Application 29215 Davis Street SMART

RESPONSE TO COMMENTS

This document summarizes the comments that Air District staff received on the draft evaluation report and permit conditions for Application 29215 Organic Material Composting Facility (OMCF) for Davis Street SMART.

The Air District received comments regarding the draft evaluation report and permit conditions from two individuals: Arthur Boone with Center for Recycling Research, Berkeley, and Toni Stein with Environmental Health Trust.

Air District staff have considered all comments received. Staff have prepared specific responses to comments received. These responses are set forth below.

Comments and Responses

Comment 1

On page one, line 3, he says that DSTS includes "a single stream recyclable material recovery facility." DSTS has not operated a MRF at DSTS since about 2015 when it closed down its operation in the building north of the transfer station and simply dumped collection trucks here at DSTS and reloaded the materials for sorting and separation elsewhere. WMAC currently collects the recyclables carts from only about 7% of the county's population, a small fraction of the 82% of the customers that the Oakland Scavenger Company had for garbage in 1977 when it sold itself to Waste Management, the national garbage company. Both Oakland and Hayward, WMAC's two largest remaining garbage accounts, now use other contractors (California Waste Solutions in Oakland and Tri-Ced in Hayward) for single stream recyclables hauling and processing. The statement mentioned at the top of this paragraph lacks pertinent details.

Response to Comment #1

For clarification, the plant currently does accept residential single stream recyclable material from Ora Loma, Albany, and Emeryville at the single stream MRF location. However, the plant does not currently process residential single stream recyclable material at the single stream MRF location. This material is transloaded for processing at other Waste Management or third party off-site locations. The plant does process commercial single stream recyclable material at the single stream MRF location. Based on operational needs, the plant also processes commercial single stream recyclable materials at the SMART MRF on-site at DSTS.

Comment #2

In his account of the information presented to the City of San Leandro in 2011 (found at the bottom of page 8 and the top of page 9), Mr. Tom fails to report that the project at that time consisted of 54 vessels to do anaerobic digestion of organics materials, not the aerobic composting planned for the open top, in-vessel systems discussed in this proposal. [The 54 vessels plan is best seen at AR 0140 of the trial court's administrative record; the case file is available now at the Court of Appeals at S154804].

In fact, one of the major CEQA violations of this entire project is that the City of San Leandro as lead agency has never done an EIR on the project that is now before the BAAQMD. While WMAC staff

discussed doing mixed waste processing in the northeast building (the so-called OMRF) where they now expect to prepare source-separated organics for composting, it wasn't until 2016 when Mr. Tackitt (who had replaced Mr. Isola as project lead) met and talked with Ms. Sally Barros of CSL staff on February 19, 2016 (revealed in a letter from Barros to Tackitt of April 4, 2016 [copy available] wherein she says that "the project [as presented in February] is consistent with previously approved Master Plan CEQA IS/MND, PLN2010-00026." In fact, to this date, the City of San Leandro has never seen either the full blown AD project which WMAC laid out in 2016 for the ACWMA or the project as laid out for the BAAQMD today.

If the BAAQMD believes that WMAC showed the same project to CSL in 2010 as they showed to the ACWMA in 2016 or to you today, then you have been fooled.

Response to Comment #2

The anaerobic digestion portion as described in the Mitigated Negative Declaration (MND) has not been proposed in the Air District permit application. Air District analysis shows the proposed in-vessel composting operation complies with air quality rules and regulations.

The trial court, in rejecting the Petitions for Writ of Mandate, declined to find that preparation of an environmental impact report (EIR) was required under CEQA for purposes of the Authority's amendment to the Countywide Integrated Waste Management Plan. Specifically, on June 11, 2018, in her order denying petitioners motion to vacate the prior judgment, Judge MacLaren found no substantial evidence in the record before the Authority that the Authority's approval could result in a potentially significant adverse environmental impact, including from anaerobic digestion as previously approved by the City after compliance with CEQA. The 2010 Staff Report MND from the City of San Leandro discussed a fully enclosed air handling operation for organics/food waste recycling with in-vessel compost units served by biofilters which is consistent with the BAAQMD permit application.

