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July 15, 2019

Washington State Department of Ecology
Northwest Regional Office Toxics Cleanup Program
3190 160th Ave SE
Bellevue, WA 98008-5452

Attention: Mr. Grant Yang – Site Manager

Re: **Site Name: Glacier Recycle**
Site Address: 32300 148th Ave., SE, Auburn, WA
Facility/Site No.: 21135
Cleanup Site ID No.: 12326
VCP Project No.: NW3202

Dear Mr. Yang:

On the behalf of our client, Glacier Recycle Real Property, LLC, we have reviewed your May 13, 2019 "Further Action" Letter. In that letter, you indicated that additional remedial action is necessary to cleanup contamination at the above-mentioned Site. Based on review of your letter, ECI concedes that there may need to be further activities at the Site and that there are revisions to the Remedial Investigation (RI) report that can be made. However, there also appear to be several misunderstandings and/or misinterpretations by Ecology regarding this Site that would affect the work requested. ECI also identified some incorrect statements in Ecology's summary of the Site. The purpose of this letter is to:

- Clear up the misunderstandings and/or misinterpretations by Ecology,
- Correct Ecology's incorrect Statements,
- Identify the action items requested by Ecology that ECI does not agree with and explain why, and
- Identify those action Items requested by Ecology ECI agrees with and is willing to implement.

ECOLOGY MISUNDERSTANDINGS and/or MISINTERPRETATIONS

In reviewing Ecology's May 13, 2019 "Further Action" (FA) Letter, ECI identified several areas where Ecology either misunderstood the reports reviewed or misinterpreted the information in the reports. ECI also identified some incorrect statements by Ecology in the letter. ECI realizes that the information in the reports reviewed by Ecology were prepared by different consultants for differing reasons and are not in a consistent format. ECI would like to indicate that the RI report ECI prepared summarizes the information and attempts to relay the information in a format that is consistent with the goals of the RI. However, ECI concedes that there may be sections of the report that could have been clearer or more fully elaborated.

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This section of the letter will identify and clarify those areas that ECI believes that Ecology has misunderstood and/or misinterpreted the information presented and corrects statements made by Ecology in the FA letter that were incorrect.

Contaminants Defining the Site

On page 2 of the FA letter Ecology's description of the Site includes the statement that:

"The Site is defined by the nature and extent of contamination associated with the following releases:

- *Total petroleum hydrocarbons as gasoline (TPH-G), as diesel (TPH-D), and as oil (TPH-O) range organics, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs), arsenic and chromium in soil."*

ECI agrees that the Site is described by total petroleum as oil (TPH-O) (ORO) range organics, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs), arsenic and chromium in soil. These contaminants are a result of the demolition debris fill material used by the various occupants on the Property. ECI does not agree that total petroleum as gasoline (TPH-G) (GRO) and diesel (TPH-D) (DRO) define the Site.

Review of the analytical results and the laboratory datasheets indicates that GRO and DRO were reported but that the analytical results are flagged by the various laboratories as not being present due to highly weathered diesel, being reported as a result of overlap of the chromatograms in the TPH-D and/or TPH-O ranges, or that the reported TPH-G or DRO do not match the gasoline or diesel standards used for quantification.

DRO and GRO have a carbon range (C9 through C12) and therefore a chromatographic range that overlap. If there is DRO present in a sample at high levels with little or no GRO, the overlap causes interference in interpreting the results. Some laboratories will report the GRO and "flag" the results indicating that they do not match the fuel standard used to quantify the GRO data. Other laboratories will report the results as gasoline or diesel whichever appears to be the most prevalent or that best matches the standards used. Based on review of the results and discussions with the analytical laboratory used by ECI, it appears that the "flagged" GRO results are from diesel and not gasoline.

The same thing happens with the overlap of the carbon ranges between ORO and DRO (C13 through C24). When there are high levels of ORO, the overlap with the DRO range in the chromatograms causes interference. At this Site, it appears that the petroleum hydrocarbons present are in the heavy oil range likely from asphalt shingles and tarpaper roofing material in the demolition debris buried at the Site.

