YAKIMA REGIONAL CLEAN AIR AGENCY

Order of Approval Permit Number NSRP-03-DTGEI-22

New Source Review Order of Approval for a Limited Purpose Landfill (LPL) for DTG Enterprises Inc. Dba; DTG Recycle - Yakima
(After the Fact)

IN THE MATTER OF approving a project which establishes a new air contaminant source at DTG Enterprises Inc. at41 Rocky Top Road, in Yakima, WA. THIS ORDER OF APPROVAL IS HEREBY ISSUED TO:

Applicant/Permittee: DGT Enterprises Inc. Dba; DTG Recycle - Yakima
Materials Recovery Facility at Existing Limited Purpose Landfill
Formerly known as:
Anderson Rock and Demolition Pits
Limited Purpose Landfill

Located at: 41 Rocky Top Road
Yakima, WA 98908

Contact: DGT Enterprises Inc.
Attn: Mike Sheldon
PO Box 14203
Mill Creek, WA 98082
(425) 549-3000

IN COMPLIANCE WITH THE PROVISIONS OF THE STATE OF WASHINGTON CLEAN AIR ACT (Revised Code of Washington (RCW) CHAPTER 70A.15.2210, CHAPTER 70A.15 WASHINGTON ADMINISTRATIVE CODE (WAC) 173-400-110, WAC 173-460-040, and WAC 173-350-400.

ISSUE DATE: , 2023

THIS ORDER OF APPROVAL PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:

Modification or construction of the project must be conducted in compliance with all data and specifications submitted with the New Source Review (NSR) application under which this Order of Approval is issued unless otherwise specified herein. The conditions and limitations of this NSR Order of Approval are attached as follows:

1.0 DESCRIPTION OF THE SOURCE

1.1 DGT Enterprises Inc. Dba; DTG Recycle - Yakima, hereafter referred to as the Permittee, Facility, DTG or the Source, purchased Anderson Rock and Demolition Pits on November 1, 2019 at 41 Rocky Top Road, Yakima, WA. The Facility site plan and location is shown in Figures 1 and 2, respectively.

1.2 This LPL has been operating under a Yakima Health District permit prior and after its purchase by DTG. Phase 1 or cell #1 began filling while the Facility was under Anderson's ownership and completed filling of cell under DTG's ownership (about December 2022). The Facility submitted a New Source Review (NSR) application on June 29, 2023 for the Phase 2 or cell #2 of LPL operations including a Materials Recovery Facility (MRF) as part of the LPL operations. On August 9, 2023 the Facility submitted additional information at the request of YRCAA to include phase 1 so that the hydrogen sulfide emissions from this cell can be included in this NSR Order of Approval (Order/Permit).

1.3 Part of Cell # 1 caught on fire. As of the time of writing this Order the fire still burning beneath the surface. DTG entered into and Agreed Order (AO) Number DE 21624 with the Department of Ecology under the Model Toxic Control Act (MTCA) Chapter 70A.305 Revised Code of Washington (RCW) and the Cleanup Regulation of Washington Administrative Code (WAC) 173-340. Because of the AO and pursuant to the regulations of MTCA, that part of Cell # 1 shown in Figure 3 is not included in this NSR process and evaluation, including air emissions. Cell # 1 site location map and the approximate area of the MTCA area are shown in Figure 3 below.

1.4 The AO requires the owner of the land; East Mountain Investments, Inc., and DTG Enterprises, Inc. (collectively referred to as the Potentially Liable Parties or PLPs) to "provide for remedial action at a facility where there has been a release or threatened release of hazardous substances". The AO "requires the PLPs to complete a limited Remedial Investigation and Interim Actions as necessary". "Ecology believes the actions required by the "Agreed Order" are in the public interest".

1.5 The Facility previously operated under a Solid Waste Permit, from the Yakima Health District (YHD), for the inert demolition waste materials, including drywall waste, wood waste and wood chipper/grinder. The wood chips are for resale or used as LPL surface daily cover.

1.6 East mountain Investments, Inc. is an "owner or operator" of a "facility" as defined in the RCW 70A.305.020 (8) and (22), respectively. According to County Assessor records, East Mountain Investments, Inc. is the owner of the property (Parcel No. 17131023003). The landfill is permitted and operated by DTG Enterprises, Inc. as a LPL.

1.7 Currently, the Facility did not get their permit renewed by the YHD and is currently not accepting demolition waste until all requirements are met by the Facility as indicated in the YDH letter dated June 27th, 2023. This letter states that DTG must cease accepting all solid waste effective on July 1, 2023, until all required conditions are approved by the YHD.

1.8 Rock crushing operations are not part of this NSR Order of Approval. However, when the Facility has stock piles of crushed rock, by a third entity, the fugitive air emissions from the transportation of crushed rock out of the Facility are part of this Order.

1.9 The Facility ceased accepting Petroleum Contaminated Soil (PCS) for treatment. The PCS operation is not part of this Order as the Facility will not be permitted to accept any PCS as it ceased operation. The LPL expanded by another 64 acers from existing 61-acre LPL in 2015, based on documentation from the Yakima County Planning Department. The Facility had never been issued Order for LPL operations by the YRCAA office; thus, this expansion is subject to NSR requirements and considered after the fact.

