is implemented? This estimate and associated drawings should be available or pursued if Alternative 2B is supposed to be a viable option for public acceptance.**

b. What impacts will the remediation efforts, both immediate and long-term, have on the Panelyte site? Will there be additional restrictions imposed on the Panelyte site as a result of implementing Alternative 2B?

c. What is the current estimate of green space that would be available along Portage Creek if Alternative 2B is implemented? If public acceptance of Alternative 2B is desired, it seems that such estimates should be available prior to selection of the alternative. What signage would be posted along the disposal site fencing if Alternative 2B is implemented? What restrictions, if any, will be imposed on any trailway development along Portage Creek?

2. Panelyte Site

a. The City was already aware of ongoing environmental concerns at the property. What options are available to move forward since a "comfort letter" appears to be unattainable?

3. Western Disposal Area

a. The City will be re-reviewing the data that is in the Feasibility Study. A significant question the City has relates to a large mass of contaminated residuals remaining in contact with the groundwater in the consolidated disposal area if Alternative 2B is implemented. Even though the disposal area will be capped, groundwater will continue to flow through contaminated residuals and "vent" to Portage Creek. How will USEPA deal with ongoing PCB contamination that will occur as groundwater in contact with the contaminated residuals vents to Portage Creek? When PCB concentrations exceed acceptable levels, what treatment schemes will USEPA employ to ensure PCB contamination does not continue?

The following statement is provided in item 3.a. in the response to the City on May 22, 2013: "Alternative 2B will prevent contaminated waste material at the OU1 landfill, including contamination in the WDA, from impacting groundwater and surface water." How specifically will Alternative 2B prevent contamination via venting groundwater into Portage Creek? What have studies at other similar "waste in place" disposal sites shown in regards to contaminated residuals remaining in contact with groundwater and any associated venting to surface water? Have such studies been conducted? Also, how will Alternative 2B prevent the contaminated waste from impacting the groundwater when portions of the contaminated waste already physically reside in the groundwater and will continue to be

saturated with groundwater? This seems to be a contradictory statement since the contaminated waste will remain within the groundwater.

b. As noted above, City staff will be reviewing the Remedial Investigation data regarding these issues. Under 3.b.iv., there are a few questions: Can you please define "extensive" based on the response provided? In addition, how specifically did groundwater and soil investigations specifically show that waste (i.e., drums or barrels) had not been disposed of in the WDA?

4. b. The City appreciates a more responsive approach to the Cork Street Landfill issues. However, the City's specific suggestion from the March 12, 2013 meeting was to have numerous groundwater issues near the Allied Disposal Site coordinated by a single agency. This would include the current Strebor, Inc. site located immediately west of the Allied Disposal Site. Will such coordination be conducted to ensure the City is kept informed of activities/issues at such sites? Will the USEPA be coordinating such efforts? If sentinel wells are installed as part of Alternative 2B will such wells be physically located away from the Allied Disposal Site to ensure that there is adequate monitoring of any off-site migration? How will such wells be utilized to monitor other contaminated groundwater sites in the immediate area and will USEPA-Region 5 be coordinating any such monitoring and oversight?

5. Operational Costs

b. Can the USEPA please expand upon this response? What are specific estimated annual projected costs for each of the first 5 years of operation of the Allied Disposal Site if Alternative 2B is selected? What rate of return on investment of the $3 million allocated to operation and maintenance was used to determine if this amount was adequate? Will the State of Michigan be required to supplement these funds if their investment strategy does not provide adequate ongoing funding for O & M costs? Is the State of Michigan required to keep these funds separate from other funds?

e. If the remedy for the Allied Disposal Site proves to be ineffective (as determined by USEPA during their 5 year review) where would additional funding come from to take appropriate action? What if those funds are not available?

f. The Lyondell Environmental Custodial Trust owns the former Allied Paper property south of Alcott Street. What happens if/when the Lyondell Environmental Custodial Trust runs out of money both in general and in their separate tax escrow account? What happens if the property cannot be sold, i.e., there is no willing buyer? What mechanisms are available if the Trust decides to walk away from the property?

There are some other general questions that have come up that the City would also like to have addressed.

1. Under the "Summary of Remedial Alternatives" provided to the City of Kalamazoo at the March 12, 2013 meeting, Alternative 3 ("Removal and Off-Site Disposal"), the estimated capital cost was listed as $366 million. This amount is close to $130 million more than the estimated capital cost previously provided ($238 million). What is the rationale behind such a large increase (over 50%) in Alternative 3? What specific issues have arisen that have caused this estimated cost to increase this significantly?

2. In discussions with The Environmental Quality Company (EQ), the City has been told that EQ has not been contacted by either USEPA-Region 5 or its consultant about Alternative 3 under the Summary of Remedial Alternatives. EQ owns and operates the closest TSCA landfill to the Allied Disposal Site and would likely be the selected repository for PCB waste excavated from the Allied Site. Why wasn't EQ consulted regarding potential costs associated with Alternative 3?

3. The City of Kalamazoo has obtained a preliminary estimate of treatment costs associated with its Central Well Field in the event that the aquifer serving the well field should become contaminated with PCBs. Current 2013 estimated capital costs are approximately $3.4 million to provide treatment using activated carbon. If the City is in the position of needing to provide such treatment due to migration from the Allied Disposal Site, would Lyondell Environmental Custodial Trust and/or the USEPA-Region 5 be responsible for any such costs incurred by the City for such treatment?

4. It was indicated in the teleconference on Tuesday, April 16, 2013 that a database of similar situated sites as the Allied Disposal Site within USEPA-Region 5 will be provided. The City is very interested in reviewing these sites particularly in regards to public acceptance of the alternative(s) selected. One site that the City

has become aware of is in St. Louis, Michigan called the "Velsichol Site". Any information that USEPA-Region 5 can provide regarding this particular site would be appreciated.

2) Does the EPA's cap and monitor option adequately address the issue of shallow or up-migrating ground water percolating through the site beneath the cap? If not , there will be endless collection and treatment costs.

Allied is different than 12th street or Willow as it is in town.

Willow is even closer to residential areas. The area surrounding Willow is an EJ area. If someone suggests that assign a lower value to the residents in that area, we just won't do that. We absolutely believe that Willow and 12th are protective. Playing favorites between communities is not what EPA does.