

## Remedial Actions Options Report

623 8<sup>th</sup> Street, Stoughton, WI

BRRTS #02-13-555627

Report dated: August 10, 2010

City of Stoughton Comments:

- 1) Executive Summary, 3<sup>rd</sup> paragraph, the first sentence should also reference that groundwater samples were also collected and submitted for laboratory analysis in four of the probes that were advanced on June 2, 2010 as part of the subsurface contamination assessment activities. *This can be added.*
- 2) Executive Summary, 3<sup>rd</sup> paragraph, last sentence – This sentence indicates that site assessment activities conducted on the subject property in June and July 2010 does not contain PAH, VOC or heavy metal concentrations above regulatory enforcement standards (ES). However, the conclusions and recommendations of the June 2010 Contamination Assessment Report state that groundwater contains PAH concentrations above enforcement standards. In discussion with Ayers staff in attendance at the July 2010 RDA meeting, it was clear that the ES levels in groundwater samples was a driving factor for additional site investigation and groundwater sampling. Also, in Appendix A of the Remedial Action Options Report (August 2010) Table 5 indicates that Benzo(a) pyrene exceeds enforcement standards in Sample I.D. GP-2 and GP-7. Additionally, Table 5 also indicates ES exceedances for Benzo (b) fluoranthene and Chrysene in groundwater collected from GP-7. The June 2010 Contamination Assessment Report recommended that the City of Stoughton conduct additional assessment activities to define the extent of PAH contamination in groundwater below the property and report a hazardous substance release to the WDNR in accordance with Sec. 292.11 Wis. Statutes. Benzo(a)pyrene is also detected above a preventive action limit (PAL) in monitoring wells MW-4 and MW-5 as shown in Table 5 in the Remedial Action Options Report. PALs are also noted for Benzo(b) fluoranthene and Chrysene.

*PAH were detected above ES in groundwater samples collected from soil probes. NR 141 monitoring wells were subsequently installed to verify the concentrations detected in the probes. Laboratory analysis of groundwater sampled from NR 141 wells did not confirm concentrations of PAH above ES. Since PAH were not detected above ES in the most recent sampling round, conducted from NR 141 monitoring wells, and concentrations detected in samples collected from soil probes were not confirmed, PAH concentrations above ES are not considered to be present.*

*Installation of NR 141 wells was warranted to verify the results of groundwater samples collected from the probes. If the wells were not installed, the only groundwater data we would have would indicate that ES for PAH were exceeded which would require inclusion of this site on the GIS registry for groundwater. There are concentrations of PAH above PAL, as determined from sampling of NR 141 wells, however these concentrations do not require remedial action which was the focus of the Remedial Action Option Report.*

- 3) Page 4, Groundwater paragraph, last sentence – groundwater flow across the site was determined to be southerly toward the Yahara River. Was this determined from groundwater elevation measurements taken from the monitoring wells installed on the site?

*Yes.*

- 4) Page 4, Nature and Extent of Contamination paragraph, first sentence – soil beneath the site contains PAH, lead, and arsenic and concentrations greater than non-industrial direct contact residual contaminant levels (RCLs). So does that mean we are using residential RCLs? Please clarify.

*Because the site is being redeveloped for residential (non-industrial) use, contamination in soil exceeding industrial standards has to be remediated to non-industrial standards or removed from the site. Contaminant concentrations above non-industrial standards in soil can remain on site but engineering control (cap) must be constructed to prevent direct human contact with the contaminated soil.*

- 5) Page 5, first sentence top of page – Groundwater collected from NR 141 wells installed on the site did not contain PAH, VOC, or heavy metal concentrations about enforcement standards. However, groundwater samples from GP-2 and GP-7 did have detections above ES levels (see comment 2 above). Is there a distinction between groundwater samples collected and analyzed from geo-probe versus monitoring well collection? If that is the case, then this was not indicated in the June 2010 Contamination Assessment Report or with consultation from Ayers representatives at the RDA meeting.

*A geoprobe is not considered by the WDNR to be a point of enforcement standard application. Groundwater samples were collected from the geoprobe as an inexpensive means in determining the presence or absence of contaminants of concern.*

- 6) Page 5, ,second paragraph, middle of page, fifth sentence – report indicates that material removed during the excavation of the stormwater basin will contain contamination, primarily PAH. Suggest to use the term “most likely”, instead of “will” in this situation.

*This can be revised.*

- 7) Page 7, Remedial Action Objectives section – consider a bullet point that indicates that infiltration of surface water below the property may be reduced via the proposed parking lot surface serving as a cap over the property.

*This can be inserted*

- 8) Page 7, Remedial Action Objectives section, last bullet – future redevelopment activities, beyond this project?