1.10 This Order of Approval is for the operation of cell # 2, currently under construction and shall be lined with geomembrane, and Cell # 1, except the area under the AO for the reasons stated above.

1.11 This LPL is considered a new source of air contaminants requiring a NSR permit pursuant to the Revised Code of Washington (RCW) 70A.15.2210 and the WAC 173-400-110, 173-460-040.

1.12 Yakima County issued a Determination of Non-Significance (DNS) for a new 64 acres expansion of the existing LPL pursuant to the State Environment Policy Act (SEPA) with SEPA number SEP2015-00024 and signed by the County in September 9, 2015. In addition, a Conditional Use Permit (CUP) was issued on November 27, 2015; CUP2015-00051

1.13 Air emissions from LPL are mainly Particulate Matter with small aerodynamic diameters (PM_{10} and $PM_{2.5}$) and Hydrogen Sulfide (H_2S) a Toxic Air Pollutant (TAP) in accordance with the Federal Clean Air Act (FCAA) and the Washington Administrative Code (WAC) 173-460-150, respectively.

1.14 Air emissions from MTCA area are not included in this Order. However, YRCAA will consider the permitting part for that area upon the conclusion of the MTCA project. All documentation and air emissions shall be submitted to YRCAA during MTCA project.

1.15 Current air emissions from the Facility include fugitive emissions from; the LPL earth moving equipment, unpaved road use, tub grinder, wood chip piles, transport of occasional crushed rock, and hydrogen sulfide primarily from sheetrock disposed of in both cells of the LPL.

1.16 Cell #1 number volume is about 2,150,654 cubic meters (m^3) while Cell #2 about 1,593,225 cubic meters (m^3). This will give a design capacity of 675,107 tons for cell #1 and 500,146 tons for cell #2 assuming a density of 0.24 tons per cubic yard (yd^3).

2.0 DETERMINATION

In relation to the above modification/construction, YRCAA determines that the Permittee shall comply with the federal, state and local regulations and laws including but not limited to the following determination:

2.1 The Facility is located in an area that is in attainment with all criteria pollutants;

2.2 The Facility is not a major stationary Source nor is this construction/ modification is subject to the Prevention of Significant Deterioration (PSD) permitting requirements of WAC 173-400-700 through 173-400-750;

2.3 The Facility shall register with YRCAA and shall be classified as a complex minor source. This modification / construction or any proposed future modification shall be subject to NSR requirements pursuant to WAC 173-400-110 and WAC 173-460-040;

2.4 The Source is subject to WAC 173-400-099 – Registration Program and YRCAA Regulation 1, 4.01 – Registration Program annually;

2.5 The Facility is not subject to 40 CFR Part 61, Subpart M- National Emission Standard for Asbestos as the facility is not receiving asbestos materials;

2.6 Part of Cell # 1 shown in Figure 3, below is under an AO Number DE 21624 with the Department of Ecology under the MTCA Chapter 70A.305 Revised Code of Washington (RCW) and the Cleanup Regulation of Washington Administrative Code (WAC) 173-340. Thus, it is determined that part is not included in this NSR process and evaluation, including air emissions;

2.7 Upon the completion of the MTCA' project, The Facility shall submit a closure plan and approved by YRCAA; and

2.8 The recommended model by U.S. Environmental Protection Agency (US EPA) AERSCREEN Model was used for modeling the ambient air impact. The model results showed that all potential air emissions will comply with the NAAQS and the Acceptable Source Impact Level (ASIL) of WAC 173-460-150.

THEREFORE, it is hereby ordered that the project as described above, in the NSR application, and in the submitted plans, specifications and other information submitted in reference thereto, is **APPROVED** for operation, **PROVIDED** the specification and information submitted with the application and the following conditions are met:

3.0 OPERATING APPROVAL CONDITIONS

3.1 This Order is for the operations in new Cell #2 LPL and it includes hydrogen sulfide emission from Cell #1 except the area under the AO of the Department of Ecology, located at 41 Rocky Top Road, Yakima, WA, in accordance with the plan and specifications submitted with the NSR application to YRCAA and specified in Table 1 and shown in the Figures 1 to 3 below.

3.2. Pursuant to RCW 70A.15.2210, WAC 173-400-113 and WAC 173-460-060, Best Available Control Technology (BACT) and toxic-BACT (t-BACT), respectively, are required to control all air emissions from any proposed new Facility or modified Source. YRCAA finds BACT and t-BACT analysis to be satisfied as follows:

3.2.1 TAP emissions include H_2S shall always be below the ASILs at the property boundary;

3.2.2 MTCA's area at Cell #1 shall meet all the substantive requirement of a NSR air emissions as indicated by the rules and regulation of WAC 173-400-110 (1)(c)(ii)(e) and MTCA's Regulation.

