RESPONSIVENESS SUMMARY

PUBLIC COMMENT PERIOD FOR
ENGINEERING DESIGN REPORT
May 4 – June 4, 2009

Prepared by
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
300 Desmond Drive
Olympia, Washington 98504-7775

June 2009

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Site Information

Address: 2201 6th Aveune, Milton
Site Manager: Dom Reale
Public Involvement Coordinator: Meg Bommarito

In 2008, the Washington Department of Ecology (Ecology) entered into a Consent Decree with Murray Pacific Corp (Murray Pacific) to begin cleanup actions at the B&L Woodwaste site, located along the border of Milton and Fife, Washington.

As part of the agreement, Murray Pacific developed an Engineering Design Report to describe in detail how the first phase of the final cleanup actions would be implemented and maintained. Generally, the cleanup consists of construction of a sub-surface wall around the landfill, pumping and treatment of wetland groundwater and other remedial measures.

The comment period for the Agreed Order ran from May 4 – June 4, 2009. Public comments and Ecology's responses are summarized in this document.

Site Background

The B& L Woodwaste landfill was used from mid 1970's until the early 1980's. Woodwaste, mixed with soil and Asarco slag, originating from log sort yards in Commencement Bay were taken to this site for disposal. The Asarco slag leached arsenic into the soils and groundwater.

In 1982, the Commencement Bay Nearshore/Tideflats area, including Hylebos Waterway and the B&L Woodwaste site, were added to the National Priorities List by the Environmental Protection Agency (EPA). The B&L Woodwaste site, which includes the landfill and surrounding ditches and wetlands, was named as a source of arsenic, copper and lead.

In 1992, Ecology issued an Enforcement Order requiring Asarco, Inc. and other responsible parties (Murray Pacific, Louisiana-Pacific and Executive Bark) to do the following:

- Consolidate woodwaste on the 18 acre property into an 11 acre landfill.
- Construct a multi-layer capping system to prevent rain from flushing contamination from the waste.
- Install and operate a groundwater monitoring well system.
- Create a plan to address any failure of the remedy.

In response to a discovery of elevated arsenic in groundwater at the site, Ecology completed an extensive study of the wetland area and found:

- Dissolved arsenic levels in the groundwater in a nearby wetland were above cleanup standards.
- Some waste at the bottom of the landfill was in contact with the water table during the winter months.

- Plants and animals in the nearby wetland did not appear to be experiencing any toxic effects.

In 2002, Asarco's funds became unavailable and they were unable to complete the rest of the Cleanup Action Plan. In **2005**, Ecology amended the original Enforcement Order and required the liable parties (PLPs) to complete:

- An evaluation of potential remedies to contain the release of contaminated groundwater from the site.
- An investigation of the wetland area to determine what remedial action is needed.

In 2005, Asarco entered into bankruptcy proceedings and has not contributed towards cleanup efforts since that time. Murray Pacific has contributed to the evaluation of potential remedies and preparation of the Cleanup Action Plan.

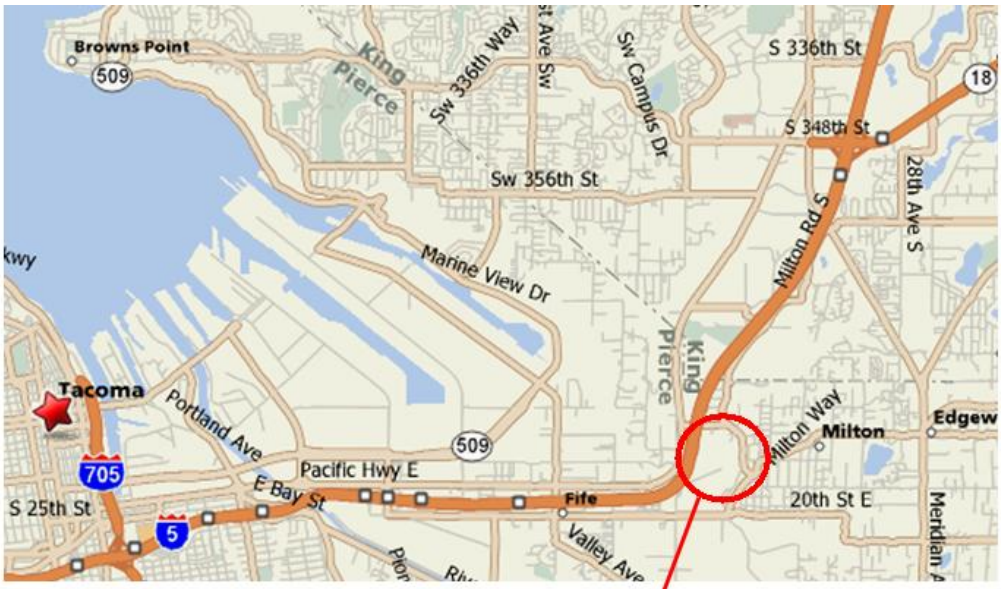
In July 2007, the draft Cleanup Action Plan (CAP) was finalized after a public comment period. Ecology entered into bankruptcy court proceedings with Asarco and settlement negotiations with Asarco, Murray Pacific, Wasser and Winters and Louisiana Pacific related to those proceedings.