In addition, the DRO concentrations that are identified as being above the MTCA Method A Cleanup level were reported from the NWTPH-HCID analytical method. This method is not as accurate as the NWTPH-D analytical method. When the samples with HCID results reported as being greater than the MTCA Method A Cleanup level were reanalyzed using the more accurate NWTPH-D method the result showed the concentrations as being either less than the Method A cleanup levels or were a result of the overlap with ORO.

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Characterization of the Site

Contaminants of Concern Exceeding Cleanup Levels

On Page 3 of the letter Ecology indicates that a number of the chemicals defined by Ecology as chemicals of concern (COCs) at this Site were detected exceeding MTCA Method A cleanup levels. There is a table that shows both GRO and DRO as exceeding the Cleanup levels. For the reasons discussed above, ECI does not consider GRO and DRO to be of concern at this Site and therefore the table in the letter is not an accurate representation of the COC above the cleanup levels.

Level of Contaminants in Groundwater

On Page 3 Ecology states that:

"Elevated levels of TPH-G, TPH-D, and TPH-O, arsenic, cadmium chromium, copper, manganese, lead and zinc were also found in ground water samples collected in the previous multi-phase Site investigations. However, concentrations of the chemicals did not exceed MTCA Method A cleanup levels."

ECI would like to point out that groundwater samples were only collected from the monitoring wells in the aquifer beneath the Site from monitoring wells installed by ECI and that one sample of "perched" water collected from one of ECI's soil borings was analyzed. In those analyses, TPH-G, TPH-O and cadmium were not detected as indicated by Ecology. ECI agrees that the constituents found in the dissolved phase were below the laboratory reporting limits or practical quantitation limits (PQLs). The DRO reported in the "perched" water sample was at a level significantly below the MTCA Method A cleanup level of DRO at 190 mg/kg.

Enclosure A - Description of the Site

In Enclosure A (Description and Diagrams of the Site) of the FA letter, Ecology states in the "Source of Contamination" section that:

"Releases in the soil were discovered from three 10,000-gallon capacity underground storage tanks (USTs) and five above-ground storage tanks (ASTs; three 250-gallon, one 12,000-gallon, and one 4,000-gallon) and two unknown aboveground storage tanks (ASTs). Subsequent site assessments confirmed that the USTs, ASTs and their associated operation systems were the contamination sources, resulting in COCs exceedances."

ECI agrees that there appeared to be releases to soil in the excavation from the decommissioning of three underground storage tanks that were removed from the property in 1995 but that according to the Site Assessment report prepared at the time, the contaminated soil was removed from the Site and that the remaining soil in excavation appeared to be "clean". It should also be noted that the analytical results were from the NWTPH-D analysis and reported results of between 210 and 380 mg/kg which were above the cleanup standards in effect at the time but are significantly below the cleanup standards currently in effect for DRO and ORO (2,000 mg/kg).

Enclosure A - Source of Contamination

Ecology's statement that "...the USTs and AST and their associated operation systems were the contamination sources, resulting in COCs exceedances..." is a result of misinterpreting the history of the site and the location of the contamination found on the Site. The USTs and ASTs are not the source of the

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contamination at the Site. The source of the contamination found at the Site is a result of the demolition debris processed and/or buried at the Site by the various operators. The contamination found is not located near where the USTs or ASTs were located.

Enclosure A – Ecological Setting

In this section Ecology indicates that:

“The land surface of the Property is vacant and currently used for a parking facility for King County’s Fire Station fleet and equipment...”

ECI agrees that the land is vacant except for the remaining buildings on the Property. However, it is not being used as parking by the King County Fire Station fleet and equipment. That equipment is parked on a separate parcel not owned by Glacier Recycle Real Property, LLC but owned by King County Fire District 44 and is not part of the remedial investigation area.

