DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

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PART 70
TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)

APPLICATION FOR:
Significant Revision

SUBMITTED BY:
Broadbent & Associates, Inc.

FOR:
Caesars Entertainment, Inc., Caesars Consolidated Properties
Source: 00257

LOCATION:
One Caesars Palace Drive
Las Vegas, Nevada 89109

SIC Code 7011, "Hotels and Motels"
NAICS Code 721120, "Casino Hotels"

TSD Date: March 6, 2025

EXECUTIVE SUMMARY

Caesars Entertainment, Inc., Caesars Consolidated Properties is the operator of multiple gaming and lodging facilities located in Hydrographic Area 212 (the Las Vegas Valley). Hydrographic Area 212 is designated as attainment for all regulated air pollutants except ozone and was designated a moderate nonattainment area for ozone on January 5, 2023. The designation has not imposed any new requirements at this time. Hydrographic Area 212 was designated a serious nonattainment area for ozone on January 21, 2025. Clark County has drafted or imposed new requirements to address this designation. HA 212 is also subject to a maintenance plan for the CO and PM_{10} NAAQS.

Caesars owns and operates several adjacent and contiguous hotels and casinos grouped under SIC Code 7011, "Hotels and Motels" and NAICS Code 721120, "Casino Hotels". The source operates ten facilities consisting of natural gas-fired boilers, diesel-powered generators, cooling towers, and a gasoline dispensing facility. Insignificant emission units include natural gas-fired boilers and water heaters, spray booths, woodworking operations, media blasting operations, and diesel storage tanks. The source operates a combination of fossil-fuel boilers with a cumulative heat-input rating exceeding 250 million Btu, which classifies it as a categorical source under AQR 12.2.2(j).

Caesars Entertainment, Inc. is a major source for NO_x, CO, and GHG, and a minor source for all other regulated pollutants. The source is subject to 40 CFR Part 60, Subparts Dc and IIII and 40 CFR Part 63, Subparts ZZZZ and CCCCCC.

The following table summarizes the source potential to emit for each regulated air pollutant from all emission units addressed by this significant revision permit.

Table 1: Emission Units PTE Summary (TPY)

Pollutants	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[1]
Source PTE	**70.38**	**70.38**	**440.30**	**187.12**	**2.30**	**27.24**	**5.93**	**354,918.57**
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[2]	-
Major Stationary Source Thresholds (PSD)	250	250	-	250	250	-	10/25[2]	-
Major Stationary Source Threshold (Serious Nonattainment)	-	-	50	-	-	50	-	-

[1]Metric tons per year, CO2e.
[2]Ten tons for any individual hazardous air pollutant or 25 tons for combination of all HAPs.

Clark County Department of Environment and Sustainability (DES) has delegated authority from the U.S. Environmental Protection Agency to implement the requirement of the Part 70 operating permit program (Part 70 OP).

This permit is being issued based on the significant revision application submitted on September 12, 2024.

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ACRONYMS AND ABBREVIATIONS

(These terms may be seen in the Technical Support Document)

AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DOM	date of manufacture
EPA	U.S. Environmental Protection Agency
EU	emission unit
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standard
NSR	New Source Review
OP	Operating Permit
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
PSD	Prevention of Significant Deterioration
PTE	potential to emit
SIC	Standard Industrial Classification
SO_2	sulfur dioxides
TSD	technical support document
VOC	volatile organic compound

I. SOURCE DESCRIPTION

Caesars Entertainment, Inc., Caesars Consolidated Properties operates multiple resort hotels and casinos as identified in Table I-1.

Table I-1: Caesars Entertainment, Inc. Property Identification

Harrah's Las Vegas, 3475 S. Las Vegas Blvd.	**The LINQ Hotel & Casino**, 3535 S. Las Vegas Blvd.
Flamingo Las Vegas, 3555 S. Las Vegas Blvd.	**Planet Hollywood**, 3667 S. Las Vegas Blvd.
Horseshoe Las Vegas, 3645 S. Las Vegas Blvd.	**LINQ Complex - High Roller**, 3545 S. Las Vegas Blvd.
Caesars Palace, 3570 S. Las Vegas Blvd.	**Forum Meeting Center**, 3911 Koval Lane
The Cromwell Las Vegas, 3595 S. Las Vegas Blvd.	**Paris Las Vegas,** 3655 S. Las Vegas Blvd.

