CLARK COUNTY

DEPARTMENT OF AIR QUALITY
AND ENVIRONMENTAL MANAGEMENT
500 South Grand Central Parkway, Box 555210, Las Vegas, Nevada 89155

Authority To Construct
For a Major Part 70 Source
Source: 395

Issued in accordance with the
Clark County Air Quality Regulations (AQR)

ISSUED TO: **Republic Services**
770 East Sahara Avenue
Las Vegas, Nevada 89124

SOURCE: **Republic Dumpco, Inc**
Apex Waste Management Center
East of Interstate 15/US 93 Junction
Apex, Nevada 89124

RESPONSIBLE OFFICIAL:

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Permit Issuance: **12/21/2010**
Permit Administrative Revision: **9/20/2011**

ISSUED BY: CLARK COUNTY DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT

Richard Beckstead
Permitting Manager, Clark County DAQEM

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I ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
Btu	British Thermal Unit
°C	Degrees Celsius
CAAA	Clean Air Act, as amended
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
DAQEM	Clark County Department of Air Quality & Environmental Management
EPA	United States Environmental Protection Agency
EU	Emission Unit
°F	Degrees Fahrenheit
ft^3/yr	Cubic foot per year
GCCS	Gas Collection and Control System
HAP	Hazardous Air Pollutant
HP	Horse Power
H_2S	Hydrogen Sulfide
LANDGem	Landfill Gas Emissions Model
LFG	Landfill Gas
m^3/yr	Cubic meter per year
Mg/yr	Megagram per year
MMBtu	Millions of British Thermal Units
MMscf	Million Standard Cubic Foot
M/N	Model Number
MSWL	Municipal Solid Waste Landfill
N/A	Not Applicable
NAICS	North American Industry Classification System
NMOC	Non-Methane Organic Compounds
NO_x	Nitrogen Oxides
NRS	Nevada Revised Statutes
OP	Operating Permit
PM_{10}	Particulate Matter less than 10 microns
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
QA/AC	Quality Assurance/Quality Control
RBLC	EPA's RACT/BACT/LAER Clearinghouse database
RMP	Risk Management Plan
SCC	Source Classification Codes
scf	Standard Cubic Foot
scfm	Standard Cubic Feet per minute
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/N	Serial Number
SO_x	Sulfur Oxides
SSM	Start-up, Shut-down, and Malfunction
TCS	Toxic Chemical Substance
TRS	Total Reduced Sulfur
VOC	Volatile Organic Compound

II GENERAL CONDITIONS

A. GENERAL REQUIREMENTS

1. This ATC does not supersede or replace any Part 70 requirements, including any permit conditions, compliance requirements and/or emission limitations outlined in the Part 70 (Title V) Operating Permit.
2. No person shall begin actual construction of a New Part 70 source, or modify or reconstruct an existing Part 70 source that falls within the preconstruction review applicability criteria, without first obtaining an Authority to Construct Permit from the Control Officer. *[AQR 12.4.1.1(a)]*
3. The Permittee shall post the permit in a location which is clearly visible and accessible to the facility's employees and representatives of the department. *[AQR 12.4.3.1(e)(16) and 12.13]*
4. The Permittee shall commence the construction, modification, or reconstruction of this source within eighteen (18) months after the date of issuance of this Authority to Construct Permit and construction shall not discontinued for a period greater than twelve (12) months. *[AQR 12.4.1.1(b)]*
5. The Permittee shall submit an application for a Part 70 Operating Permit within twelve (12) months after commencing operation of the modification or reconstruction authorized by the ATC, or on or before such earlier date tht the Control Officer may establish. If the source submits a timely application under this condition, it may continue operating under its Authority to Construct Permit until final action is taken on its application for a new Part 70 Operating Permit. However, where an existing Part 70 Operating Permit would prohibit such construction or change in operation, the source must obtain a Part 70 Operating Permit revision before commencing operation. *[AQR 12.4.1.1(b) and 12.5.2.1(a)(1) and (3)]*
6. This ATC does not convey any property rights or any exclusive privilege. *[AQR 12.4.3.1(e)(6)]*
7. The Permittee shall pay all fees assessed pursuant to AQR Section 18. *[AQR 12.4.3.1(e)(17)]*