3.2.3 The Facility ceased accepting PCS for treatment. The facility will not accept any PCS at the facility site;

3.2.4 Apply dust palliative material or water on unpaved roads and unpaved areas as needed to minimize airborne dust emissions;

3.2.5 Vehicle speeds shall be limited to 10 mph;

3.2.6 Apply cover soil to control moisture and reduce any odors at active landfill;

3.2.7 Use windbreaks or vegetative cover to reduce fugitive dust emissions;

3.2.8 The Permittee shall develop, maintain and implement an Operation and Maintenance (O&M) plan including appropriate training for all operators; and

3.3 The Permittee must develop and implement a site specific O&M plan based on the owners/operators experience as part of BACT. The O&M Plan shall contain at least four sections: general information, operation plan (i.e., key operating parameters), maintenance plan and any other additional information. The Permittee must develop the O&M plan within 60 days of the issuance of this Order if it is not developed yet, and shall include the development of landfill gas response for H_2S and odors which include at minimum, the following:

3.3.1 Log the off-site complaint or detection of odors, and report to YRCAA within 24 hours;

3.3.2 Investigate the complaint to determine the source and extent of the odors within 24 hours of receiving the complaints;

3.3.3 Corrective actions that will be taken; If the odor problems is not resolved quickly, then consider whether to cease acceptance of any material that has the potential to contribute to odorous, or apply additional a cover soils or apply other materials cover;

3.3.4 Conduct ambient H_2S air monitoring at or beyond the boundary lines, especially near downwind area, low-lying areas, or receptor locations;

3.3.5 Record all measured H_2S concentrations and the locations where they were measured; and

3.3.6 Take weekly methane ambient air readings at the property boundary which shall not be between Lower Explosive Limits (LEL) and Upper Explosive Limits (UEL) of 5-15%.

3.3.7 Record the corrective actions taken to resolve the issue.

3.4 Within 60 days from the date of issuance of this Order, the Permittee shall submit a letter notifying YRCAA that the O&M plan is completed and in place. If the Permittee needs to make any future modification to the facility and their operating procedures, an approval in writing from YRCAA which may require NSR, must be issued before such modification takes place. The O&M documents must be updated and implemented to reflect such modification.

3.5 The Permittee shall accept only the permitted wastes as specified in the NSR application and approved by the rules and regulation. i.e., cured concrete, asphaltic materials, brick and masonry, ceramic materials, glass, stainless steel, aluminum, lime, gypsum, scrap drywall, dirt and rock, construction and demolition (C&D), and land clearing debris, wood waste, ash (other than special incinerator ash), and dredge spoils.

3.6 The maximum allowable demolition waste shall not exceed 690276 cubic yard per year.

3.7 The Facility ceased accepting Petroleum Contaminated Soil (PCS) for treatment. The remaining PCS at the site from previous years shall be treated within 364 days from the issuance of this Order.

3.8 If the treatment of the PCS is not complete within 364 days from the issuance of this Order it shall be removed from the site to another facility that accepts PCS.

3.9 For the MRF operations, it shall be only for materials like cured concrete, asphaltic pavement, metal, construction, demolition, and land clearing debris dirt and rock.

3.10 The Facility shall not accept purely plastic materials, and shall minimize any plastic materials that are combined with the demolishing materials.

3.11 There shall be no burning allowed anywhere within DTG Yakima site.

3.12 The O&M plan and all records including this Order and other permits, if any, must be maintained at the Facility's site or accessible place and be made available to the Air Pollution Control Officer (APCO) of the YRCAA or his designated staff during inspections or upon request pursuant to RCW 70A.15.2500.

3.13 The Permittee must conduct visible emission inspections of the facility at least once per month. Inspections are to be performed while the facility is in operation during daylight hours. If during the monthly visible emissions inspection, visible emissions other than uncombined water are observed from the activity, the Permittee must as soon as practicable but within 24 hours of the initial observation:

3.13.1 Take corrective action, which may include shutting down the activity until there are no visible emissions (or until the unit or activity is demonstrated to be in compliance with all applicable opacity limitations in the permit using the reference test method); or

3.13.2 Alternatively, determine the opacity using the reference test method. If visible emissions are observed from the source make sure that the source is being operated and maintained properly and either shut it down within 3 hours or observe visible emissions using 40 CFR Method 9 or Method 22 for nonpoint source/fugitive within 72 hours. All observations using the opacity reference test method must be kept on-site and made available to YRCAA staff upon inspection.

3.14 There must be no fallout, fugitive emissions or odors from this Facility beyond the property boundary in a quantity that interferes unreasonably with the use and enjoyment of the property owner upon which the material deposited or odor is detected , or is detrimental to the health, safety or welfare of any person, or causes damage to any property or business.

3.15 This Facility shall not receive any asbestos materials. All received demolishing materials shall have a certificate/manifest that asbestos survey was done on the structure prior to demolishing.

3.16 If and when the structural materials were demolished due to fire, the structure must also have a manifest to proof no asbestos was found, before they are being accepted at the Facility.

3.17 All C&D materials received from outside the country, i.,e. Canada must have and show that materials has been inspected by the appropriate authorities i.,e. Ministry of Environment or has been certified by a professional abatement company or equivalent regulations by the country.

3.18 This Order authorizes the operation of a LPL as specified herein this Order. Cell #1, hydrogen sulfide emissions, except the AO area and the construction and operation of a lined Cell #2, and an MRF as specified in Table 1 below.

