



WILDWOOD

August 25, 2015

Mr. David Williams
U.S. EPA Region 7
Chief, Planning and Preparedness North
Hazardous Material, Oil and Disaster Response
11201 Renner Blvd.
Lenexa, KS 66219

Re: City of Wildwood Comments regarding Ellisville Superfund Site

Dear Mr. Williams:

The City of Wildwood is in receipt of a document title, *Ellisville Superfund Site, Summary of Discussion Topics*, dated July 16, 2015, which provides the U.S. Environmental Protection Agency (EPA) & Missouri Department of Natural Resources (MDNR) proposed long-term strategy for addressing the many outstanding concerns involving the Ellisville Superfund Site. Following is a compilation of comments/questions from the City of Wildwood and its citizens to date. Please be advised that the City of Ellisville may have additional comments, as may other citizens following an eventual public meeting.

GENERAL COMMENTS:

1. Please provide an opportunity for a public meeting, to allow citizens and other interested parties to provide public comments regarding the EPA/MDNR long-term strategy.
2. Please further investigate the surface and subsurface contamination, which remains in the creek bed area at the northeast corner of the Claymont Development property, as identified in the December 2, 2014 Removal Action (RA) Report. Additionally, please analyze the archived Sampling Units (SU) samples for Decision Units (DU) 39, 47 & 48 because: 39 & 48 overlap (this area under Covenant); and, 47 (1.5 acres) and 48 (1.8 acres) are too large to be reduced to a 4 ounce jar and yet retain an Upper Confidence Limit (UCL).
3. Please further investigate the concerns previously identified by Mundell & Associates, which were not addressed as part of the 2012 Removal Action on the Callahan property. These concerns are set out on the attached pages numbered 6-8, items 7 through 10.
4. Please provide an update on the establishment of a trust to facilitate any Long Term Stewardship issues that may surface in the future at any of the sub-site properties.
5. Please provide an update on further characterization of groundwater contamination and the potential for indoor air intrusion into area residences.
6. Please provide a current assessment of the Rosalie property.

ADDITIONAL CITIZEN COMMENTS/QUESTIONS:

1. The 2008 MDNR geo-probe investigation has been omitted from EPA reports, even though there were 8 borings on or adjacent to the northeast corner and all contained soil gas. The Covenant includes this area and since soil gas can rise into the ambient air as toxic vapors, how does the EPA intend to control this current and future health risk?

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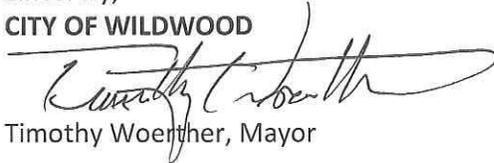
2. In 1987, to address all Missouri (MO) dioxin sites, the EPA established the cleanup guidelines that were concurred with the Centers for Disease Control and Prevention (CDC). Regardless of the land zoning or land usage, the presence of a stream (on or adjacent) requires residential standards, not only to the streambed but also to surrounding surfaces that drain into the stream. Since water/erosion still transports dioxin, has the CDC concurred with the change to the guidelines?
3. The Bliss Covenant area applies to only the 2014 RA area, while the Strecker Forest Covenant includes the streambed and northeast corner which were not part of the RA area. Please explain this discrepancy.
4. What standards are being applied to the monitoring well data?
5. Other than possibly delisting properties off the National Priorities List (NPL) and applying Covenants, what specifically would be the difference between future and past monitoring?
6. In reference to the Removal Action Report for the Claymont Development property, please address the following:
 - a. The Pollution Reports (POLREPS) mentioned possible Potentially Responsible Parties (PRP) -- were any named?
 - b. What were the pre-and-post excavation dimensions for each Excavation Area (EA)?
 - c. What were the dimensions and volume capacity of the retention pond? Since EA-1 was still open, why did water have to be pumped out of only EA-3? Was perched water encountered?
 - d. Did any workers need to upgrade their protective gear to include a respirator?
 - e. Seven samples from roll-off boxes and 4 soil samples from EA-3 were submitted for disposal profile sampling. Please extract that lab data and submit it under separate cover. Were landfill standards applied to data?
 - f. The 9-26-13 Site Action Memo did not state a limitation regarding depth. EA-1 has six areas of subsurface exceedances. Please explain why excavation was terminated before attaining the 2,460 ppt standard.
 - g. Fig. 2 Pre-Excavation
 - i. Please add a triangle illustrating EA-1.
 - ii. Soil Boring table is illegible.
 - h. Fig. 2 Post-Excavation
 - i. Please illustrate NPL line in bright color.
 - ii. Please add the 4 cell letters to EA-2.
 - iii. Please clarify EA-1 with Table 3 since it's an odd shape with 4 north walls.
 - i. Fig. 3
 - i. Please illustrate NPL line in bright color.
 - ii. Please add the 4 cell letters to EA-2.
 - iii. Please clarify EA-1.
 - iv. Please add all property lines.
7. Please provide the original application to the Superfund for the Bliss/Ellisville Site.
8. Please provide the 1986 Record of Decision for the Bliss Site.
9. Please provide the 8-22-91 letter from EPA to DNR regarding groundwater monitoring.
10. Please provide the 1996 EPA Region VII Emergency Response and Removal, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal for the Bliss-Ellisville Site, Wildwood, MO, prepared by Ecology and Environment.
11. Please provide the amendment (or change) to CERCLA Law that permits a Covenant to substitute for 5-Year Reviews.

