

# **RESPONSIVENESS SUMMARY**

**Big B Mini Mart** 

Agreed Order No. DE 10813

**FSID No. 386** 

**CSID No. 4901** 

September 12 – October 12, 2016 Public Comment Period

Interim Action Work Plan & SEPA Determination of Non-Significance

Prepared by Washington State Department of Ecology Central Regional Office Toxics Cleanup Program Union Gap, Washington

October 18, 2016

The Washington State Department of Ecology (Ecology) held a 30-day public comment period from September 12 through October 12, 2016 for an Interim Action Work Plan and SEPA Determination of Non-Significance at the Big B Mini Mart Site (Site).

The potentially liable persons (PLPs) are Gurmit Singh Kaila, Short Stop, LLC, BNSF Railway Company, and Big B, LLC.

This Responsiveness Summary provides Ecology's responses to the comments submitted during the public comment period. Based on the comments, clarifying language will be added to the Interim Action Work Plan. Ecology appreciates all those who provided comments.

### **Responses to Comments**

Comments received during the public comment period were provided by:

### Mr. Robert D. Miller, environmental consultant

Ecology appreciates that Mr. Miller reviewed the document and took the time to comment.

### **Comment 1:**

"The IAWP created by Floyd Snider (FS) begins with immediate removal of all USTs. WSCO strongly supports this action, but would like clarification that UST tank removal includes at least the removal of all UST system product lines and removal of on-site drummed fuel and/or waste water as well."

### **Ecology Response:**

The Underground Storage Tanks regulation, Chapter 173-360 WAC, allows piping to either be capped or removed from the ground during a permanent closure. However, this specific issue was posed as a question to Kevin Wilkerson, the UST decommissioning supervisor, on October 12, 2016, and he stated that all of the piping was to be removed during the UST decommissioning. Ecology will be onsite during the interim action to verify that the piping is removed.

As stated in the IAWP, petroleum-contaminated soils will be properly disposed at the Anderson Rock and Demolition Pits landfill, a facility which is permitted to receive such materials. Investigation derived wastewater and other liquids removed from the subsurface will also be properly disposed at a facility permitted to receive such materials and specific wording referring to that will be added to the IAWP to make that action more explicit.

### **Comment 2:**

"In our opinion the IAWP proposes only a feeble and a grossly inadequate attempt to remove free product from groundwater that is destined to fail the intended purpose. I remind Ecology that removal of free product is not an option. It is required by Washington State law, and is also required by the US EPA without regard to cost. The IAWP states the free product removal is limited to one day within the tank pits, i.e., the day after the tanks have been removed.

A) Since the plan of action is to leave petroleum saturated soil surrounding the tank pits inplace, the free product will most assuredly leach back into the tank pit for weeks to months after tank removal. Hence, we would like to see the tank pits left open as ponds and periodically skimmed off until such time that free product no longer continues to emerge and cover the UST ponds. We suggest that gravel in the bottom of the UST pit be excavated until sufficient depth is achieved such that soil achieves MTCA, method A requirements. A possible alternative to further tank pit excavation may be to stir petroleum contaminated pea gravel and native gravel underwater. For example, a trackhoe bucket could be used to stir the petroleum contaminated gravel lying on the tank pit floor. This endeavor will release trapped submerged free product and allow it to float to the surface, so that, accumulated floating product may be skimmed before backfilling the pit.