Enclosure A – Groundwater

In this section of Enclosure A, Ecology states that:

“Perched ground water was reportedly encountered at the base of the fill at depths of 3 to 9 feet bgs, and in the former underground storage tank (UST) excavation at approximately 14 feet bgs. Regional ground water at the Site occurs under unconfined conditions at depths ranging from 31 to 50 feet bgs, with a north to north-west flow direction towards Big Soos Creek...”

ECI concedes that the section of the RI report describing the groundwater and perched water found was not as clear as it could have been. Perched water was found at the base of the fill in one location by Farallon and by Langseth and in one test boring by ECI.

The location where water was observed by Langseth and Farallon was in the former “tipping area” described by Langseth and encompassed by Farallon’s Northern Test Trench. This “tipping area” is connected to one of the surface stormwater retention basins at the Site which may account for the water observed seeping into the test pits. The remaining test pits excavated by Farallon did not encounter perched water and the soils were described as being dry to moist.

ECI observed perched water at a depth of 4 to 10 feet below the ground surface (bgs) in one soil boring advanced at the Site. The remaining test pits and borings did not encounter perched water. During the advancement of the boring where perched water was encountered, the weather was raining and it is believed that the water observed was rainwater infiltrating the fill and the soil boring.

ECI does not agree with the statement by Ecology that groundwater was observed in the excavation for the three USTs that were removed from the Site. The Site Assessment report does not mention encountering groundwater. It only mentions that contaminated soil was observed to a depth of approximately 14 feet below the ground surface and that it was removed from the Site.

Based on the above, ECI does not believe that perched groundwater at the Site is a concern or is monitorable. Perched groundwater, if present, is very discontinuous and fleeting.

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ECI agrees with Ecology's interpretation that the regional groundwater at the Site occurs at a depth of 31 to 50 feet bgs.

Enclosure A – Contamination and Remediation

In this section of the FA letter Ecology correctly states that soil and groundwater contamination were found during a Phase II Site investigation in 2013. However, ECI believes that Ecology misinterpreted the 2014 Initial Investigation conducted by Ecology in 2014 as described in the RI report.

The 2014 Initial Investigation was conducted because of a "...long history of compliance issues under solid waste (SW) handling..." and that "...due to the nature of the waste, a wide array of contaminants could have been released to the environment. Both soil and groundwater impacts are possible."

The statement in Ecology's May 13, 2019 FA Letter that *"The following Site investigation in 2014 further confirmed six USTs, two ASTs and applications of the land-use (a wood chipping plant and construction material recycling facility) were the contamination source."* is not completely accurate. It is true that the applications of land-use (a wood chipping plant and construction material recycling facility) were the source of the contamination. However, there were only three (not six) USTs removed from the property and they were not the source of the contamination as previously discussed above.

This section indicates that soil cleanup levels were exceeded for TPH-G and TPH-D. As discussed above in the "Contaminants Defining the Site" section of this letter, TPH-G and TPH-D are not present at the Site and that the TPH present is in the TPH-O range.

Miscellaneous Incorrect Statements in Ecology's Letter.

In addition to the corrections specifically identified in the previous sections of this letter, ECI noted several incorrect statements in the letter or enclosure. Those incorrect statements are listed below.

- In the closing of the Letter Ecology States that:

"If you have any questions about this opinion or the termination of the Agreement, please contact me..."

ECI is not terminating the Voluntary Cleanup Program (VCP) Agreement and Ecology has not mentioned anything about terminating the agreement. Work will be continuing at the Site and it is anticipated that there will be further requests for opinions under the VCP with regards to work performed.

- Ecology incorrectly states that the monitoring wells at the Site were installed in 2014. The monitoring wells were installed by ECI in February of 2018.
- ECI also noted that the FA letter refers to a Figure 4. This Figure was not included in the letter received or the Letter that is posted on Ecology's electronic document repository for the Site. As a result, ECI is not sure what Ecology was trying to illustrate with that figure.

ECOLOGY REQUESTS THAT ECI DOES NOT AGREE WITH

In Section 1 of the May 13, 2019 FA letter (Characterization of the Site, Pages 3 and 4) Ecology indicates that:

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"At this time, Ecology has determined that the following additional information is needed to support an adequate site characterization..."