In 2008, Ecology and Murray Pacific Corp (Murray Pacific) entered into a Consent Decree requiring Murray Pacific to implement the Cleanup Action Plan which required:

- Completion of an archeological survey of the area to determine if cultural artifacts are present.
- Design and construction of the cleanup remedy detailed in the CAP.

As part of the 2008 agreement, Murray Pacific developed an Engineering Design Report to describe in detail how the first phase of the final cleanup actions would be implemented and maintained. Generally, the cleanup consists of construction of a sub-surface wall around the landfill, pumping and treatment of wetland groundwater and other remedial measures.

Site Location



Comment #1: Jacquelyn Whalen

From: lujqwhalen@comcast.net [mailto:lujqwhalen@comcast.net]
Sent: Thursday, June 04, 2009 3:20 PM
To: Reale, Dominick (ECY)
Cc: lneal@cityofmilton.net
Subject: Comment on EDR for B&L Woodwaste Cleanup

Comments on the Engineering Design Report on the B & L Woodwaste site; Facility Site ID# 1203.

To Dom Reale, Project Manager; Washington Department of Ecology SWRO Toxics Cleanup Program

I live in Milton Washington. I am a water customer of the City of Milton Utility. I continue to be very concerned about ground water contamination and degradation of the nearby wetland and down gradient water systems. My first choice is removal of the Landfill. The Hylebos watershed, Commencement Bay, the wetlands nearby the cleanup site, and the associated aquifers are irreplaceable, valuable ecological systems calling for lasting effective protection. I am glad that more intensive protection is about to commence!

City of Milton Water Utility water wells:

1. I want more acknowledgement of the impact of B & L Woodwaste site pollution to the groundwater supplying our water wells. I did not find much information in the EDR noting the potential or actual damage to - or endangering of - our water supply.

2.. I am very concerned that the cleanup plan's groundwater extraction for hydraulic gradient control beneath the landfill will lower the availability of water to the Milton water Utility customers and will force the utility to drill for more water elsewhere or force purchasing water form a different water supplier.

3. There should be more monitoring wells installed to confirm that the aquifer that serves the Milton Water Utility is not in jeopardy and that Milton's wellhead protection program is not in danger because of the B & L Woodwaste site contamination of groundwater and surface water systems. The Milton water wells left unprotected have become monitoring wells for arsenic contamination from the B & L Site. This is not acceptable. The direction of the arsenic plume can shift, soil hydrology can change. Monitoring wells should be installed to detect contamination before the pollution corrupts the aquifer and or the surface water between the site and the water wells.

4. Where/What is the plan for mitigating/remediating the impact to the Milton Water Utility in the event that the B & L Woodwaste site damages the Utility?

5. Protection of the water wells is additional protection for all the well being of any other water/hydrology system in the area.

Earthquake damage:
I am concerned about the strength of the remedial action taken to implement the containment action plan in the event of an earthquake. When the next quake occurs, is

there a standard in place that would call for an immediate monitoring of the test stations and fmore requent intervals of monitoring to ensure that the containment systems have not been compromised? Also, what are the protections in place to fund and implement a repair if necessary?

SR 167/Interstate 5 Interchange:
Is the B & L Woodwaste site included in the analysis of the Department of Transportations Environmental Impact Statement so that the construction of Hwy 167 intersecting with Interstate 5 will not damage the cleanup actions at the Woodwaste site?

Costs:
I think that it is much better to pay for more intensive remediation actions now than risk higher long term costs to extract and treat arsenic contaminated groundwater in maintenance and operation of the cleanup action program.