II. PERMITTING ACTION

On September 12, 2024, the permittee submitted a significant revision application to incorporate the diesel-powered fire pump (EU: BA21) added to the Horseshoe Hotel and Casino with the ATC permit issued on November 13, 2024. Incorporation of the ATC in the OP is not an administrative revision as the ATC was not subject to AQR 12.2.16.6 – Enhanced public participation procedures. Since adding a diesel engine subject to an NSPS is a Title I modification, this permitting action cannot be a minor revision per AQR 12.5.2.14(a)(1)(E). Therefore, this permitting action is a significant revision to the Part 70 OP.

In addition, Caesars Entertainment divested all interest in the Battista's operation. Therefore, all references to this property have been removed and the source PTE has been revised accordingly.

III. EMISSIONS INFORMATION

A. Emission Unit List

Table III-A-1 lists the emission units at this stationary source.

Table III-A-1: New Emission Unit

EU	Description	Rating	Make	Model No.	Serial No.	SCC
Horseshoe						
BA21^{N}	Fire Pump	260 hp	Aurora	10-481-18	15-2460314	20300101
	Diesel Engine; DOM: 2015		Cummins	QSB6.7	73884312	

B. Applicability Emissions

Permitting applicability is determined by calculating the emissions for all proposed emission units using 8,760 hours of operation (except for emergency generators or fire pumps, which use 500 hours), any inherent controls, any inherent throughput limitations, and the emission factors provided by the manufacturer, by source test results, by EPA AP-42, or by other approved methods. The applicability emissions are included in this evaluation as part of an ongoing assessment of the source's status with every proposed change.

Table III-B-1: Applicability Emissions (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
Source Applicability Emissions	**76.11**	**74.28**	**442.25**	**188.76**	**2.34**	**30.26**	**7.34**	**357,245.43**
Major source Thresholds	100	100	100	100	100	100	10/25[2]	75,000
Nonattainment NSR Thresholds	-	-	100	-	-	100	N/A	-
PSD Thresholds	250	250	-	250	250	-	-	-

[1]In units of CO_2e
[2]10 tons for any single HAP or 25 tons for any combination of HAP pollutants.

C. Source-Wide PTE

PTE is calculated to include any controls or limits, whether voluntarily proposed by the permittee or required. PTE does not include insignificant emission units and activities, but does include fugitive emissions.

Table III-C-1: Source-Wide PTE (tons per year)

Pollutants	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	H_2S	Pb	GHG[1]
Source PTE	70.38	70.38	440.30	187.12	2.30	27.24	5.93	0	0	354,918.57

[1]In units of CO_2e

Table III-C-2: Emissions Increase (tons per year)

Description	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
Current Permitting Action	70.38	70.38	440.30	187.12	2.30	27.24	5.93	354,918.57
Title V OP issued 09/25/2024	70.36	70.36	439.96	186.97	2.29	27.23	5.92	354,845.18
Emissions Increase	0.02	0.02	0.34	0.15	0.01	0.01	0.01	73.39
AQR 12.5.1(d) Minor NSR Significance Levels	7.5	5.0	20	50	20	20		N/A
AQR 12.2.2(uu) Significance Thresholds	15	10	40/25	100	40	40/25	10	N/A
RACT/BACT Analysis Required	No	No	No	No	No	No	No	No

[1]In units of CO_2e

IV. CONTROL TECHNOLOGY

As shown in Table III-C-2, the emission increases associated with this permitting action are below the AQR 12.2.2 significant thresholds. Therefore, a BACT analysis is not required. All BACT requirements established with previous permitting actions remain enforceable. The calculated emission increase is also below the AQR 12.4 Minor NSR significance and therefore, a RACT analysis is not triggered for the proposed changes.

The permittee shall only combust diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35% by volume in the engine (EU: BA21).