- B) The focus on 7 feet depth of trench mentioned in the IAWP seems too shallow and inappropriate, rather we recommend that the focus should be field verified trench depths of encountered petroleum saturated soil and free product that appears trapped between soil particles wherein 7 feet depth should be stated as a secondary minimum depth requirement. At the Astro113 site we discovered that it was necessary in some locations to dig to 8.5 or 9 feet depths to satisfy MTCA, method A requirements and to remove trapped free product. We also discovered that free product had been migrating through the top 1 foot of underlying native gravel, and not just through the overlying native silt and fill materials where the static water levels have been previously recorded. Although noticeably more difficult to achieve, we suggest that Big B be prepared to excavate the top of the underlying gravel formation, while bracing the trench excavation against cave-ins. Failure to address the full depth of free product globules will not stop the continued migration of the petroleum product through the preferential pathway of the underlying native gravel formation.
- C) The SEPA Environmental Checklist states "The interim action is tentatively expected to continue over a period of six months or approximately until March 2017." We assume the Checklist includes the proposed trench and two water skimmers. The Checklist date by Ecology is in stark contrast to Floyd Snider's IAWP later date. We support the IAWP, but not focused on the worst six months for free product removal as cited in the Checklist. From firsthand experience, we know that skimming free product during the winter months will be plagued with freezing weather, which typically causes equipment failures and liquids inside of tubes and above ground tanks to freeze. During the same period a high groundwater table with cold water will be present, wherein free product typically becomes more viscose (less apt to migrate) and will remain largely trapped between soil particles. We suggest that the time horizon for free product recover be extended and vigorously pursued when conditions are favorable, so as, to maximize the amount of recovery and provide better cost efficiency.
- D) Figure 1 of the IAWP (attached) clearly shows free product over 1/2 ft in thickness nearby the property boundary between Big B and WSCO sites. In addition, we at Robert D Miller Consulting, Inc submitted to Ecology a groundwater report documenting that samples collected on June 30, 2016 on WSCO's property contain large amounts of lead in all of the up gradient wells (MW1, MW12, MW13 & MW14) on WSCO property, except MW15. Free product was previously observed at time of our monitor well installation but thickness was not measured in the same four wells. During the June, 2016 monitoring event, concentrations of total lead above MTCA, method A only occurred at the north end of the Astra site. Hence, Floyd Snider's Figure 1 mis-represents and clearly understates the full extent of free product and petroleum hydrocarbons from Big B's release onto the Astro 113 site. Further, WAC 173-340-200 defines "Site" the same as "Facility" and states in part "...any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located." Therefore, property boundary between Big B and Astro 113 site is meaningless in regards to the extent of the Big B release; and this needs to be acknowledged and addressed as part of their immediate effort to stop the continuous spread of free product. We submit that Big B has an equal or greater obligation to remove free product from off- site properties, such as the Astra 113, than it does to remove product from its own property.
- *E)* The IAWP proposes two skimmers in a 90 ft long pea gravel filled trench with no induced groundwater removal, wherein the trench is oriented perpendicular to the flow of groundwater. As a hydrogeologist with experience in controlling groundwater for the purposes of contaminant control and dewatering for the construction of high rise buildings, dam repairs, and underground utility lines; it is my professional opinion that the current

trench design with two skimmers will prove grossly inefficient and will be capable of capturing little free product even if groundwater is simultaneously extracted. As presented by Floyd Snider, I suggest that free product will primarily pass through the trench and beyond. I suggest that the geometry and details of the design imped recovery. Specifically, each skimmer will need to clear about 45 lineal feet of product from the proposed 90 feet long trench, and must do so in a tortuous pathway around thousands of particles of pea gravel, while simultaneously competing with a groundwater flow direction that is perpendicular to the trench orientation. To measure the efficiency of Floyd Snider's design, I suggest that the trench include three monitor wells, one at each end of the trench and the third half way between the two skimmers. The wells will allow measurement points of product thickness as compared to those at locations of the skimmers. Be aware, that we made an attempt to remove free product from the former observation wells within the pea gravel filled UST pit at the Astro 113. Our attempt failed to reduce product thickness more than 20%, despite utilizing a 10 gpm submersible pump, which created about one foot of drawdown and pumped hundreds of gallons of liquids. Specifically, at no time did the drawdown created by pumping from any one of the three observations wells achieve any noticeable thinning of free product in the other two wells. In my opinion the current design of the Floyd Snider trench will fail to achieve its goals for several reasons: 1. At 7 feet depth, it is likely too shallow to capture the free product through the primary migratory pathway (top of gravel formation) at times of low groundwater levels; 2. The trench layout does not capitalize upon utilization of the consistent groundwater flow direction to bring the free product to the water skimmers; 3. The design does not prevent continuous migration of free product through the down gradient sidewall of the trench; and 4. The location of the trench has no impact on free product that has already migrated beyond Big B's property boundaries and will uncontrollably continue to spread across the Astro 113 site."