3.19 This Order authorizes the use of the following equipment listed in Table 2 as submitted by the Permittee:

Table 1: Authorized and specified operations of the LPL

Unit Number	Description	Size
1	Cell # 2	91302.28 m^2 x 17.5 m high
2	Cell # 1 (closed) with MTCA's Area	169.92 m radius by 23.71 m high
3	Materials Recovery Facility (MRF)	
4	Tub Grinder	

Table 2: Authorized Equipment List.

Unit No	Unit Type	Make	Size
---------	*Equipment*	*Make/Manufacturer*	*Model*
2	Fuel/lube truck	Peterbuilt	PB335
3	Water truck	Ford	F550
4	Pressure clean truck	Ford	F250
5	Pickup	Ford	F250
6	Pickup	Chevrolet	1500
7	Pickup	Chevrolet	Silverado
8	Van	Ford	Econoline
9	Side by side	Polaris	Ranger Crew XP1000
10	Excavator	Caterpillar	320
11	Haul truck	Caterpillar	740 B
12	Haul truck	Caterpillar	740 B
13	Dump truck	Chevrolet	C3500
14	Loader	Caterpillar	980M
15	Dozer	Caterpillar	D-8T
16	Compactor	Caterpillar	836K
17	Tipper (LPL)	Columbia Industries	New horizon 65 ton
18	Tipper (MRF)	Columbia Industries	New horizon 65 ton
19	Loader	Caterpillar	962K
20	Backhoe	John Deere	510D
21	Screen plant	CEC	Screen-1t
22	Portable sort line, power source	Perkins	403F-11 / 25 hp

23	Portable sort line, power source	Perkins	403F-11 / 25 hp
24	Tub grinder	CW Mill	TCII 1564P
25	Sweeper	Broce	RC300
26	Excavator	Luigong	CLG906
27	Water truck	Kenworth	K20
28	Motor grader	Caterpillar	120G
29	Tractor	KW	10-1043
30	Tracked jaw crusher (not used)	Pioneer	FT2640

GENERAL APPROVAL CONDITIONS

4.1 Modification/establishment of this Facility must comply with all applicable Federal, State, and Local laws and regulations, including, but not limited to, RCW 70A.15.2210 (Washington Clean Air Act), WAC 173-400 (General Regulations for Air Pollution Sources), WAC 173-350 (Solid Waste Handling Standards), and the YRCAA Regulation 1.

4.2 All plans, specifications, other information and any further authorizations or approvals or denials in relation to this Modification, shall be incorporated herein and made part of YRCAA file.

4.3 Except as specified in this Order, any new or additional construction, modifications or alterations not covered in this review process which will affect air emissions in this Facility are subject to a NSR permitting process before it takes place or construction starts as required by RCW 70A.15.2210, WAC 173-400-110 and WAC 173-460-040.

4.4 The YRCAA staff shall be allowed to inspect the project at reasonable times and inspect equipment and/or records specific to the control, recovery, and/or release of contaminants into the atmosphere, in accordance with RCW 70A.15.2500 and YRCAA Regulation 1.

4.5 Nothing in this approval shall be construed as preventing compliance with any requirement(s) of law including those imposed pursuant to the federal and state CAA, and rules and regulations thereunder. Any violation(s) of such rules and regulations are subject to enforcement and penalty action in accordance with RCW 70A.15.3150 and YRCAA Regulation 1, Article 5.

4.6 This Order (NSRP-03-DTGEI-22) may be modified, suspended or revoked in whole or part for cause including, but not limited to, the following:

4.6.1 Violation of any terms or conditions of this authorization; or

4.6.2 If this authorization has been obtained by misrepresentation or failure to disclose fully all relevant facts.

4.7 The provisions of this authorization are severable and, if any provision or application of any provision of this authorization to any circumstance is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

4.8 Deviations from these conditions are violations subject to penalties in accordance with RCW 70A.15.3150 and 3160, WAC 173-400-230 and YRCAA Regulation 1, Article 5, Section 5.02.

4.9 The requirements of this Order apply to the Facility owner and/or operator(s) and any contractor or subcontractor performing any activity authorized under this Order. Any person(s), including contractor(s) and subcontractor(s), not in compliance with the applicable Order requirements are in violation of State and Local laws and subject to appropriate civil and criminal penalties. The Facility owner and/or operator, and all contractor(s) or subcontractor(s) are liable for the actions and violations of their employee(s). Any violation committed by a contractor or subcontractor shall be considered a violation by the Facility owner and/or operator, and is also a violation by the contractor and/or any subcontractor(s).

4.10 If, or whenever the Permittee wants to modify the operation, expand, install new equipment/operation or change limits in this Permit, another NSR application must be filed and approved with YRCAA before the changes take place and BACT and t-BACT requirements must be satisfied.

5.0 EMISSION LIMITS

5.1 Hydrogen sulfide concentrations in ambient air at the property boundary line of LPL for the 24-hour averaged concentrations shall not exceed the ASIL level of 2 $\mu g/m^3$ or 1.44 ppbv.

5.2 Visible emission from work around the site shall not exceed ten percent opacity for more than three minutes in any one hour for any operation.