V. OPERATIONAL LIMITS

The new diesel-powered fire pump is permitted to operate up to 100 hours for testing and maintenance with unlimited operation for emergencies. The permittee may operate the fire pump up to 50 hours/year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance (EU: BA21).

VI. REVIEW OF APPLICABLE REGULATIONS

Local Regulations

DAQ has determined that the following public laws, statutes, and associated regulations are applicable:

1. CAAA (authority: 42 U.S.C. § 7401, et seq.);

2. Title 40 of the CFR, including 40 CFR Part 70 and others;

3. Chapter 445 of the NRS, Sections 401 through 601;

4. Portions of the AQR included in the state implementation plan (SIP) for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from ATC permits issued by DAQ are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and

5. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

Federal Regulations

The new emergency engine is subject to 40 CFR 60, Subpart IIII. By adhering to the requirements of Subpart IIII, the permittee will also meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

VII. MONITORING

Standard monitoring requirements apply to the new unit. The permittee shall monitor and record the hours of operation for the emergency engine, and monitor the sulfur content and cetane index or aromatic content of the fuel burned by retaining a copy of vendor fuel specifications. In addition, the engine is subject to quarterly visible emission checks.

VIII. PERFORMANCE TESTING

No performance testing requirements have been identified.

IX. INCREMENT ANALYSIS

Caesar's Entertainment Corporation is a major source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include 61 boilers, 50 generators and 28 cooling towers. Since minor source baseline dates for NO_x (October 21, 1988) and SO_2 (June 29, 1979) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

DAQ modeled the source using AERMOD to track the increment consumption. Average actual emissions (2022-2023) were used in the NO_X modeling. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (2011 to 2015) of meteorological data from the McCarran Station were used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table IX-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

Table IX-1: PSD Increment Consumption

Pollutant	Averaging Period	Source's PSD Increment Consumption (µg/m³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	3.71[1]	664450	3997650
SO_2	24-hour	1.45[1]	663850	3998650
SO_2	Annual	0.78	663850	3998650
NO_X	Annual	5.38	663950	3998650

[1] Highest Second High Concentration.

X. ENVIRONMENTAL JUSTICE

The map and statistical tables included in this section were obtained from the EJ Screen website. As a means to obtain reasonable demographic data, a two mile radius from the center of the source was selected. The area within this circle equates to 12.56 square miles and represents a residential population of 52,655. The proposed modification results in less than one ton of total emissions for all criteria pollutants. As a result, this permitting action will not have an adverse or disparate effect on an underserved population when compared to the general population of Las Vegas. Therefore, an extensive assessment wasn't performed.

Map of Selected Area

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	26%	13%	85	14%	84
Lack of Health Insurance	23%	12%	90	9%	94
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	5%	6%	66	12%	39
Wildfire Risk	0%	33%	0	14%	0

Sites reporting to EPA within defined area:

Superfund 0
Hazardous Waste, Treatment, Storage, and Disposal Facilities 4
Water Dischargers 183
Air Pollution 10
Brownfields 2
Toxic Release Inventory 8

Other community features within defined area:

Schools 7
Hospitals 1
Places of Worship 8

Other environmental data:

Air Non-attainment ..... Yes
Impaired Waters ..... Yes

Selected location contains American Indian Reservation Lands* ..... No
Selected location contains a "Justice40 (CEJST)" disadvantaged community ..... Yes
Selected location contains an EPA IRA disadvantaged community ..... Yes

Report for 2 miles Ring Centered at 36.116368,-115.175009

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	22%	20%	66	20%	73
Heart Disease	7.3	6.4	74	6.1	72
Asthma	10.9	10.3	72	10	75
Cancer	4.7	5.7	32	6.1	21
Persons with Disabilities	14.9%	13.2%	68	13.4%	65

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	52%
Spanish	31%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	2%
Korean	1%
Chinese (including Mandarin, Cantonese)	3%
Vietnamese	1%
Tagalog (including Filipino)	5%
Other Asian and Pacific Island	2%
Other and Unspecified	2%
Total Non-English	48%