B. MODIFICATION, REVISION, RENEWAL REQUIREMENTS

1. The Permittee shall file an application for any change in the Responsible Official of the source and may implement the change immediately upon submittal of the request. *[AQR 12.4.3.4(a)(1)(D) and 12.4.3.4(a)(2)(C)]*
2. The Permittee shall file an application for a transfer of ownership at least 30 days prior to the date of a change in ownership or operational control of the source and such application shall constitute a temporary ATC under the conditions of the existing permit. *[AQR 12.12.2(c) and (d)]*
3. The Control Officer may revise, revoke and re-issue, re-open and revise, or terminate the permit for cause. *[AQR 12.4.3.1 (e)(5)]*
4. The Control Officer reserves the right, upon reasonable cause, to modify existing conditions and impose additional new compliance, monitoring and control requirements. *[AQR 12.4.3.1(e)(10)(B) and (C)]*

C. REPORTING/NOTIFICATIONS/PROVIDING INFORMANTION REQUIREMENTS

1. The Permittee shall report start of construction, construction interruptions exceeding nine (9) months, and completion of construction to the Control Officer in writing not later than fifteen (15) working days after occurrence of the event. *[AQR 12.4.3.1(e)(12)]*
2. The Permittee shall provide written notification of the actual date of commencing operation, received by the Control Officer, within fifteen (15) calendar days after such date. *[AQR 12.4.3.1(e)(13)]*
3. The Permittee shall provide separate written notification for commencing operation for each unit of phased construction, which may involve a series of units commencing operation at different times. *[AQR 12.4.3.1(e)(14)]*
4. The Permittee shall retain records of all required monitoring and performance demonstration data and supporting information for five (5) years after the date of the sample collection, measurement, report, or analysis. Supporting information includes all records regarding calibration and maintenance of the monitoring equipment, all original strip-chart recordings for continuous monitoring instrumentation, and if applicable, all other records required to be maintained pursuant to 40 CFR 64.9(b). *[AQR 12.4.3.1(e)(1)]*
5. The Permittee shall allow the Control Officer or any authorized representative of the Control Officer upon presentation of credentials to enter the Permittee's' premises where the source is located or emissions related activity is conducted to: *[AQR 12.4.3.1(e) (8)]*
    a. Have access to and copy during normal business hours any records that are kept pursuant to the conditions of the permit;
    b. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under this permit;
    c. Sample or monitor substances or parameters to determine compliance with the conditions of the permit or applicable requirements; and
    d. Document alleged violations using devices such as cameras or video equipment.
6. The Permittee shall provide the Control Officer, within a reasonable time, with any information that the Control Officer requests in writing to determine whether cause exists for revising, revoking and re-issuance or terminating the permit, or to determine compliance with the conditions of the permit. Upon request the Permittee shall also furnish to the Control Officer copies of any records required to be kept by the permit, or for information claimed to be confidential, the Permittee may furnish such records directly to the Administrator along with a claim of confidentiality. *[AQR 12.4.3.1(e)(7)]*

D. COMPLIANCE REQUIREMENTS

1. The Permittee shall comply with all conditions contained in this ATC. Any noncompliance constitutes a violation and is grounds for an action for non-compliance, revocation and re-issuance or the termination of the permit by the Control Officer, or the re-opening or revising of the permit by the Permittee as directed by the Control Officer. *[AQR 12.4.3.1(e)(3)]*

2. Each of the conditions and requirements of this permit are severable and if any are held invalid, the remaining conditions and requirements continue in effect. *[AQR 12.4.3.1(e)(2)]*
3. The need to halt or reduce activity to maintain compliance with the conditions of the permit is not a defense to noncompliance with any condition of the permit. *[AQR 12.4.3.1(e)(4)]*
4. The Permittee shall promptly report to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) upon the commencement of operation deviations from permit requirements, including those attributable to malfunction, startup, or shut-down. All reports of deviations shall identify the probable cause of the deviations and any corrective actions or preventative measures taken. *[AQR 12.5.2.6(d)(4)(B) and (C)]*
5. A responsible official of the source shall certify that, based on information and belief formed after a reasonable inquiry, the statements made in any document required to be submitted by any condition of the permit are true, accurate, and complete. *[AQR 12.4.3.1(e)(9)]*

III SOURCE-WIDE PTE SUMMARY

1. Republic Dumpco Inc., is a major source for PM_{10}, NO_x, SO_x, HAP, and TCS (H_2S) and is a minor source for $PM_{2.5}$, CO, and VOC.