*This refers to the proposed upcoming development as indicated in the RAOR and shown on the RAOR figures.*

- 9) Page 7, Issues Affecting Remedial Options section, second bullet – expand and define a bit more on what is meant by compressible soils. Would specific construction practices entail pilings used to provide structural support?

*This bullet was put in the RAOR to explain the rational for having to remove a foot of contaminated soil and replace with a foot of clean fill in cap areas that will be landscaped. If not for the poor site soils, a one-foot cap of clean soils could be placed over contaminated soils currently exposed at the ground surface. Based upon conversations with the engineers for the project, it was understood that it was preferable*

*to maintain current site grades instead of raising grades in landscaped areas with the cap. The engineering and geotechnical aspects of this project are best answered by the engineers for the project.*

- 10) Page 9, Environmental Feasibility section – consider adding to the end of the sentence – extent of contamination, and the physical nature of the site (e.g., groundwater elevation)

*This can be modified.*

- 11) Page 9, Economic Feasibility section – What about the back filling of the site with material suitable for construction and bring the property back up to grade? Some additional detail on how volume and estimated cost numbers were derived would be helpful.

*That is part of this alternative. Contaminated soil would be excavated to the water table or an estimated depth of four feet and then backfilled with clean material to match existing grade. The volume of soil was based upon excavating soil to the four foot depth within the estimated areas of contamination shown on Figure 3. Cost estimates were derived based upon a similar project conducted within the last year. Quotes were also obtained and used to calculate the estimated costs.*

- 12) Page 10, Technical Feasibility, second paragraph, last sentence – removing soil from the stormwater basin to be considered for back fill – is this a preferred soil type (e.g. sandy loam) or would it have fail amount of silt or clay content for construction purposes?

*From an environmental standpoint this material could be reused on site. Suitability for construction purposes would be determined by the project engineer.*

- 13) Page 12, Alternative 3 – No Action – Was the WDNR’s project manager (understood to be Melissa Enoch) contacted and consulted about this no action alternative? It seems interesting that we go from a situation of ES and RCL issues, recommendations of timely hazardous substance release reporting to the WDNR, and a remedial alternative presented that includes excavation of the entire 623 8<sup>th</sup> St property – to a No Action alternative.

*The WDNR project manager is Mike Schmoller. The No Action alternative is a baseline that is used to document the result of not performing remediation at the site. This alternative is standard for Remedial Alternatives Analysis.*

- 14) Page 13, Summary of Preferred Alternative, first paragraph, fourth sentence – Do we know there will be contaminated soil in the proposed stormwater basin location (shown on drawing No. 3) based on soil sampling information? It appears that MW-4 is the one location that is located in the basin area, GP-8 and GP-12 are close. Some explanation on estimated extent of impacted or contaminated soil would be helpful. Also, some additional information on how the estimates depicted in drawing No. 3 for hot spot soil (areal extent) were made would be beneficial as well.

*The estimated extent of soil contamination was based upon the results of assessment activities conducted on the property. The boundaries of soil contamination are conservative estimates and are established to be protective of human health and the environment. The only way to definitively know if contamination exists throughout the proposed stormwater basin would be to install additional probes. The hot spots were determined based upon the detection of contaminant concentrations, either lead or PAH, being above industrial RCL. Soil containing contamination above industrial RCL will require removal from the site unless the contaminant concentrations are remediated*

*below industrial RCL.*

- 15) Page 14, Fill Management section, third sentence - This material will remain on site except in areas of hot spot removal (due to what?) or where excess material is generated during the stormwater basin construction, capping or site grading activities.

*Material identified as hot spot areas contain contaminant concentrations above industrial standards and cannot remain on site at these concentration if the site is being developed for non-industrial purposes. Excess material containing contaminant concentrations above non-industrial standards will be reused on site to the extent practical. Any material containing contaminant concentration above non-industrial standards that cannot be reused will require off site disposal. These areas may include the stormwater basin, areas requiring a cap or other areas where grading may generate excess material.*

- 16) Page 14, Water Management section, second sentence – Analysis of groundwater samples from two GP locations on the site have PAH detections above enforcement standards. How does this factor in to the environmental management plan?

*The handling and disposal of groundwater generated, if dewatering is required during construction activities, would be dependent upon the concentration of contaminants (not necessarily that it is above ES) and volume of groundwater and other parameters as required by the disposal facility.*

- 17) Appendix A page – the title and text on this page should explain more clearly where these data tables were extracted from (e.g., Contamination Assessment Report, 623 8<sup>th</sup> Street, Stoughton, June 2010)

*This can be done*

- 18) Table 1 – Does NE indicate not established?

*Yes*