The City of Wildwood remains very concerned with the public health risks that may still remain within the Ellisville Site, inclusive of each of its sub-sites. Therefore, it's critical the EPA and MDNR respond in detail to each of the concerns raised herein.

If you require additional time to gather information to respond to a particular request, please do not allow the need to gather additional information to delay your response to any other request. Furthermore, please advise if you have any questions or require any additional information from the City of Wildwood. Your timely response to these matters is appreciated

Sincerely,

CITY OF WILDWOOD



Timothy Woerther, Mayor

Cc: U.S. Representative Ann Wagner
U.S. Senator Roy Blunt
U.S. Senator Claire McCaskill
U.S. EPA Administrator Gina McCarthy
U.S. EPA Region 7 Acting Administrator Mark Hague
MDNR Environmental Quality Director Leanne Tippett Mosby
MDHSS Director Gail Vasterling
Governor Jay Nixon
Missouri Representative Don Gosen
Missouri Representative Kirk Mathews
Missouri Representative Shamed Dogan
Missouri Senator Dave Schatz
Missouri Senator Eric Schmitt
Wildwood City Council Members
Ellisville Mayor Adam Paul
Ellisville City Council Members

Impact: MUNDELL agrees that given the existing municipal water supply, the shallow aquifer zone does not appear to represent a primary water source for public consumption. However, MUNDELL believes that the groundwater still represents a potential threat to the public (e.g., dioxin and naphthalene among other compounds present above Levels of Concern), and has concern that these potential threats are not dismissed without a thorough evaluation. Even if drinking wells are not a concern, the water in the shallow aquifer zone is part of a dynamic flow system that is not completely understood at this time. As such, MUNDELL believes that the potential exists for this contaminated water to migrate to areas where an exposure pathway is completed.

For example, if the (contaminated) groundwater table rises enough to enter the nearby unnamed tributary during a high water table period (e.g., such as during and after an extended heavy rainfall period), it can pose a dermal or ingestion exposure hazard to anyone who may wade into the creek for recreational purposes. In addition, potential VI issues may be present in nearby residences if the zone of impacted groundwater extends beyond the Bliss property. Also, the contaminated groundwater may make its way to another water system (e.g., Caulks Creek) that is accessed for drinking water, agricultural, or recreational purposes. In addition, given the karstic nature of this area, there may be solution channels that direct shallow groundwater through bedrock material to surrounding springs. In fact, the U.S. EPA report cites Lewis Spring (located 3 miles to the northeast of Strecker Forest) as a discharge point for shallow groundwater from the study area.

Given the additional (potential) routes of exposure other than accessing the aquifer as a tap water source, it would be prudent, as a cautionary approach, to make the continued evaluation of the fate and transport of the impacted shallow aquifer system a priority. MUNDELL understands that the U.S. EPA will conduct dye tracing after groundwater sampling activities are no longer required. It is also hoped that the Missouri Department of Natural Resources (MDNR) is making progress toward delineating the extent of groundwater contamination in this area, and that this information is made available to the public at the earliest opportunity.

1.3 Callahan Site Comments

Item 7: Dioxin Results Collected From Fill

Comment: Although data obtained from the U.S. EPA sampling activities will be beneficial in order to evaluate potential *surface* exposure associated with dioxin, it is likely that the surface sampling that was conducted in DU-1 sampled clean fill, and is not representative of the areas of native soil at depth that remain impacted with historic contaminants.

Basis: The analytical results, reporting limits and LOCs are summarized in analytical summary tables as previously discussed. As such, it does not appear that any dioxin sampling was completed from the DU sampling areas or soil borings below a depth of two ft-bgs. Therefore, the recent sampling results do not provide any indication of whether the chemical impacts within the subsurface soil are above LOCs. The U.S. EPA report does acknowledge that there may be some further risk assessment needed in consideration of future construction worker exposure, but the report emphasizes that, in terms of exposure scenarios, it is assumed that the relevant exposure pathway for residents would be to near-surface soil impacts only.

Impact: MUNDELL's concern with the EPA approach is two-fold:

- a) Restricting the assessment of dioxin soil quality to the near-surface leaves unresolved data gaps that remain as to the extent of dioxin contamination at depth. Based on the

2005 confirmation sampling investigation by the MDNR, the most elevated remaining impacted soil appears to be located (typically) below 7 feet. It is this soil that has the potential to show the highest levels of dioxin. Even though it is not at the surface, it should nonetheless be properly evaluated for dioxin impacts.