5.3 In addition to the approval conditions and limits specified in this Order, the Permittee shall comply with all other applicable general standards for maximum air emissions as specified in WAC 173-400-040, WAC 173-460, and WAC 173-400-075.

5.4 Methane concentration shall not be between LEL and UEL (5 to 15%) at any time.

5.5 No toxic air emissions shall exceed the ASIL at any time beyond the boundary line of the facility.

5.6 The maximum allowable demolition waste shall not exceed 690276 cubic yard per year.

5.7 All air emissions limitation in the AO, by the Department Of Ecology for the MTCA's area must be enforced by the Department and shall always meet all federal and state ambient air emissions standards.

6.0 MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

6.1 The Permittee shall keep all records including this Order on site or at the nearest office. Records shall include, at minimum, daily records of solid wastes received, and any outgoing material such as crushed rock and recycled materials, which shall include the following information:

6.1.1 Records of actual weight and volume, kind of materials, dates, operator name, etc.

6.1.2 Records of any O&M items performed during operation or off operating hours.

6.1.3 The permittee shall include any corrective action taken at this.

6.1.4 Keep record of any required air monitoring.

6.2 The Permittee shall keep a record of any waste shipments that was rejected by the facility and for what reason.

6.3 The Permittee shall log all complaints received, and any corrective action taken.

6.4 The Permittee shall monitor hydrogen sulfide concentration daily for the first three months. If H_2S is not detected in any reading, then the monitoring shall be done weekly for the next three months. If no H_2S detected in this three months, the monitoring shall be done at minimum twice monthly. However, if one H_2S is detected within the first three months, monitoring schedule shall revert back to daily monitoring.

6.5 All required records shall be maintained and kept at the site for a rolling average of five years period, and be made available to the APCO of the YRCAA or his designated staff during inspections or upon request.

6.6 Any application form, report, or compliance certification, monthly record and the annual report submitted to YRCAA pursuant to this Order must be signed by a responsible official.

6.7 This Order and its conditions shall remain in effect in the event of any change in control or ownership of the Facility. In the event of any such change in control or ownership of the subject Facility, the Permittee shall notify the succeeding owner of this Order and conditions and shall notify the YRCAA of the change in control or ownership by filing an "Ownership or Name Change" form within fifteen (15) days of that change. The form can be obtained from our website or requested from the agency.

6.8 Pursuant to RCW 70A.15.2210, this Order shall be void without full payment of all actual YRCAA cost within thirty days after the issuance date.

Yakima Regional Clean Air Agency

You may appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process and applicable requirements is governed by Chapter 43.21B RCW. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB, P.O. Box 40903, Olympia, WA, 98504-0903. Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order to YRCAA in paper form - by mail or in person. E-mail is not accepted.

DATED at the City of Yakima, Washington on this day of , 2023

PREPARED BY:

Wade Porter
Engineer Specialist
Yakima Regional Clean Air Agency

REVIEWED BY:

Hasan M. Tahat, Ph.D.
Engineering and Planning Division Supervisor
Yakima Regional Clean Air Agency
for
Marc Thornsbury
Air Pollution Control Officer
Yakima Regional Clean Air Agency

REVIEWED BY:

Norman Hepner, P.E.,
Nth Degree Engineering Solutions

Appendix A
DTG Enterprises Inc. Dba; DTG Recycle - Yakima
Limited Purpose Landfill (LPL)
NSRP-03-DTGEI-22

Actual Operating Hours Calculations

Operating Schedule:	hrs/day	day/wk	wk/yr	holidays	hrs/yr	
Actual Operating hours:	10	5	52	6	2540	Actual
Allowable Operating hours:	12	6	52	6	3672	Allowable
Potential To Emit:					8760	PTE

0.24 ton LPL waste equals 1 Cubic Yard			
Demo	Wood waste	Total	
690,276.0	32,000.0	722,276.0	yards^3
165,666.2	4,800.0	173,346.2	ton LPL waste

0.15 Ton wood waste equals 1 CY

Fugitive Emissions from unpaved roads; Roll-off Haul truck, Loader, Dozer, Dump Trucks, and Light Truck

Emission (lb/VMT) = k ((s/12)^a)*((W/3)^b) (equation 1a, Section 13.2.2, AP-42)

Constants	PM2.5	PM10	PM
k, lb/VMT	0.15	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45

k, s, a, b are factors taken from Section 13.2.2 of AP-42

Roll -off Haul Truck; Gravel Haul tuck road on compacted soil and gravel

silt content (s), %	6.8	From site testing
Haul truck weight (W), ton	22.5	Ave. truck weight, loaded, then empty
Haul truck capacity, ton	15	Estimated tons material per truck
W	30	mean vehicle weight (tons)

VMT input data for Haul/Dump truck on compacted soil and gravel

Unpaved road length, ≈ 1.25 mi.	2.5	mile (round trip)
Trips/yr (Production/Veh Wt.)	11556.4	trips/yr
VMT/yr	28891.0	miles/yr

Roll -off Haul Truck; Gravel Haul tuck road in LPL and wood waste area(s).

silt content (s), %	3.6	From site testing
Haul truck weight (W), ton	22.5	Ave. truck weight, loaded, then empty
Haul truck capacity, ton	15	Estimated tons material per truck
W	30	mean vehicle weight (tons)