Flooding:
100-year floods are happening far more frequently and stormwater in general is becoming more problematic with more intensification of impervious surfaces. I ask for more worst case scenario investigation to take place to ensure that the barrier wall, trench system and ponds associated with the cleanup will withstand the trend of increasing frequency and intensity of flooding that we are experiencing in the local water shed and the Commencement Bay area.

I appreciate the opportunity to comment on the cleanup plan and access to all the documents related to the cleanup action plan on the ecology website. I can see that this is a a complicated and indepth process. I wish you great success in achieving total removal of contamination produced by the B & L Woodwaste site.

Thank you for your consideration of the issues I have listed.

Jacquelyn Whalen

Ecology Response

Ecology appreciates your comments on the Engineering Design Report (EDR) and the cleanup activities at the B&L Woodwaste Site. Our responses are summarized below.

Comment 1: *"I want more acknowledgement of the impact of B & L Woodwaste site pollution to the groundwater supplying our water wells. I did not find much information in the EDR noting the potential or actual damage to - or endangering of - our water supply."*

Response: Information regarding the groundwater contamination at the site was provided in the Cleanup Action Plan (CAP) and in the attached Groundwater Alternatives Evaluation (GAE), both submitted for public comment in June 2007. The GAE Appendix B, "Drinking Water Exposure Pathway Factors" addresses these issues specifically. The CAP is still available on the Ecology website for your reference.
http://www.ecy.wa.gov/programs/tcp/sites/B_L_Woodwaste/B_L_woodwaste_hp.htm

The risk of contamination of City of Milton municipal wells from the B&L Site has been considered as part of multiple investigations dating back to 1990. To our knowledge, arsenic has not been detected in any public wells maintained by the City of Milton, including the two Milton municipal wells located closest to the B&L Woodwaste Site, Wells No. 3 and No. 9. These and other Milton wells are located upgradient of the B&L Woodwaste Site, so that the groundwater flow direction transports shallow arsenic contamination away from these wells, which draw water from depths of 78 to 200 feet below ground surface. Investigations have shown that the shallow groundwater arsenic contamination from the Site does not flow downward because of a combination of a low permeability soil layer beneath the contamination and an upward flow of groundwater from deeper to more shallow depths. Thus, the deeper Milton wells are naturally isolated from the shallow site contamination. The existing level of protection will be increased by installation of the containment system described in the EDR, along with pumping and treatment of the shallow, contaminated groundwater planned for implementation in future phases of remedy construction.

Comment 2: *"I am very concerned that the cleanup plan's groundwater extraction for hydraulic gradient control beneath the landfill will lower the availability of water to the Milton water Utility customers and will force the utility to drill for more water elsewhere or force purchasing water form a different water supplier."*

Response: The planned groundwater extraction system will extract groundwater from the shallow aquifer beneath the landfill and adjacent wetlands, from depths of approximately 20-30 feet below ground surface. The remedy selected will minimize the amount of groundwater recovery needed to address Site contamination. The volume of groundwater that will be extracted is so small that it is expected to only impact groundwater levels in the immediate vicinity of the wells. The extracted groundwater will be re-entered into the wetland system, once it has been treated to achieve Ecology discharge standards. Therefore, the net reduction in wetland waters should be near zero.

Additionally, groundwater extraction in all areas other than immediately beneath the landfill itself will occur over a limited time. The Milton wells extract water from a deeper aquifer at depths of 78 to 200 feet below ground surface. Previous investigations indicate there is no connection between the deep aquifer that supplies the wells and the shallow aquifer in the area impacted by the landfill. Therefore, we do not expect to affect the Milton wells. As discussed in the EDR, an extensive assessment of the hydrogeology of the area is included as a key component of the cleanup action underway. This study will identify potential impacts related to the remedy.

Comment 3: *"There should be more monitoring wells installed to confirm that the aquifer that serves the Milton Water Utility is not in jeopardy and that Milton's wellhead protection program is not in danger because of the B & L Woodwaste site contamination of groundwater and surface water systems. The Milton water wells left unprotected have become monitoring wells for arsenic contamination from the B & L Site. This is not acceptable. The direction of the arsenic plume can shift, soil hydrology can change. Monitoring wells should be installed to detect contamination before the pollution corrupts the aquifer and or the surface water between the site and the water wells."*

Response: An extensive monitoring well system is currently in place at the B&L Site and will continue to be monitored in perpetuity. New wells have been installed over the past year to confirm the effectiveness of the planned remedy. In over two decades of monitoring, arsenic has never been detected above cleanup levels in the monitoring wells that are located in between the B&L Woodwaste Site and City of Milton wells No. 3 and No. 9. This is attributed to the fact that the Milton wells are upgradient of the B&L Woodwaste Site, a condition which is permanent. No surface water contamination has ever been identified between the Site and the Milton wells. The ongoing monitoring program assesses arsenic migration from the Site, and the department will provide information to the City of Milton if migration toward their wells is detected.