Comment #3

Please provide additional time in this public review such that I may have the opportunity to provide additional comments after you provide clarification on the information that is in your Engineering Report that is not consistent with the DSTS Project description previously presented by the applicant at other State and local meetings including those for the Davis Street Transfer Station Facility Transfer Processing Report Documents:

- *Transfer Processing Report (TPR) - (Rev 14, October 2016) (PDF) Appendices (Appendix A- X) to the TPR (ZIP)*
- *http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0007/Document?SITESCH=01-AA-0007*
- *http://www.acgov.org/aceh/solid/solid_waste_program.htm*

Response to Comment #3

Per the Air District's email dated October 1, 2019, the Air District is unable to extend the comment period. However, the Air District will consider all comments received before and after the comment period ends prior to making our final decision on the permit.

Comment #4

The Engineering Evaluation includes an inadequate analysis of the VOC emissions and the expected impacts especially for the asthma triggering chemical VOC emissions from the operations described for which the State of California OEHHA has set thresholds (aside from the cancer limits.)

This zone is high a highly impacted asthma zone; therefore each individual VOC emitted from this project should modelled to meet the Office of Environmental Health Hazard Assessment (OEHHA) Chronic reference exposure limits, CRELS for the residential locations including at Garfield School and at the residential locations nearest to the DSTS and improved control technologies should be applied beyond the biofilter to reduce the VOC emissions.

This location is a Hot Spot in Cal Enviro Screen for Toxic inhalation impacts, yet the engineering analysis only looks at ozone producing VOCs and does no analysis for the impacts of the VOCs on the population from inhalation as OEHHA has guidance on.

Need to do health risk analysis on the inhalation impacts to the nearby population. Please check using the HARP model what the max emissions will be for each of the VOC inhalation asthma-gens that impact inhalation to ensure that the proposed BACT for this project will reduce these emission to levels below the OEHHA limits for 8 hour and chronic exposures.

Response to Comment #4

The VOC and toxic air contaminant (TAC) emission calculations for each source were based on best engineering practices and all references used are cited in the Engineering Evaluation report. The Health Risk Assessment (HRA) conducted for this project included an evaluation of Chronic Hazard Index (HI) and Acute HI for all receptors within the modeled domain including those on and around Garfield Elementary School. The analysis was performed using the California Air Resources Board (ARB) HARP2 Air Dispersion & Risk Tool (ADMRT) Version 19044, with Risk Assessment Health Values from the most recent version of the Consolidated Table of Office of Environmental Health Hazard Assessment (OEHHA)/ARB Approved Risk Assessment Health Values. The reported highest chronic (annual) and acute (1-hour) HI values were in fact for the Respiratory Target Organ System, with ammonia being the highest contributing pollutant for both exposure durations. Ammonia is lighter than air with a density approximately 59% that of air and would be expected to dissipate rapidly, especially since the school is at least one-half mile from the emissions source. The highest chronic and acute HI values found to occur at or around Garfield Elementary as a result of the project are well below the maximum values that were reported. HARP results specific to the school are available upon request.

Comment #5

The Engineering Evaluation report fails to present the project clearly including all of the toxic emissions. The evaluation does not clearly explain the actual emissions instead it lists as follows:

S-64 OMCF Organic Material Stockpiles Abated by Dust Collector DC-1 A-12 (12,316 cfm) and Acid Gas Scrubber and Biofilter #2 A-7 (Surface area = 4,227 sq ft, Depth = 8 feet, Blower flow rate = 35,000 cfm Phase 1 and 38,000 cfm Phase 2, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-65 OMCF Pre-Processing Material Handling Operation Abated by Dust Collector DC-1 A-12 (12,316 cfm) and Acid Gas Scrubber and Biofilter #2 A-7 (Surface area = 4,227 sq ft, Depth = 8 feet, Blower flow rate = 35,000 cfm Phase 1 and 38,000 cfm Phase 2, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-66 OMCF Rotary Drum Reactors #1 and #2 (Phase 1) Abated by Acid Gas Scrubber and Biofilter #2 A-7 (Surface area = 4,227 sq ft, Depth = 8 feet, Blower flow rate = 35,000 cfm Phase 1 and 38,000 cfm Phase

2, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-67 OMCF Rotary Drum Reactors #3 and #4 (Phase 2) Abated by Acid Gas Scrubber and Biofilter #2 A-7 (Surface area = 4,227 sq ft, Depth = 8 feet, Blower flow rate = 35,000 cfm Phase 1 and 38,000 cfm Phase 2, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-68 OMCF In-Vessel Composting Lanes #1 through #8 (Phase 1) Abated by Acid Gas Scrubber and Biofilter #3 A-9 (Surface area = 5,176 sq ft, Depth = 8 feet, Blower flow rate = 48,000 cfm, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-69 OMCF In-Vessel Composting Lanes #9 through #16 (Phase 2) Abated by Acid Gas Scrubber and Biofilter #4 A-11 (Surface area = 5,176 sq ft, Depth = 8 feet, Blower flow rate = 48,000 cfm, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

S-70 OMCF Post-Processing Material Handling Operation Abated by Dust Collectors DC-2 A-13 (12,316 cfm), DC-3 A-14 (12,316 cfm), DC-4 A-15 (12,316 cfm), and DC-5 A-16 (10,012 cfm) and Acid Gas Scrubber and Biofilter #2 A-7 (Surface area = 4,227 sq ft, Depth = 8 feet, Blower flow rate = 35,000 cfm Phase 1 and 38,000 cfm Phase 2, Media type = Biomix of broken and fibrous roots 50-120mm (approx. 30%) and pine bark/woodchips 20-50mm (approx. 70%))

Response to Comment #5

Table 5 on page 7 of the Engineering Evaluation lists the daily and annual criterial air pollutant emissions from each source for this operation. Table 12, 13, and 14 on page 15 and 16 of the Engineering Evaluation lists the toxic air contaminant emissions from each source for this operation.

Comment #6

The biofilter will serve as the control technology for multiple sources inside the building but from a emission standpoint the biofilter stack is one sources emitting to the external air. No emissions will be emitted to the outdoor air from S-64,65,66,67,68,69. Instead all of these will have one stack. Its unclear why your report presents it this way. We ask that this be corrected before comments are closed. As you currently present it each is considered a separate source in your calculations instead of them being added together as they should be. S-64,65,66,67,68,69 should be combined into a source for the one biofilter.

Response to Comment #6

The Engineering Evaluation presents each source separately as this is how the operation is analyzed from a New Source Review (NSR) standpoint. In the HRA, each source is presented to show the contribution of each source to the overall health risk of the project. The final health risk of the project is determined by modeling the emissions that are being emitted to atmosphere. Sources S-64, S-65, S-66, S-67, and S-70 are controlled by biofilter #2. Source S-68 is controlled by biofilter #3. Source S-69 is controlled by biofilter #4. Each biofilter exhaust was modeled in the health risk assessment to determine the overall health risk from all sources in the project. All emissions from the operation have been accounted for in the HRA analysis.

Comment #7

Also a biofilter is not the best potential control efficiency for organic emissions for the toxic emissions from these in facility IV composting and processing stacks at the DSTS!!

The applicant has not proposed the most effective control option. The applicant has proposed an in-vessel composting operation with biofilter alone for its abatement which does not meet the BAAQMD BACT2 requirements. A BACT cost effectiveness determination is required and GAC should be used.

The BAAQMD has published proposed BACT Guidelines for VOC emissions. This has not gone through public comments and it is not regulation. There have been no instances of this being used in an urban environment. VOC Best Available control technology in an urban environment has been established to be achieved with the addition of granulated Activated Carbon that can be included in addition to the biofilter alone when the VOC levels are at the magnitude presented. There has been no showing that this BACT is in feasible at this location. This is the BACT that was adopted in Berkeley CA in an urban environment for VOC concentrations.

