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December 9, 2014

Rick Brausch, Chief  
Policy and Program Support Division  
Hazardous Waste Management Program  
Department of Toxic Substances Control  
1001 I Street  
Sacramento, CA 95814

Re: Metal Shredder Residue Treatability Study

Dear Mr. Brausch:

This letter will confirm the discussion that Peter Zawislanski from Terraphase Engineering and I had with you and other Department staff on September 10, 2014, regarding the Metal Shredder Residue Treatability Study and the issues raised in your September 8, 2014 letter. As discussed during the call, we do not believe there are any significant areas of disagreement between the Department and the industry regarding the Treatability Study. We share the Department's interest in ensuring that the study takes into consideration the operations at each of the shredding facilities operated by the study participants, as well as the potential variability in shredder feed stocks and shredder residue at these facilities.

We agreed at the conclusion of the call that Terraphase Engineering could begin work without further delay, and the study has been underway since that time. I am advised by Terraphase, however, that the bench-scale phase of the study (Phase 1) has not yet been completed and is taking longer than anticipated due to the complexity of the scientific and analytical issues that must be addressed. A discussion of the updated project schedule is provided below.

Following is a brief summary of the key points of agreement:

- Shredder residue samples for the bench-scale phase of the study were collected from three facilities (Sims/Redwood City, Schnitzer/Oakland and SA/Anaheim) during the period August 18-August 29. The Department was notified in advance of these sampling activities as required by the Work Plan.

- Shredder residue samples to be used for baseline analysis will be collected from all five facilities (the three noted above, plus SA/Terminal Island and SA/Bakersfield). Pilot-scale treatability studies and related sampling will also be conducted at each of the five facilities.
- Treatment demonstrations will be made on a facility-specific basis, based on the analytical results of samples collected at that facility.
- Pilot-phase data from all five facilities will be pooled for purposes of establishing statistically-based, statewide treatment standards for metal shredder residue.
- Over the course of the study, multiple sampling events will be conducted at each facility to allow for a comparison of the data sets over time and to provide a more robust statistical analysis of variability. The bench-scale phase of the project is being conducted on samples of untreated residue that were collected over two, eight-hour shifts. Additional sampling events will be conducted for purposes of the baseline analysis and the pilot-scale field tests. We understand that the Department believes a minimum of three sampling events should be conducted for these purposes. The Department will be provided advance notice of each of these events.
- A Quality Assurance/Quality Control Plan (QAPP) has been prepared and was provided to the Department on September 9, 2014, along with the Standard Operating Procedures for the Calscience Laboratory.

As noted above, Terraphase began the bench-scale phase of the study in mid-September. Since then, bench-scale treatment has been conducted on over 150 samples under a number of varying conditions, including different reagent mixes, different moisture contents, different sample preparation methods, and different curing times. This work is ongoing and is expected to be completed in mid-January. Once the bench-scale work has been completed, we will schedule a meeting with Department staff to discuss the results and determine if there are any areas that warrant further bench-scale study. If not, Terraphase will proceed with pilot testing of the selected treatment recipes and full-scale treatment demonstrations.

Given the foregoing, it is apparent that the original project schedule was overly optimistic. The technical work, including the pilot (field) phase of the project, will not be completed until the end of the first quarter 2015. Additional time will then be needed to conduct literature research, develop the proposed treatment standards, and draft the report. At this point, we are anticipating submittal of a draft report to the Department by the end of June 2015.

We recognize this represents a delay of approximately six months beyond what may have been communicated to the public and other interested agencies. However, the additional time is necessary to allow the study to be conducted thoroughly and accurately, and to allow the experts who are conducting the study to pursue lines of inquiry and answer questions that arise during the course of the study. We also note that the updated schedule is consistent with the schedule contained in SB 1249, which requires the Department to complete its analysis of hazardous waste management activities at shredding facilities and any subsequent regulatory action by January 1, 2018. Submittal of the treatability study report by June 30, 2015 leaves ample time for review of the report and the related evaluation mandated by the new law.

We appreciate your consideration and will keep you advised of our progress.

Very truly yours,

A handwritten signature in cursive script that reads "Meg Rosegay".

Margaret Rosegay

Cc: Su Patel, DTSC  
Ed Benelli, DTSC

Peter Zawislanski, Terraphase Engineering  
Melisa Cohen, Sims  
Todd Peterson, SA Recycling  
Nick Andrusyshyn, Schnitzer Steel