Comment 4: *"Where/What is the plan for mitigating/remediating the impact to the Milton Water Utility in the event that the B & L Woodwaste site damages the Utility?"*

Response: The ongoing monitoring program, which includes regular sampling of the monitoring well network, is designed to identify arsenic migration. The department regularly evaluates groundwater monitoring results. If the department determines that arsenic is migrating toward City of Milton supply wells, the department will notify the City and work with them to resolve any issues. As described above, the activities described in the EDR will have no impact on the Milton Water Utility. The planned remedy will significantly improve groundwater quality in the vicinity of the landfill and provide for long-term containment of impacted groundwater beneath the landfill.

Comment 5: *"Protection of the water wells is additional protection for all the well being of any other water/hydrology system in the area."*

Response: See responses to comments 1, 2, 3, and 4.

Comment 6: *"I am concerned about the strength of the remedial action taken to implement the containment action plan in the event of an earthquake. When the next quake occurs, is there a standard in place that would call for an immediate monitoring of the test stations and more frequent intervals of monitoring to ensure that the containment systems have not been compromised? Also, what are the protections in place to fund and implement a repair if necessary?"*

Response: The department shares your concern regarding the permanence of the remedy in the event of an earthquake. The slurry wall barrier was selected in part due to its capacity to withstand minor earthquake damage and its capacity for repair in the event of major earthquake damage. The current action is the first step for implementing the full remedy specified in the 2008 CAP. Prior to completing the remedy, detailed plans will be prepared for future operations, inspection, monitoring, and maintenance of the remedy. The future plans will include requirements for a thorough inspection and evaluation of the containment barrier and the landfill cap after an earthquake event to assess their integrity. Corrective action will be taken as necessary, based on the findings of the inspections and testing. Potential costs for repair of the containment system in the event of earthquake damage were taken into consideration during

settlement negotiations with Asarco; funding for repair will be provided by the B&L Woodwaste Trust and/or its future assigns.

Comment 7: *"Is the B & L Woodwaste site included in the analysis of the Department of Transportations Environmental Impact Statement so that the construction of Hwy 167 intersecting with Interstate 5 will not damage the cleanup actions at the Woodwaste site?"*

Response: The Washington State Department of Transportation (WSDOT) is aware of the remedial actions planned at the B&L Woodwaste Site and has been involved in the consultation process for the remedy. The department is working cooperatively with WSDOT to ensure the two projects will be protective of the public and the environment. It is expected that the remedy for the landfill site will not adversely affect the SR 167 project and wetlands mitigation plans.

Comment 8: *"I think that it is much better to pay for more intensive remediation actions now than risk higher long term costs to extract and treat arsenic contaminated groundwater in maintenance and operation of the cleanup action program."*

Response: The CAP included a discussion (Section 5) devoted to evaluating the various cleanup remedy alternatives, including evaluation of waste removal as a remedial alternative. The proposed containment cleanup alternative provides a comparable level of protection to human health and the environment, but at a much lower cost.

The estimated cost of removal ranged from $65 – $150 million. The less costly ($65 – $90 million) removal options, where the waste is removed, but contaminated subsoils remained, still required a slurry wall for containment. Removal of waste and subsoils was estimated at over $100 million. The long-term cost for the selected containment approach was estimated at $20 million and achieves a comparable level of protection as the removal options, albeit with the ongoing need for operation, monitoring, and maintenance, thus it has been selected as Ecology's preferred remedy.