Ecology goes on to list six main items and seven sub-items that they would like to see implemented or items changed in the RI report.

ECI concedes that some of the items may be necessary and/or easy to implement to make the RI report clearer. However, there are also items that Ecology is requesting the ECI believes are not necessary or are being requested based on the misunderstandings and/or misinterpretations made by Ecology. This section of the letter will identify those items that ECI does not agree with and will provide an explanation as to why.

Need for Further Delineation of Contaminants in Soil

Ecology indicates that:

"The horizontal and vertical boundaries of COCs exceeding the cleanup levels in soil need to be further delineated prior to developing a cleanup action plan (CAP)"

ECI believes that the areas of contamination have been delineated. Over 152 soil samples not including the samples from the decommissioning of the USTs from the Site have been analyzed for the constituents of concern.

As described in the RI report, Langseth Environmental Services conducted a Phase II Site Investigation at the Site in 2013. Samples were collected from 16 test pits and test trench located in various locations where recycling activities had occurred at the Site. These results indicated that there were petroleum hydrocarbons present above the cleanup levels at the Site.

In September 2014, Farallon Consulting established a 100- by 100-foot grid across the Site, excavated and sampled 43 test pits in the areas where construction debris materials were historically stockpiled, the former bone yards, and areas surrounding the concrete pad and material sorting areas. They also excavated two test trenches and three test pits to verify the ORO results from the Langseth Phase II investigation.

In 2018, using the grid established by Farallon, ECI excavated a total of 13 test pits to further define the vertical extent of contamination observed by Farallon and advanced 12 soil borings in areas that had not been explored by Farallon. Figure 3 of the RI report shows the location of all the sample collected.

The analytical results revealed that there were several areas that contained contaminants of concern above the MTCA Method A cleanup levels. The analytical results from all of the analyses also showed that the vertical extent of contamination was confined to the fill and that the native soil below the fill was not contaminated. Figures 6 through 10 of the RI report show those areas.

The boundaries of the contaminated areas were drawn based on the analytical results of the grid samples analyzed. ECI was not able to place all of the analytical results on the figures because the figures would have become too cluttered to read. Therefore, the results showing contamination above the cleanup

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levels were placed on the map. The results of the grid samples adjacent to the boundaries drawn were below the MTCA Method A cleanup levels for the specific constituent of concern shown on the figure. ECI believes that further exploration would not provide additional data beyond that already obtained that would be useful for developing a cleanup action plan.

ECI will consider revising the figures to show all of the sample location along with the areas of contamination. However, the analytical results for samples below the MTCA Method A cleanup levels outside of the areas of contamination will not be placed on the figures.

Description of Surface water and Stormwater runoff

Ecology indicates that:

"The pattern of surface water and storm water runoff flow are not described in the RI report."

Stormwater and surface water are mentioned in Section 4 and Section 6.3.4 of the RI report.

In Section 4 of the RI related concerns Ecology had regarding the stormwater at the Site the Initial Investigation report states that:

"...all stormwater onsite, including runoff from the "small" concrete pad, infiltrates to ground. This infiltration could potentially carry contaminants to the groundwater."

This section of the report also indicates that a Solid Waste Program (now called Waste 2 Resources Program) inspector stated that:

"...precipitation that fell on the Site accumulated like a "bath tub" and drained slowly downwards and to a catch basin in one of the stormwater retention ponds..."

This section of the RI indicates that Glacier Recycle operated under a "Industrial Stormwater Discharge Permit" with a discharge to Big Soos Creek. Although not mentioned in the report, the permit number was S03002421D.

Section 6.3.4 of the RI report describes the Site Conceptual Model's "Exposure Pathway" for surface water. The RI states:

"Surface water at the Site is mostly contained on the Site by means of stormwater ponds. However, in the northern portion of the Site there is a stormwater pond that has an overflow catch basin that reportedly discharges to the north along a ravine owned by Glacier Recycle north of the Site. Big Soos Creek lies approximately ¼ [mile] north of the Site. This discharge was formerly permitted from 1998 to at least 2009 through an Industrial Stormwater General Permit issued by Ecology."