#### **Ecology Response:**

A) In general, an interim action is distinguished from a cleanup action in that an interim action only partially addresses the cleanup of a site as the process is described in Chapter 173-340-430 WAC of the Model Toxics Control Act (MTCA). As stated in Chapter 173-340-450, the minimum objective of a free product removal interim action is cessation of free product (separate phase) migration. In addition to the trench recovery system, the UST system decommissioning and associated removal of petroleum-contaminated soils and light nonaqueous phase liquid (LNAPL) are expected to address the issue of potential LNAPL migration and to a more limited extent, the associated impacts of LNAPL.

The suggestions to implement more aggressive measures are more appropriately addressed under a Feasibility Study. Ecology is concerned that imposition of more aggressive measures may lead to unintended consequences. For example, the suggestion to leave the tank pits open for a period of time has merit provided the length of time for having an open pit is limited due to potentially complicating factors.

However, weather conditions may lead to the formation of a thermal inversion which can aggravate air quality or lead to vapor/odor complaints based on prevailing wind direction.

B) The design of the trench including the 7-foot depth is based on Floyd Snider's evaluation of the data collected during the remedial investigation. This data is derived from their observations and measurements obtained from the monitoring wells, piezometers, and test pits at the Big B Mini Mart Site. Investigations at the two properties show that site conditions vary.

- C) The length of time for operation of the trench recovery system is not limited by the IAWP. The IAWP states that the performance of the recovery trench will be assessed over a 6-month period. Per the IAWP, Operations and Maintenance (O & M) of the LNAPL recovery system will consist of measurements on a weekly and monthly basis over the evaluation period. During this time, system performance and other relevant information will be observed and documented. Elements of the LNAPL recovery system as shown in Figure 3 of the IAWP will be inspected during these site visits by the PLPs' agent. During these inspections, maintenance steps can be taken to mitigate the effects of the weather that may impact the mechanical elements of the system. Again, the length of time for operation of the trench recovery system is not limited by the IAWP.
- D) To Ecology's knowledge, LNAPL has not yet been observed as a separate phase liquid at the north end of the Toads Express Mart & Deli 113 (aka Astro Mart 113). To date, the data does not demonstrate that a contiguous LNAPL body extends across both of the properties. With regard to the dissolved concentrations of contaminants, Ecology is aware that each property has experienced a distinct release based on the investigations at each property.
- E) The design of the LNAPL recovery system was initially proposed by Floyd Snider. The IAWP does allow modification or variation from the initial design upon further evaluation. The performance evaluation is expected to cover a six month duration as described in the IAWP. However, the duration of free product recovery is not specifically limited under the IAWP.

## **Comment 3:**

"WSCO requests Ecology to set a time limit for free product removal, such that, should the proposed free product removal system(s) fail to achieve free product removal by some reasonable date, Big B agrees to physically remove the saturated soil and free product shortly thereafter."

# **Ecology Response:**

This interim action addresses LNAPL recovery consistent with Section 450 of the Model Toxics Control Act (Chapter 173-340 WAC). A setting of a specific time limit for LNAPL recovery is not explicitly stated as a requirement under this Section.

Also, the data collected to date does not indicate an imminent hazard posed by the LNAPL under current site conditions and which would warrant more immediate action within a narrow time frame. Ecology will continue to monitor the site for changes and respond appropriately.

# Comment 4:

"WSCO requests Ecology to set a reasonable time limit for Big B to cleanup petroleum contamination beneath the Astro 113 site to MTCA, method A criteria."

# **Ecology Response:**

The issue of determining a reasonable restoration time frame will be dealt with during the selection of cleanup actions that is part of the Feasibility Study portion of the Agreed Order. The Feasibility Study will be produced after completion of the remedial investigations. The interim action for LNAPL recovery may continue throughout this entire process depending on site conditions and other factors.