Comment 9: "*100-year floods are happening far more frequently and stormwater in general is becoming more problematic with more intensification of impervious surfaces. I ask for more worst case scenario investigation to take place to ensure that the barrier wall, trench system and ponds associated with the cleanup will withstand the trend of increasing frequency and intensity of flooding that we are experiencing in the local water shed and the Commencement Bay area.*"

Response: The potential effects of flooding were considered by Ecology in the development of the CAP, and management of high water conditions is a central component of the design of the barrier wall and interceptor trench systems. There are several reasons to believe that the remedy is robust enough to withstand repeated flood events:

- The waste is configured as a sloped pile that would be primarily above even the 100-year flood, and the access road where the slurry wall is to be built is well above the surrounding wetlands; multiple 100 year floods have occurred since the landfill cap was constructed in 1993, with no known damage to any element of that system.

- The waste pile is covered with an impermeable cap that will be tied into the surrounding slurry wall containment barrier, thus preventing infiltration of flood waters to the waste.

- The barrier wall and interceptor trench system have been designed to maintain existing groundwater flow conditions and are located above the 100-year flood plain.

- Any excess water that may enter the containment system would be removed through the pumping and treatment system to be added in future construction phases, thus preventing release of contaminated groundwater. The groundwater recovery and treatment system will be designed to maintain operations in the event of 100-year flood events.

- If, in spite of all of the built-in preventive systems, somehow a release of arsenic-laden groundwater from the Site occurs, the groundwater monitoring network has been designed to detect it and arsenic would be transported slowly in groundwater, allowing sufficient time to develop and implement an appropriate approach to address the release.

Comment #2: Joseph s. Alhadeff

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Benaroya

June 3, 2009

Washington State Department of Ecology
Toxics Cleanup Program
PO Box 4775
Olympia, WA 98504-7775

Attention: Dom Reale and Meg Bommarito

RE: Comment on Proposed Cleanup Action
B&L Woodwaste
2201 6th Avenue
Milton, Washington
Facility Site ID # 1203

The Benaroya Capital Company, LLC (TBC) owns Tax Parcel 0420053011, which is adjacent to the B&L Woodwaste site in Milton (Pierce County). TBC acquired this parcel in 2007. Pursuant to the open Public Comment Period we raise the following issues of significant concern regarding the proposed cleanup action:

1. Ecology did not provide written notice of the public comment period to TBC through the MTCA public notice and participation; WAC 173-340-600()4(b) specifically requires notice by mail "to persons who reside within the potentially affected vicinity of the proposed action... [including] all property within and contiguous to the site." Ecology failed in its obligation to notify an adjoining property owner.

2. In a June 3, 2009 telephone call, Mr. Dom Reale indicated that there was sampling of the wetlands on our property in the past and that Ecology issued a "Decision Document" concerning these impacts. We were not previously aware of this sampling and have not been provided a copy of this or other pertinent documentation from Ecology.

3. While this process has been ongoing for two years or more, we first learned about the imminent cleanup action at the B&L Landfill site from a third party just a few days ago and as a result we have not had sufficient time to research the impact of the contaminant migration from the B&L Woodwaste site to our property and the potential impacts of the proposed cleanup action on our property.

4. We request an extension of the public comment period to allow us and our consultants adequate time to review the prior reports in Ecology's files.

5. We are very concerned that the scope of the cleanup may not adequately address potential impacts on our property.

6. We believe additional baseline sampling along the shared property line (northeastern and eastern boundary of the B&L Woodwaste site) should be performed to satisfy all parties that the scope of the proposed cleanup action is sufficient and to allow monitoring during the cleanup action to demonstrate that there is no contamination on our property and that the environmental condition of our property is not being adversely affected by the cleanup activity and plan.

Please contact me as soon as possible to discuss these issues which are of great concern to us.
Sincerely,

Joseph S. Alhadeff
Benaroya Capital Company, LLC

cc: GeoEngineers, Dana Carlisle
Jameson Babbitt Stites & Lombard PLLC, Anne DeVoe-Lawler

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Ecology Response

Thank you for your comments regarding the Engineering Design Report (EDR) for the B&L Woodwaste Site (Site). We have reviewed your comments and prepared the responses below. As you know, we have also scheduled a meeting with you and your consultant to discuss the pending cleanup action being implemented for the Site.

Comment 1: *"Ecology did not provide written notice of the public comment period to TBC through the MTCA public notice and participation; WAC 173-340-60004(b) specifically requires notice by mail "to persons who reside within the potentially affected vicinity of the proposed action ... [including] all property within and contiguous to the site." Ecology failed in its obligation to notify an adjoining property owner."*

Response: The department regrets that TBC was omitted from the extensive list of recipients for public notice related to the B&L Woodwaste Site. We have added your name to the list and you will receive future notices regarding the ongoing implementation of the remedy. We also note that the current action, as described in the Engineering Design Report (EDR) documents for the B&L Woodwaste Site recently issued for public comment, does not directly affect TBC property. As you have indicated, TBC purchased the property in 2007. Ecology had regrettably not checked with the Pierce County Assessor's Office since 2007 to become aware of the property transfer. Ecology has continued to send site notices to Joanne Hazen, the former owner.