Response to Comment #7

Carbon adsorption removes gaseous pollutants from an air stream by transferring the pollutants to the solid surface of an adsorbent.

Organic waste is mostly composed of carbon, hydrogen, oxygen, and nitrogen, with small amounts of phosphorus, sulfur, potassium, and other trace elements. When microbes decompose the waste, energy is released and the microbes convert the waste into compounds that support their growth and reproduction. Greenhouse gases, such as methane (CH4) and carbon dioxide (CO2), are generated, as well as organic acids and ammonia (NH3). High amounts of carbon dioxide are produced by composting operations and as a result the VOC concentration in the exhaust stream is low. This type of exhaust stream with low VOC concentration is not an ideal stream for the use of carbon adsorption. Typically in landfill operations and compost operations, industry does not use carbon adsorption for VOC control primarily due to low VOC exhaust streams. Carbon adsorption is effective for use as odor control but not very effective for controlling low VOC concentration streams. In addition, the cost could also be affected by other stream conditions, such as the presence/absence of excessive amounts of particulate, moisture, or other substances which would require the use of extensive pretreatment and/or corrosive-resistant construction materials. Short desorption cycles, very high vapor pressure constituents, high moisture contents and significant amounts of impurities or difficult to desorb VOCs in the stream may significantly shorten carbon life. Composting is known to create appreciable amounts of particulate matter, moisture, and impurities. Carbon adsorption is also not effective at controlling ammonia whereas biofilters are more effective in controlling ammonia emissions. Thus, carbon adsorption is not a good control option for this type of operation and BACT cost effectiveness was not evaluated.

The District BACT Guideline for composting operations lists a BACT2 requirement of 1.6 lb/wet ton of feedstock pending issuance of a Permit to Operate for Application #25019. This application has not been issued a Permit to Operate to date. This BACT2 requirement is achieved via a Covered Aerated Static Pile which achieves a 80% control efficiency for POC emissions. The proposed biofilters in this application will be required to have a control efficiency of at least 80% for POC emissions. Based on District review, carbon adsorption has not been used for control of POC emissions for any composting operations and will not be required for BACT purposes. Therefore, the proposed biofilters satisfied the BACT requirement for this type of operation.

Comment #8

The Engineering evaluation fails to fairly evaluate the overall Davis Street Transfer Station toxic emissions, instead the evaluation attempts to parse the toxic emissions in half. The Report fails to provide what emissions were used in the so called HARP Project Summary Report that is not attached or accessible to the public. Best available control technology to reduce the overall emissions are not being applied for the emissions found in the report. Instead of evaluating the impact of all of the toxic emissions from the full facility on the community it evaluates the impact stack by stack missing the full impact. The impact of these stacks together are additive and cumulative. The community experiences the toxics from all the stacks at once. The BAAQMD is required to apply the best available control technology for the total emissions. The composting stacks are required to include BACT to reduce the VOCs to level.

The HRA does not present the risk of inhalation impacts on asthma for the nearby community. VOC controls need to be increased to reduce the impacts on the community. The proposed project does not have adequate controls for the S-66, S-67, S-68, S-69 compost project; it is wrong for the BAAQMD to parse the emissions stack by stack to claim to meet the POC emission limits and control measures to satisfy BACT for POC control. Analysis needs to address the total emissions and control the total emissions.

Response to Comment #8

The HRA results and supporting modeling inputs and outputs have been sent to the commenter through public records as requested. This documentation details each exhaust point and the emissions that are being emitted to atmosphere and how those emissions were modeled. The combined health risks from all of the sources in both the Organic Material Recovery Facility (OMRF, previously permitted) and the Organic Compost Material Facility (OMCF) have been modeled in this application. Please see the response to comment #4 regarding inhalation impacts and response to comment #7 for details on what is considered BACT for this operation.