VMT input data for Haul/Dump truck on LPL and wood waste areas

Unpaved road length, ≈ 0.11 mi.	0.22	mile (round trip)
Trips/yr (Production/Veh Wt.)	11556.4	trips/yr
VMT/yr	2542.4	miles/yr

Loader weight (W), ton	33	Estimated Loader weight
Loader capacity, ton	2	Estimated bucket capacity of loader
W	34	mean vehicle weight (tons)
LPL silt content (s), %	3.6	From on-site silt testing
VMT input data for loader		
Loader average speed, mph	5	Average speed of loader onsite.
hours/yr	635	Estimated loader operated 25% of the time LPL was open
VMT/yr (Speed × hours/yr)	3175	miles/yr

Appendix A
DTG Enterprises Inc. Dba; DTG Recycle - Yakima
Limited Purpose Landfill (LPL)
NSRP-03-DTGEI-22

Proposed Draft

Dozer weight (W), ton	40	Weight of D8 Caterpillar
Dozer average speed, mph	2	Average speed of Bull Dozer onsite.
hours/yr	1270	Estimated Bull Dozer operated half the time LPL was open
VMT/yr (Speed × hours/yr)	2540	miles/yr

Light Truck Fugitive Emissions formula: Emission (lb/VMT) = $[k ((s/12)^a)*((S/30)^4)/(M/.5)^c] - C$
(equation 1b, Section 13.2.2, AP-42)

5.70% M = surface material moisture content (%)
7 S = mean vehicle speed (mph)

C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

	PM2.5	PM10	PM
C (lb/VMT)	0.00036	0.00047	0.00047
c	0.2	0.2	0.3
d	0.5	0.5	0.3

VMT input data for light truck

Light truck average speed, mph	7	Average speed of light truck onsite.
Miles/yr	254	Estimated light truck operated 10% of the time LPL was open
VMT/yr (Speed × hours/yr)	1778	miles/yr

	Emission Factors			VMT/yr	Uncontrolled Emissions		
	PM2.5	PM10	PM	compacted soil & gravel	PM2.5	PM10	PM
lb/VMT (haul truck gravel)	0.25	2.54	9.28	28891.0	7,325.7	73,257.0	268,094.9
lb/VMT (haul truck LPL)	0.14	1.43	5.95	2542.4	363.7	3,637.0	15,115.6
lb/VMT (loader)	0.27	2.68	9.82	3175.0	851.7	8,517.1	31,169.5
lb/VMT (Bull Dozer)	0.16	1.63	6.77	2540.0	413.6	4,135.8	17,188.5
lb/VMT (light truck)	0.07	0.67	4.08	1778.0	118.7	1,192.1	7,256.5

E.F. reduction due to natural mitigation; P is equal to the number of days with rainfall greater than 0.01 inch per day.

$E_{ext} = E \times (365-P)/365$ P = 70.00 day in at site ((365-P)/365) = 80.8%

Actual with natural mitigation included

	Emission Factors			Uncontrolled Emissions			
	PM2.5	PM10	PM	VMT/yr	PM2.5	PM10	PM
lb/VMT (haul truck gravel)	0.20	2.05	7.50	28891.0	5,920.8	59,207.7	216,679.5
lb/VMT (haul truck LPL)	0.12	1.16	4.81	2542.4	294.0	2,939.5	12,216.8
lb/VMT (loader)	0.22	2.17	7.93	3175.0	688.4	6,883.7	25,191.8
lb/VMT (Bull Dozer)	0.13	1.32	5.47	2540.0	334.3	3,342.6	13,892.0
lb/VMT (light truck)	0.05	0.54	3.30	1778.0	95.9	963.5	5,864.9

Control Eff. site watering = 80%

	Controlled Emissions (lbs)		
	PM2.5	PM10	PM
lb/VMT (haul truck gravel)	1,184.2	11,841.5	43,335.9
lb/VMT (haul truck LPL)	58.8	587.9	2,443.4
lb/VMT (loader)	137.7	1,376.7	5,038.4
lb/VMT (Bull Dozer)	66.9	668.5	2,778.4
lb/VMT (light truck)	19.2	192.7	1,173.0

Controlled Emissions (tons)		
PM2.5	PM10	PM
0.59	5.92	21.67
0.03	0.29	1.22
0.07	0.69	2.52
0.03	0.33	1.39
0.01	0.10	0.59

Proposed Draft

Woodwaste Tub Grinder

Emission, lb PM/ton woodwaste 0.24

-Emission factor for "Log Debarking" from a previous edition of EPA Document AP-42, Table 10.3-1 (0.024 lb PM/ton) was used to estimate total PM emissions.

-The tub grinder will be equipped with a water suppression system. Thus, control efficiency of 50% was assumed for the particulate emission in accordance with BAAQMD Permit Handbook Chapter 11.13 "Tub Grinders".

