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January 15, 2015

Jerry Wickham
Alameda County Health Care Services Agency
Environmental Health Services
Health Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Response to Alameda County Water District Comments on Antea Group's Site Management Plan for the Proposed Development of 6800 Overlake Place, Newark California
SCP Case No. RO0003136

Dear Mr. Wickham,

Antea®Group prepared this letter to respond to four comments you received from the Alameda County Water District (ACWD) regarding the proposed corrective action to mitigate slag affected soil present at 6800 Overlake Place in Newark California, as presented in Antea Group's Site Management Plan dated December 8, 2014. The comments were transmitted via electronic mail from Ms. Eileen Chen on January 13, 2015.

As you know, the corrective action includes relocation and capping of slag-affected soil present at the surface of the site to an approximate depth of 2 feet below ground surface (bgs). The slag contains lead and other metals at concentrations above human health screening levels. The corrective action will mitigate the risk of human exposure to the slag-affected soil by placing it beneath proposed buildings and pavement, and if necessary, beneath a minimum of 2 feet of topsoil (or non-slag-affected soil) within landscaping areas.

Each of Ms. Chen's comments are presented below, followed by our technical response.

1.1 ACWD does not object to the proposed capping of the shallow contaminated soil at this site to limit potential human exposure, if ACEH approves the proposed capping methods/materials. However, we recommend that the contaminated soil be capped in-place and not excavated, relocated, and, in some cases, buried at greater depths, especially considering the shallow depth to groundwater at this site.

Current storm water pollution prevention regulations require that new developments include bio retention ponds and similar measures as an integral component of the site storm water management plan. These cannot be paved and their installation requires removal of existing soil to lower surface

elevations so that stormwater will flow to them. Therefore relocation of slag-affected soil in this area is mandated to prevent continued surface exposure and off-site migration of slag-affected soil in stormwater. In addition, the slag-affected soil was imported to the site and spread uniformly across it. The soil must be excavated and handled for numerous reasons during redevelopment, including installation of underground utility lines and building foundations. It is not possible to build on a site without excavating and relocating soil.

1.2 For the area beneath the footprint of the proposed building, available data indicate that approximately the top 1 to 2 feet of soil are impacted with elevated metal concentrations. The Plan proposes to excavate and re-located the shallow impacted soil (approximately 2,700 cubic yards), so that deeper clean soil (to a total depth of 5 feet) can be excavated to create a pit large enough to bury slag impacted soil from other parts of the site. This re-locating of contaminated soil on-site does not result in any kind of contaminant cleanup, but it increases the risk of human exposure risk during implementation and creates a new contamination zone from depths of 2 to 5 feet. If cleanup is not being proposed, then the contaminated areas should be disturbed as little as possible.

In order to cap the slag-affected soil under pavement in accordance with the proposed site development plan, it is necessary to create additional capacity underneath either the building or parking lot areas to receive surface soil from the bioretention pond area, underground utility corridors, and landscaped area along Overlake Place. Antea Group evaluated numerous soil relocation scenarios and excavation sequences with Public Storage construction managers. The evaluation included a detailed assessment of the variables and constraints of moving soil on a relatively small site, and the need to maintain adequate space to maneuver around the temporary stockpiles that will be necessary to accomplish the relocation. We determined that the most feasible and lowest long-term risk solution was to place the majority of the additional soil underneath the building. It is the largest area of pavement on the site with the lowest potential for future disturbance. It is also the area that can be deepened the least to create the required capacity.

Relocating shallow contaminated soil to secured areas below paved surfaces, including large building slabs, is a common and widely accepted remedial solution for sites like this. It is an effective, reliable, and proven method of mitigating risk of human exposure or off-site transportation of the slag-affected soil via wind and stormwater transport. The Site Management Plan describes widely accepted best management practices to prevent accidental migration of the soil or exposure to humans during relocation work, and provides a detailed air monitoring plan to monitor and document the effectiveness of these control measures during remedial activities.

The Public Storage site development plan provides an expeditious and successful way to mitigate risks associated with the metals-impacted surface soils at the site. The plan has been approved by the City of Newark, and Public Storage has invested significant funding into the engineering, architectural, and entitlement process. Without this redevelopment, the site could remain in its current state for years.

1.3 In addition, it is unclear what are the seasonal or historical highs of groundwater elevations beneath this site. The Plan referenced a geotechnical investigation conducted in 2013, which reported first encountered of groundwater to be from 10 to 17 feet. In 2011, a monitoring well and borings drilled at 6500 Overlake Place (property adjacent to the subject site) reported first encountered of groundwater at approximately 8 feet. Potentially, during the raining season, contamination buried at

4 or 5 feet may be in direct contact with groundwater. Due to the shallow groundwater beneath this site, contaminated material should not be relocated from a shallower depth to a deeper depth.