Revision of the Cross-section in the Remedial Investigation Report

In the May 13, 2019 FA letter, Ecology indicated that the wanted ECI to revise the cross-section in the RI report to include seven items. ECI disagrees with several of those items.

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- Ecology indicated that they would like the cross-sections to have a vertical scale in feet above mean sea level using the National Geodetic Vertical Datum of 1988.

While an estimate of the vertical scale in feet above mean sea level can be placed on the cross-section, ECI does not believe that it is necessary. The ground surface at the Site is generally be considered flat with an elevation change of only 0.6 feet between the ground surface at the northern most groundwater monitoring well at the Site and at the southern monitoring well at the Site. A topographic map of the surface elevations at the Site has not been made available to ECI if one exists.

- Ecology indicated that they would like to see the location of perched groundwater shown on the cross-sections.

The cross-sections were drawn to maximize the cross-sectional areas of contamination at the Site especially in the vertical extent. As indicated previously in this letter, perched ground water was observed on two very localized area on the Site and was not continuous throughout the Site. Perched water was not encountered within the areas of the cross-sections and therefore cannot be placed on them.

- Ecology has requested that the monitoring wells be placed on the cross-sections as control points.

As stated above, the cross-sections were drawn to maximize the cross-sectional areas of contamination at the Site. The control points were the test pits on the cross-sectional line or projected onto the line from a relatively close distance.

With the exception of monitoring well MW1 in the northwest portion of the Site, the monitoring wells are too far from the cross-section to be used or projected onto the cross-section. In addition, if the monitoring wells were to be uses as control points on the cross-sections, the vertical scale would be so small that the details of the contaminated area would not be able to be shown. Therefore, ECI does not agree with Ecology's request to add the monitoring wells to the cross-sections as control points and believes that doing so would lessen the value of the cross sections.

- Ecology has requested that the range of high and low groundwater levels measured in the monitoring wells be shown on the cross-sections.

Since ECI does not agree that the groundwater monitoring wells should be used as control points and placed on the cross-sections, it is not possible to place the range of groundwater elevation measured on the cross-section. It should be noted that there is a large separation between the base of the contaminated fill material and the depth to the regional groundwater in the monitoring wells. There is approximately 20 to 40 feet of separation between the base of the contaminated fill at the Site and the groundwater levels measured in the monitoring wells.

ECOLOGY REQUESTS THAT ECI AGREES WOULD PROVIDE ADDITIONAL INFORMATION

In the FA letter Ecology identified items that they would like to see implemented or items they would like to see changed in the RI report. ECI disagreed with some of those items and has identified them in the previous section. There are several items that Ecology is requesting that ECI can agree to. Those items are discussed below.

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- Ecology recommends:

"...addition of at least three monitoring wells at locations within the Property boundaries, to identify contamination status in the ground water immediately downgradient of identified soil contamination (see Enclosure A, Figure 4). The data can also provide more information to develop an accurate ground water contour map and assess the ground water flow directions"

ECI agrees that the addition of monitoring wells immediately downgradient of the identified soil contamination would provide additional information on the status of the groundwater in those areas. Since the FA letter received by ECI does not have the Figure 4 referred to by Ecology, ECI is not exactly sure where Ecology was recommending that additional monitoring wells be placed. ECI is willing to consider the installation of additional monitoring wells at the site downgradient of the contaminated soil areas.

However, while these additional wells could provide information regarding the groundwater flow and status of the groundwater at the Site, they may not be needed if the remedial action recommended in the RI report of excavating for disposal select areas of the highest contamination, "capping" the remainder of the site and closing the Site with an Environmental Covenant in place is performed. The Environmental Covenant would likely require a conditional point of compliance for the groundwater at the Property boundaries. The existing wells at the Site would likely be sufficient to monitor compliance.

- Ecology has indicated that:

"Information regarding water supply wells located within 1 mile of the Site is needed to assess potential impacts on ground water."