-60% of the total PM to be PM10 according to BAAQMD Permit Handbook Chapter 11.13 "Tub Grinders".
-PM2.5 was assumed to be 60% of PM10

Woodwaste, ton/yr 4,800.0 50% Control Efficiency

	PM2.5	PM10	PM
PM Emission Factors:	0.09	0.14	0.24
lb/yr (uncontrolled)	414.72	691.20	1152.00
lb/yr (controlled)	207.36	345.60	576.00
ton/yr (controlled)	0.10	0.17	0.29

Wood chip pile

-The E.F used are for aggregate piles, but some of the wind-blown dust emitted here will be due to dirt in the wood chips.

Emission, lb/ton = $k(0.0032)((U/5)^{1.3})/((M/2)^{1.4})$ (equation 1. Section 13.2.4-3, AP-42)

Constants	PM2.5	PM10	PM
k, particle size multiplier	0.053	0.35	0.74

Assumed values

U, wind speed, mph 15 High value taken from Section 13.2.4-3, AP-42
M, material moisture, % 11 Misc. fill materials at municipal solid waste landfill.

	PM2.5	PM10	PM
lb/ton	0.00007	0.00043	0.00091
lb/yr (uncontrolled)	0.312	2.062	4.359
lb/yr (controlled)	0.156	1.031	2.179
ton/yr (controlled)	0.000	0.001	0.001

50% Control Efficiency - Same as Grinder

All Fugitive emissions as: Controlled emissions, including natural mitigation and 80% efficiency for watering

Emissions	Actual Uncontrolled (ton/yr)	Actual Controlled (ton/yr)	Allowable Controlled (ton/yr)	Significant Emission Threshold Levels	
PM	170.0	27.7	40.0	25	
PM10	45.7	7.5	10.9	15	
PM2.5	4.7	0.8	1.2	10	

Proposed Draft

Phase 2 Hydrogen Sulfide (H2S) emission

Hydrogen Sulfide emission Factor	0.976	mg/m^2-day	from permittee NSR application section 4.3.4	
			Phase 2 area (m^2)	
Phase 2 Total area containing Dry/gypsum	91,302	m^2	91,302	
	89111.025	mg/day	equals	0.196456342 lb/day

	cas#	De Minimis (lb/Day)	SQER (lb/Day)	ASIL ($\mu g/m^3$)
Hydrogen Sulfide	6/4/7783	0.0074	0.15	2

Emission Rate for Hydrogen Sulfide exceeds the SQER, **thus requires modeling**.

Area Source Modeling; Phase 2 - rectangular source

24 hr modeling concentration for 1 lb/hour @ 1000' from source	81.47	$\mu g/m^3$ per lb/hr
or	646.5	$\mu g/m^3$ per g/sec
Modeled concentration is greatest @ 1000' from source	0.667	µg/m3

Phase 1 Hydrogen Sulfide (H2S) emission

		Phase 1 area (m^2)	
		90,705	
	88528.08 mg/day	equals	0.195171167 lb/day

Area Source Modeling; Phase - circular source

24 hr modeling concentration for 1 lb/hour @ 568' from source	20.51	$\mu g/m^3$ per lb/hr
or	162.8	$\mu g/m^3$ per g/sec
Modeled concentration is greatest @ 568' from source	0.167	µg/m3