- **Table III-1: Source PTE (tons per rolling 12-months)**

Operation	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC[1]	HAP[2]	(H_2S)
Aggregate Processing (Process A)	20.60[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generators W200-W204 (Process W)	2.19	2.19	65.47	25.26	1.68	4.28	2.31	0.00
Soil Treatment (Process W)	0.88	0.00	0.00	0.00	0.00	2.78	0.00	0.00
Industrial Waste (Process W)	11.02	0.00	0.00	0.00	0.00	0.19	0.00	0.00
Paved Haul Road (Process W)	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MSWL (Process W)	226.76	16.34	55.86	73.92	193.92	11.16	8.31	0.05
Total Non-fugitive PTE	**262.42**	**18.53**	**121.33**	**99.18**	**195.60**	**18.41**	**10.62**	**0.05**
Fugitive Emissions from Landfill Gas[4]	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**32.89**	**32.16**	**147.27**

[1]VOC emissions include HAP emissions.
[2]HAP total does not include H_2S emissions.
[3]Federally enforceable emissions cap requested by the source.
[4]Fugitive emissions from the Landfill Gas are based on year 2006 estimates.

IV EMISSION UNITS AND APPLICABLE REQUIREMENTS

A. EMISSION UNITS AND LIMITS

1. Emission Units

Table IV-A-1: Summary of Emission Units

EU	Description	Model No.[1]	Serial No.[1]
G26	John Zink Candlestick (open) Flare, 42.0 MMBtu/hr, 1,400 scfm LFG Flow	10x30 LFS & Blower Skid LFF	TBD
	Control Device - Paques THIOPAQ Desulphurization System (For reducing H_2S emissions)	TBD	TBD

[1]TBD = To Be Determined.

2. Emission Limitations

a. The Permittee shall operate the flare with no visible emissions as determined by the methods specified in paragraph 40 CFR 60.18(f), except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours. *[40 CFR 60.18(c)(1)]*

b. Neither the actual nor the allowable emissions from the individual emission units shall exceed the calculated PTE as listed in Table IV-A-2 or IV-A-3.

Table IV-A-2: PTE (tons per rolling 12-months)

EU	Conditions	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	H_2S
G26	735,840,000 ft^3/yr	6.26	6.26	12.52	68.07	18.40	8.29	7.33	0.05

Table IV-A-3: PTE (pounds per hour)

EU	Conditions	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	H_2S
G26	1,400 scfm	1.43	1.43	2.86	15.54	4.20	1.90	1.70	0.02

Alternate Operating Scenario:

c. The Alternate Operating Scenario is the initial operating scenario prior to the installation of the desulfurization system, and shall be discontinued upon commencement of operation of the desulfurization system.

d. Neither the actual nor the allowable emissions from the individual emission units shall exceed the calculated PTE as listed in Table IV-A-4 or IV-A-5.

Table IV-A-4: PTE for Alternate Operating Scenario (tons per rolling 12-months)

EU	Conditions	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	H_2S
G26	55,857,359 ft^3/yr	0.48	0.48	0.95	5.17	18.40	0.16	0.08	0.01

Table IV-A-5: PTE for Alternate Operating Scenario (pounds per hour)

EU	Conditions	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	H_2S
G26	1,400 scfm	1.43	1.43	2.86	15.54	55.44	0.47	0.27	0.01

3. Production Limitations

a. The Permittee shall limit the flow of landfill gas to the open flare (EU: G26) to 1,400 standard cubic feet per minute and 735,840,000 cubic feet per rolling 12-months .

b. The Permittee shall operate the desulfurization system at all times the collected gas is routed to the flare (EU: G26), except while operating under the Alternate Operating Scenario.

c. During the time the Alternate Operating Scenario is in effect, the Permittee shall limit the actual flow of landfill gas to the open flare (EU: G26) to 1,400 standard cubic feet per minute and 55,857,359 cubic feet per rolling 12-months .

d. The Permittee shall limit the rolling 12-months emissions from both operating scenarios identified in this section to the PTE in Table IV-A-2.

B. EMISSION CONTROLS

Flare (EU: G26):

1. The Permittee shall apply controls specified in this section, except during periods of start-up, shut-down or malfunction. *[40 CFR 60.755(e)]*

2. Periods of start-up, shut-down and malfunction shall not exceed five (5) days for the collection system nor exceed one (1) hour for treatment and control devices. *[40 CFR 60.755(e)]*

3. The Permittee shall operate the open combustion flare with the flame present at all times when the collected gas is routed to the flare. *[40 CFR 60.753(f)]*

4. The Permittee shall design and operate the open combustion flare in accordance with 40 CFR 60.18 except as noted in 40 CFR 60.754(e). *[40 CFR 60.752(b)(2)(iii)(A)]*