ECI agrees that that a map showing the water supply wells within a 1-mile of the Site (a well inventory) is needed and will provide that map with the next submittal of the RI report. The information from the well inventory will also be added to the groundwater exposure pathways section of the conceptual Site Model.

- In Ecology's requests for modification of the cross-sections, they requested that:

"The Geologic units encountered in subsurface explorations" [be identified on the cross-sections],

and that:

"Contaminant concentrations in soil and ground water samples, at depth intervals where the samples were collected" [be included in the Cross-sections].

While the cross-sections were intended to show the cross-sectional distribution of the contamination at the Site, ECI agrees that the geologic material should be placed on the cross-sections. The native Silty sand with gravel was labeled on the cross-sections however, the fill material was not.

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ECI will modify the cross-sections to identify the fill material more clearly. The label of "Silty Sand with Gravel" will be used for the native material below the base of the fill. Given the depth of the test pits, further description of the native materials beyond that of being brown silty Sand with cobbles and gravel was not able to be obtained. In addition, the native soil was fairly consistent across the Site. Where possible the fill will be described in more detail in the cross-sections.

In addition to adding the geologic descriptions to the cross-section, ECI will add the locations and analytical results of the soil samples collected in the test pits shown on the cross-sections.

- Ecology requested that the groundwater elevations be shown on the groundwater contour maps presented in the RI report. In reviewing the figures ECI observed that the groundwater elevations and well were included on the groundwater contour map for May 2018 (Figure 4) but not on the contour map for February 2018 (Figure 5). This was an oversight and the requested values will be placed on the groundwater contour maps. In reviewing the figures, ECI observed that the well designations on Figure 3 are not correct and will modify the figure to show the correct designations.
- In Section 3 on page 6 of the FA letter (*Selection of Cleanup Action*) Ecology states that the cleanup action selected:

"...does not meet the substantive requirements of MTCA, because the characterization of the Site to date is not sufficient to support a Feasibility Study (FS) of cleanup alternatives. Requirements for completing an FS can be found in the Feasibility Study Report Checklist..."

As previously discussed, ECI believes that the contamination at the Site has been sufficiently characterized to determine a cleanup action. The checklist states that:

"...there may be circumstances where selection of the appropriate remedy is straightforward (emphasis added) or where a comprehensive remedial action will be implemented so that MTCA Method A cleanup levels are ultimately met throughout the site. If either of these situations apply, Ecology encourages PLPs to discuss their preferred approach with a cleanup project manager."

This statement implies that in these cases, a Feasibility Study may not be needed. Based on the size of the site the type of contamination and its location ECI is of the opinion that the cleanup action proposed in the RI report is the only feasible option. However, if Ecology would like an abbreviated feasibility Study ECI is can develop one for their review.

- Lastly in the FA letter, Ecology notes that to consider inclusion of an environmental covenant as a component of the Site cleanup action:

"...a Disproportionate Cost Analysis meeting MTCA requirements must be completed as part of the FS report."

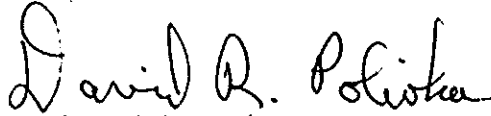
ECI acknowledges that Ecology is currently requiring that a "Disproportionate Cost Analysis" (DCA) be prepared for sites that have environmental covenants as part of the Site cleanup action and will prepare one for Ecology's review.

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CLOSING

The current owner of the Property has a potential purchaser for the Property who would like to some assurance as to what will be needed to bring this site to regulatory closure within a reasonable timeframe and cost before making a decision whether to finalize purchase of the property. ECI and our client appreciate you're your review of the work on this site and are awaiting your prompt response to this letter so that we can move forward at this Site. If you have any questions, please contact me.

Sincerely,
ECI | Environmental Consulting



David R. Polivka L.G./ L.Hg.

Senior Hydrogeologist

Direct: (360) 349-0851

Email: david@alleci.com