Phase 1 and 2 (cell #1 & 2) Hydrogen Sulfide (H2S) emission

Maximum Modeled concentration	0.834	µg/m3
	41.68%	of ASIL - okay

Yakima Regional Clean Air Agency

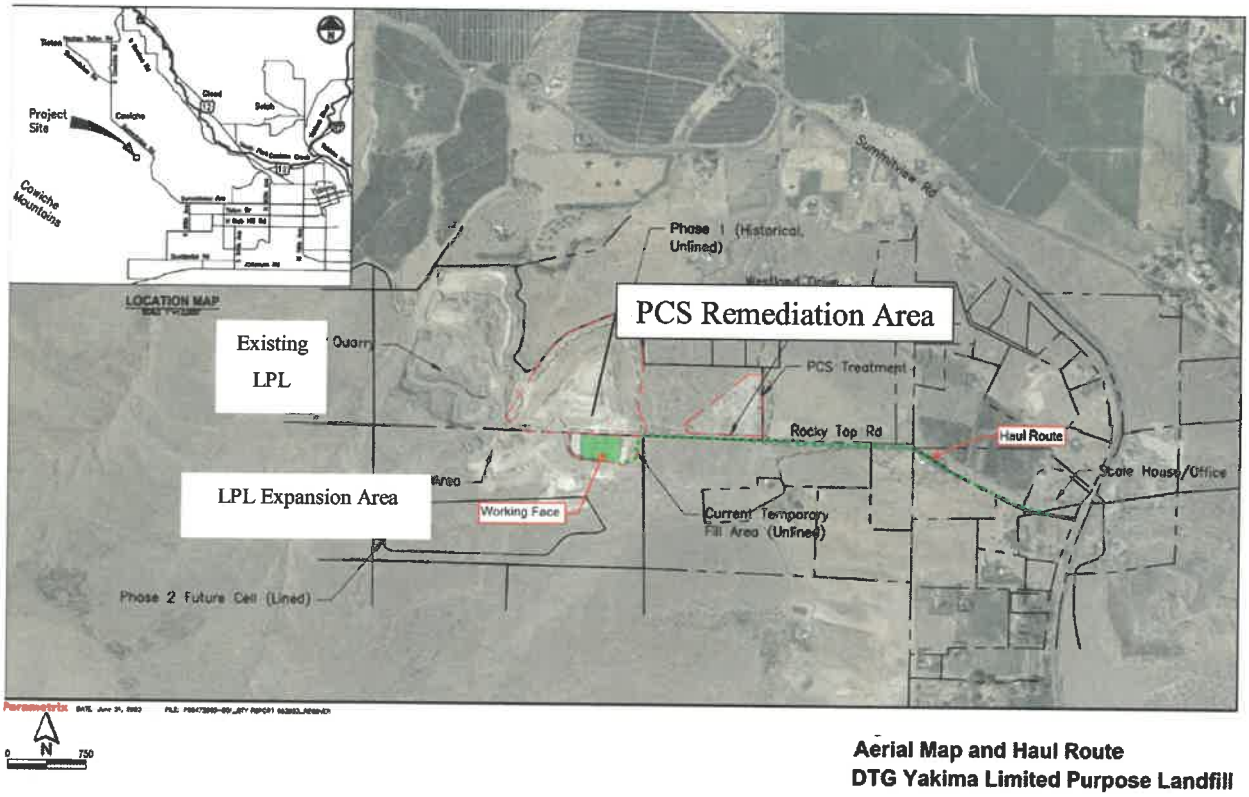

Figure 1: Current site plan of LPL showing various site operation; PCS, Rock Quarry and LPL temporary expansion fill area, and LPL Phase II site.

Figure 2: Google Earth view as provided by the Permittee; approximate LPL Expansion, phase 2 or cell #2 outlined in Orange. PCS area outlined in Pink.

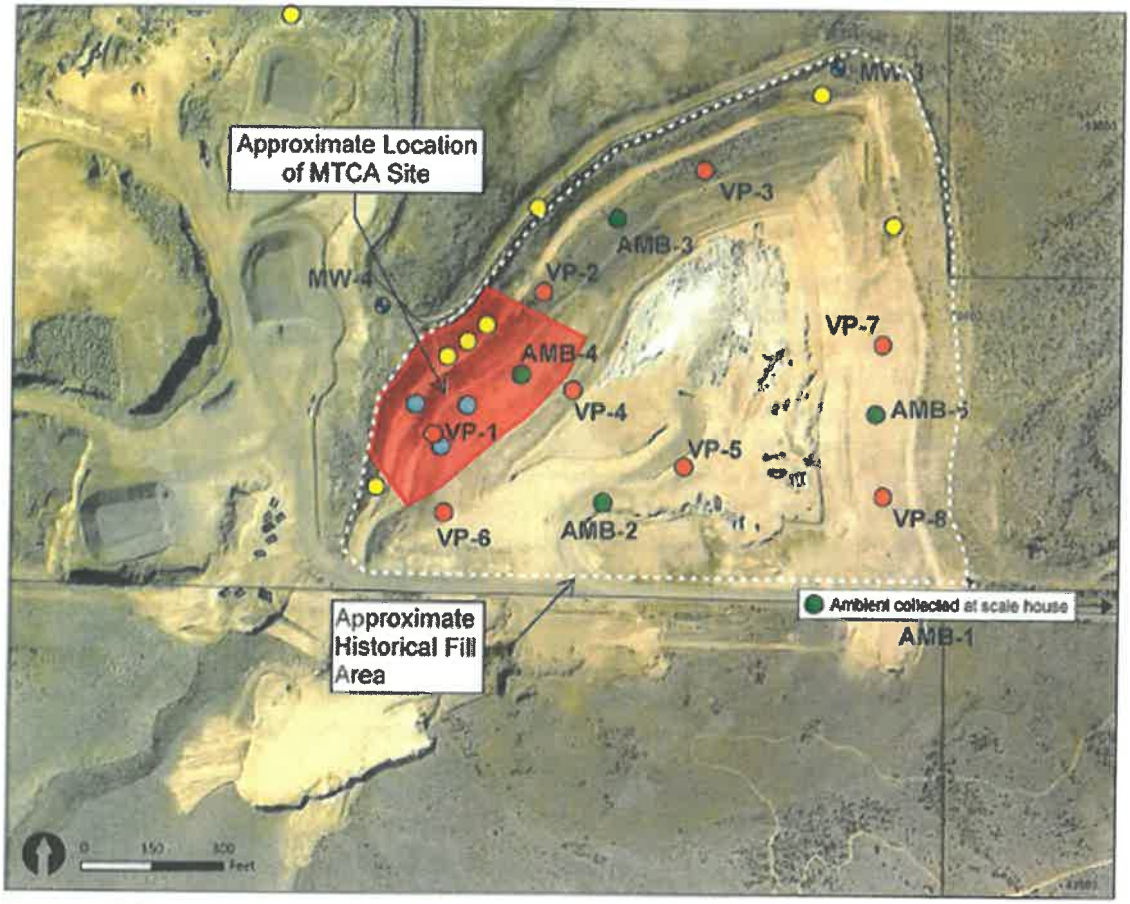

Figure 3: Location of MTCA's area.