5. The Permittee shall adhere to either the heat content specifications in 40 CFR 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR 60.18(c)(4), OR the requirements in 40 CFR 60.18(c)(3)(9). *[40 CFR 60.18(c)(3)]*

6. The Permittee shall design and operate the air-assisted flare with an exit velocity less than the velocity (V_{max}) as determined by the method specified in 40 CFR 60.18(f)(6). *[40 CFR 60.18(c)(5)]*

7. The Permittee shall develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3), and submit the plan to the Control Officer for approval. The Permittee shall maintain a copy of the SSM plan on site. *[40 CFR 63.1960]*

8. At all times, including periods of start-up, shut-down and malfunction, the Permittee shall maintain and operate the source in a manner consistent with good air pollution control practice to minimize emissions as required by 40 CFR 63.6. Determination that acceptable operating and maintenance procedures are being used shall be based on information available to the Control Officer which may include, but is not limited to , monitoring results, opacity observations, review of operating and maintenance procedures, and inspections of the source. *[40 CFR 63.1960]*

Desulfurization System:

9. The Permittee shall operate and maintain the desulfurization system in accordance with the manufacturer's specifications. *[AQR 12.4.3.1(e)]*

Other:

10. The Permittee shall operate in a manner such that odors will not cause a nuisance. *[AQR 43]*

11. The Permittee shall comply with the control requirements contained in this section. If there is inconsistency between standards or requirements, the most stringent standard or requirement shall apply. *[AQR 14.1(a)]*

C. MONITORING

1. The Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment on the open combustion flare; *[40 CFR 60.756(c)]*

    a. a heat sensing device, such as an ultraviolet beam sensor or thermocouple at the pilot light or the flame itself to indicate the continuous presence of a flame; and

    b. a device that records LFG flow to or bypass of the open combustion flare. The Permittee shall either:

        i. install, calibrate, and maintain a gas flow rate measuring device that shall record the LFG flow to the control device at least every 15 minutes; or

        ii. secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

2. The Permittee shall monitor on a quarterly basis upon commencing operation, the visible emission from the combustion flare (EU: G26) by employing 40 CFR 60 Appendix A, Method 22. The observation period shall be 2 hours and shall comply with Method 22. *[40 CFR 60.18(f)(1)]*

3. The Permittee shall perform at least one visual emissions check on the open combustion flare (EU: G26) daily, upon commencing operation, while operating to demonstrate compliance with the opacity limit. If the open combustion flare does not operate during the calendar quarter, no observation of the flare shall be required. If visible emissions are observed, corrective actions shall be taken to minimize the emissions and, if practicable, the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. *[AQR 12.4.3.1(e)(10) and AQR 26]*

4. Upon commencing operation, the Permittee shall conduct, each calendar quarter, a heating value analysis (Btu content) on the landfill gas consistent with EPA approved methods (or equivalent) or a net heating value analysis of the combustion landfill gas as outlined in 40 CFR 60.18(f)(30. *[40 CFR 60.18(f)(4)]*

5. The concentration of methane in the landfill gas shall be determined by using 40 CFR 60 Appendix A: Method 3C. *[40 CFR 60.754(e)]*

D. TESTING

1. The Permittee shall use initial performance testing for the desulfurization system to demonstrate compliance with the 92.2 percent control efficiency for H_2S reduction in landfill gas. *[AQR 12.4.3.1(a)(7)]*

E. RECORD KEEPING

1. Upon commencement of operations, various records, logs, etc., shall contain, at minimum, the following information:
   a. quarterly Method 22 test results for the open combustion flare;
   b. monthly hourly average and rolling 12-month total LFG flow to the open combustion flare (in cubic feet or cubic meters) from the gas collection and control system;
   c. quarterly LFG heating value analysis results in MMBtu/dscf;
   d. monthly and emissions for the open combustion flare that includes both operating scenarios identified in Section IV-A-3 in this ATC;
   e. quarterly summary of deviations, if any, per the SSM plan in capture and control system;
   f. the magnitude and duration of malfunctions, excess emissions, monitoring system downtimes, corrective actions taken, etc. during the flare and desulfurization system operation, as required by 40 CFR 60.7; and
   g. records of performance test results.

F MITIGATION

1. The source has no federal offset requirements.

G OTHER REQUIREMENTS

1. The Permittee shall provide the model numbers and serial numbers for the John Zinks Candlestick (open) Flare and the Paques THIOPAQ Desulphurization System within 15 days after commencement of operation.