There are no data to suggest that site groundwater is present at depths shallower than 8 feet bgs, except during periods of rainwater infiltration. The data cited above is the best data available to gauge typical static groundwater elevations at the site. The 10- to 17-foot estimate comes from a site-specific investigation conducted by professional geotechnical engineers and correlates well with the 8-foot depth reported at the adjacent property two years earlier. The corrective action calls for a maximum depth of slag affected soil of 5 feet bgs. This provides a minimum 3-foot buffer from significant groundwater contact. Current Department of Toxic Substances Control (DTSC) remedial action plans established for similar sites require a 2-foot separation between contaminated soil and median groundwater levels.

Additionally site development will significantly limit rainwater infiltration in the vicinity of the relocated slag-affected soils. As discussed in Section 3.1 of the September 5, 2014, Phase II Environmental Site Assessment (ESA), water was observed in the 3-foot deep soil borings on April 1 and 2, 2014 during a storm event. Water was not observed however, in the 5 feet deep borings installed at the site in July, 2014. Rainwater infiltration through slag-affected soil will be minimized by placing the slag-affected soil underneath pavement and the building.

More importantly, however, the slag-affected soil has already been tested for leaching potential and was found not to be leachable. As discussed in Section 5.0 of the September 5, 2014, Phase II ESA, two samples containing the highest concentrations of chromium and lead at the site respectively (B-5d1.0 and B-10d1.0) were submitted for waste characterization testing using the Toxicity Characteristic Leaching Procedure (TCLP). The intention of the TCLP analysis is to simulate disposal site conditions (i.e., landfill) where potentially acidic percolating liquids can produce leachate by dissolving and mobilizing chemicals present in solid wastes. This conservative analytical method requires that the sample be ground to maximize surface area and then acidified to a pH below 2.0 to simulate landfill conditions, This test represents far higher leaching potential conditions than would be present at this site. Even though these two samples contained the highest concentrations of lead and chromium, respectively, both samples came back non-detect, indicating that metal leaching to groundwater is not a concern for this site.

2 *As mentioned above, due to the shallow depths of groundwater, selected soil samples should be collected and tested for their metals leaching potential. In addition, because some soil samples documented total chromium concentrations that are a magnitude higher than the published regional background concentration (Lawrence Berkeley Nation Laboratory, 2009), and the source of the slag/chromium is unclear, selected soil samples should be considered for chromium (VI) analysis.*

As discussed above, this has already been done. Both lead and chromium were not detected indicating that the lead and chromium in slag-affect soils at the site are not soluble. If total chromium was non-detect, the hexavalent chromium, which is a subset of total chromium, is also non-detect. Therefore, groundwater sampling and additional leaching potential testing is not warranted at the site.

3 It is recommended that groundwater samples should be collected at B-18 and B-19, where elevated concentrations of lead were detected at depths greater than 3 feet. If lead is detected in groundwater at concentration exceeding the Maximum Contaminant Level (MCL), then impacted soil at these locations should be excavated and transported to an appropriate landfill. Depending on the concentrations detected, a groundwater investigation may be warranted.

The soil sample depths reported in soil borings B-18 and B-19 do not correlate directly to depth below original grade at the site. These borings are located near the middle and top of the elevated landscaping berm along Overlake Place and are approximately 4 feet higher than the borings located in the non-landscaped portion of the site. We apologize for this confusion in the Site Monitoring Plan. This difference in elevation is discussed in sections 3.1 and 5.0 of the September 5, 2014 Phase II ESA, but was not footnoted in Table 2 of the Site Management Plan. We will add the footnote. The elevated lead samples detected at 5.0 feet in B-18 correlate to a depth of approximately 1 foot within the non-landscaped portion of the site, which represents original grade. The 7.0-foot deep sample collected at boring B-19 correlates to a depth of approximately 3 feet below original grade.

As discussed above, however, soil samples containing the highest metals concentrations detected at the site have already been tested using the TCLP test, which indicated that the metals are not soluble. Therefore groundwater sampling is not warranted at the site.

4 As part of the post-construction site management requirement, if any disturbance (e.g., trenching, excavation, grading, landscaping) of the capped areas is proposed, approval must first be obtain from ACEH.

Section 7.0 of the Site Management Plan titled Soil Management Plan describes the methods and procedures to be followed if/when future, post construction soil disturbance activities are required at the site. The purpose of the Soil Management Plan is to provide pre-approved methods and procedures that, when followed, allow site managers/owner to conduct necessary maintenance activities without seeking additional, specific regulatory approval. Notification is required however.

Appendix C of the Site Management Plan presents the Post Construction Cap Monitoring Plan to be implemented at the site. Section 6.1 of the Post Construction Cap Monitoring Plan describes the notification requirements to be followed prior to implementing ground disturbance activities at the site. ACEH will be notified in advance of planned ground disturbance activities as described in this section.

We greatly appreciate the prompt attention your department has given this matter to date. We trust that the additional information and explanations provided in this response to ACEH comments, facilities final approval of the corrective action as quickly as possible.

Sincerely,

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