- b) The U.S. EPA approach is an attempt to *risk away* any contamination that remains, leaving the prospect of impacted soil remaining in place in areas that could be developed in the future for residential use. While the assumptions being made by the U.S. EPA in regards to likely exposure routes to the public are generally valid, not remediating all the impacted soil will continue to leave a stigma associated with the property, and will also require the application of excessive restrictive covenants and institutional controls in the vicinity of residential areas. This will have a negative influence on development and property values and the peace of mind any property owner would have toward living at or adjacent to the site. As a result, it would seem more appropriate to have a philosophy of removing impacted soil to acceptable conservative residential risk levels (or background levels) and not leaving any doubt as to the safety of the soil. This approach would lead to a greater confidence about property ownership and put to rest the decades of unending suspicion that plagues the area.

Item 8: Clarification of DU-1 sampling

Comment: Based on the dioxin tables and Figure 8, it is unclear whether sampling unit SU-D of Callahan Decision Unit 1 was actually sampled. If it was not sampled, an explanation should be provided by the U.S. EPA.

Item 9: Impacted Soil Encountered During Drilling of MW-C-01

Comment: Based on a discussion of impacted soil encountered during the advancement of boring MW-C-01, impacted soil was encountered, and the well was offset to the southeast approximately 15 feet. Soil impacts in this area should be delineated so that the potential impacts from this soil on groundwater quality can be better addressed.

Item 10: Impacts Downslope of Excavated Drum Fill Area

Comment: Potential soil/water impacts downslope of the excavated drum fill area above conservative residential LOCs may be present.

Basis: Impacted soil was identified at Callahan boring SB-C-41 at approximately the residuum/bedrock interface. Based on a review of available maps, it appears that this area is south of the excavated drum area that would have been backfilled. Boring SB-C-41 apparently was advanced in native soil. As such, the zone of impact appears to have been associated with lateral migration at depth and not from the surface. For instance, PCB arochlor 1260 and toluene are present in a shallow (*i.e.*, 4-6 ft interval) soil sample at lower concentrations relative to deeper soil samples (*i.e.*, the 12-13 ft interval).

Impact: While concentrations were not reported above LOCs, these observations suggest impacts downslope of the buried drum area along the bedrock/residuum interface. MUNDELL also noted that the soil samples for boring SB-C-40 went down only to 4-6 ft. Without access to the boring log, MUNDELL must conclude that based on the depth of impact seen to the south in boring SB-C-41, deeper impacts may be present at the boring SB-C-40 location.

Also, MUNDELL noted that grab samples along the ditch south of the fill area had low level detections of PCBs (Arochlor 1248; 0.24 mg/kg). The U.S. EPA LOC is listed as 22 mg/kg. However, the Missouri RBCA target level (based on a 1×10^{-5} cancer risk) for this compound at the soil surface is only 1.1 mg/kg. Therefore, PCBs are present at the ground surface at levels above the conservative target protective range for residential areas.

MUNDELL recommends further investigation to the south to delineate the deeper impacts observed and also sampling of any leachate seepage downslope in the ravine be considered. Also, given the proximity of residences (approximately 80 feet west of impacted fill area where strong vapors were detected at depth), it is recommended that a vapor intrusion evaluation for the nearest residences be completed as well.

2.0 REMEDIAL ALTERNATIVES AND LEVEL OF SITE CLEANUP

An important question that needs to be answered as it relates to the future use of the Proposed Strecker Forest Development Site is: what is an acceptable level of cleanup to ensure that the interests of the City of Wildwood and citizens are being met? There are two fundamental drivers that influence the level of remedial effort required for site surface and subsurface soils:

- 1) The distribution and concentration of dioxin; and
- 2) The distribution and concentration of other COCs.

Generally, it is expected that the needed effort to address non-dioxin COCs will be included in the remediation of dioxin-related impacts since the two types of contamination are generally intermixed. As such, the possible range of Site remedial alternatives to be considered would include:

- 1) No removal action, with associated institutional controls only (e.g., fencing and signage);
- 2) Removal of existing waste materials and impacted soils to the U.S. EPA non-cancer toxicity index of 50.5 ppt;
- 3) Removal of existing waste materials and impacted soils to the U.S. EPA target 1×10^{-5} excess cancer risk of 45 ppt; and
- 4) Removal of all existing waste materials and impacted soils above background dioxin levels.

Determination of Background Level of Dioxin

MUNDELL reviewed the recent U.S. EPA TEQ results to further assess the distribution of dioxin across the site and to derive a background TEQ level for the Site. MUNDELL first calculated the average TEQ from all Decision Unites (DUs). This resulted in **an average TEQ** of 155.86 ppt. MUNDELL also attempted to derive a reasonable background metric by utilizing the statistical average and standard deviation from the data set. The **background TEQ metric** was taken to be the average of the data set plus three standard deviations. Anything above this level would be considered non-background. A background TEQ of 1,373 ppt was calculated, equivalent to a 3×10^{-4} risk level.

MUNDELL then removed from consideration DUs located outside of the residential development area with a TEQ above the U.S. EPA 50.5 ppt level of concern (LOC). This resulted in a background TEQ of 46.27 ppt, which is equivalent to about a 1×10^{-5} risk level. The implication of this step is that a targeted soil removal across the relevant DUs outside the planned