Comment 2: *"In a June 3, 2009 telephone call, Mr. Dom Reale indicated that there was sampling of the wetlands on our property in the past and that Ecology issued a "Decision Document" concerning these impacts. We were not previously aware of this sampling and have not been provided a copy of this or other pertinent documentation from Ecology."*

Response: Copies of the referenced data and documentation were provided to Benaroya via Dana Carlisle at GeoEngineers on June 4, 2009. This documentation was provided to the prior owner of your property, Mrs. Joanne Hazen.

Comment 3: *"While this process has been ongoing for two years or more, we first learned about the imminent cleanup action at the B&L Landfill site from a third party just a few days ago and as a result we have not had sufficient time to research the impact of the contaminant migration from the B&L Woodwaste site to our property and the potential impacts of the proposed cleanup action on our property.*"

Response: The key site cleanup documents previously issued for public comment, the Cleanup Action Plan (CAP), the Consent Decree, and the Engineering Design Report, were provided to TBC via Dana Carlisle at GeoEngineers on May 26, 2009. In addition, relevant historical documents and data regarding the assessment and cleanup of soil contamination at TBC property were provided to TBC.

The current cleanup action presented in the EDR documents will have no direct impact on TBC property. As described in the CAP, the results of the extensive remedial investigations conducted at the B&L Woodwaste Site indicate that groundwater contamination does not extend onto TBC property and future cleanup actions on or directly affecting TBC property are not currently planned. Ecology and the CAP implementation team will be happy to meet with TBC to discuss the pending multi-year cleanup action in detail.

Comment 4: *"We request an extension of the public comment period to allow us and our consultants adequate time to review the prior reports in Ecology's files.*

Response: As noted above, the department has determined that the currently planned cleanup action will not directly affect TBC property. The planned action will provide substantial benefit to the environment and delays could prevent implementation this year. For these reasons, no extension will be granted. The department and the CAP implementation team will provide future documentation to TBC as we proceed with implementation of the full remedy specified in the CAP so that you are provided with timely information concerning future cleanup actions at the B&L Woodwaste Site.

Comment 5: *"We are very concerned that the scope of the cleanup may not adequately address potential impacts on our property."*

Response: Ecology has carefully reviewed the planned cleanup action addressed by the recent EDR and determined that there will be no direct impact on TBC property. Future phases of the cleanup action will address groundwater contamination extending beyond the Fjetland property

where the B&L Woodwaste Landfill is located. TBC will have opportunities to review this future work.

Comment 6: *"We believe additional baseline sampling along the shared property line (northeastern and eastern boundary of the B&L Woodwaste site) should be performed to satisfy all parties that the scope of the proposed cleanup action is sufficient and to allow monitoring during the cleanup action to demonstrate that there is no contamination on our property and that the environmental condition of our property is not being adversely affected by the cleanup activity and plan."*

Response: The department has been working with the liable parties for many years to complete the assessment and cleanup of the B&L Woodwaste Site. Extensive investigations have been completed to delineate soil, sediment, and groundwater contamination associated with the Site. Additional investigation needed to complete the design presented in the EDR was completed in 2008. Documentation of the historical investigation results has been provided to TBC via Dana Carlisle at GeoEngineers. Additional investigation data will be conducted this year to complete delineation of groundwater contamination extending to the northwest of the Landfill. The department has determined that the body of investigation data collected to date and planned for completion this year adequately characterizes the nature and extent of Site contamination. As the TBC property is upgradient to cross-gradient from the Landfill, no additional investigations are anticipated in the area between the Landfill and TBC property. Given the nature of the work planned for this year, potential impacts are unlikely for the TBC property. The existing well cluster to the northeast of the Landfill is routinely monitored as part of the ongoing compliance monitoring program. These wells are considered adequate for assessing the potential for impacting TBC property due to groundwater releases from the Landfill.

We will continue to work with you while we proceed with cleanup of the B&L Woodwaste Site. Please contact me with any questions or concerns you may have on the above.