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu g/m^3$)	6.58	5.65	82	8.08	13
Ozone (ppb)	66.5	64.1	94	61.6	83
Diesel Particulate Matter ($\mu g/m^3$)	0.91	0.446	94	0.261	97
Air Toxics Cancer Risk* (lifetime risk per million)	30	24	51	25	52
Air Toxics Respiratory HI*	0.45	0.34	51	0.31	70
Toxic Releases to Air	37	1,400	36	4,600	15
Traffic Proximity (daily traffic count/distance to road)	300	200	81	210	83
Lead Paint (% Pre-1960 Housing)	0.043	0.063	73	0.3	24
Superfund Proximity (site count/km distance)	0.0047	0.014	48	0.13	0
RMP Facility Proximity (facility count/km distance)	0.12	0.29	47	0.43	36
Hazardous Waste Proximity (facility count/km distance)	3.7	1.8	90	1.9	84
Underground Storage Tanks (count/km^2)	12	3.3	93	3.9	90
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.089	7	87	22	81
SOCIOECONOMIC INDICATORS					
Demographic Index	64%	41%	84	35%	86
Supplemental Demographic Index	25%	16%	85	14%	89
People of Color	75%	50%	79	39%	80
Low Income	54%	33%	83	31%	84
Unemployment Rate	8%	7%	66	6%	74
Limited English Speaking Households	17%	6%	89	5%	91
Less Than High School Education	21%	14%	75	12%	82
Under Age 5	5%	5%	56	6%	55
Over Age 64	13%	17%	45	17%	38
Low Life Expectancy	22%	20%	66	20%	73

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

XI. PUBLIC PARTICIPATION

This permitting action is for a significant revision. Therefore, it is subject to public participation in accordance with AQR 12.5.2.17.

XII. ATTACHMENTS

See the following attachment for calculations.

Table XII-1: Source PTE Summary (tons per year)

Property	PM_{10}	$PM_{2.5}$	NOx	CO	SO_2	VOC	HAP	GHG[1]
Harrah's	3.89	3.89	39.17	14.90	0.17	2.87	0.43	23,757.26
Flamingo	6.02	6.02	36.86	18.17	0.23	2.41	0.60	35,293.33
Horseshoe	4.97	4.97	47.40	13.39	0.24	2.67	0.58	32,243.82
Cromwell	0.97	0.97	9.14	4.05	0.08	0.78	0.14	9,933.93
Caesars	23.02	23.02	131.26	33.76	0.69	8.29	1.95	120,380.45
Paris	9.78	9.78	45.84	35.68	0.29	3.01	0.74	44,449.07
Linq	2.14	2.14	37.85	18.67	0.18	1.84	0.38	20,513.72
Planet Hollywood	12.62	12.62	63.77	37.72	0.24	3.45	0.66	40,996.31
High Roller	5.59	5.59	22.84	6.49	0.09	1.10	0.24	14,618.62
Forum Meeting Center	1.38	1.38	6.17	4.29	0.09	0.82	0.21	12,732.06
Total	**70.38**	**70.38**	**430.30**	**187.12**	**2.30**	**27.24**	**5.93**	**354,918.57**

[1]In units of CO_2e

Table XII-2: Source Applicability Summary (tons per year)

Property	PM10	PM2.5	NOx	CO	SO2	VOC	HAP	GHG[1]
Harrah's	3.89	3.89	39.17	14.9	0.17	2.87	0.43	23,757.26
Flamingo	6.02	6.02	36.86	18.17	0.23	2.41	0.6	35,293.33
Horseshoe	4.97	4.97	47.4	13.39	0.24	2.67	0.58	32,243.82
Cromwell	0.97	0.97	9.14	4.05	0.08	0.78	0.14	9,933.93
Caesars	23.01	23.01	131.26	33.76	0.69	8.29	1.95	120,380.45
Paris	9.78	9.78	45.84	35.68	0.29	3.01	0.74	44,449.07
Linq	2.14	2.14	37.85	18.67	0.18	1.84	0.38	20,513.72
Planet Hollywood	12.62	12.62	63.77	37.72	0.24	3.45	0.66	40,996.31
High Roller	5.59	5.59	22.84	6.49	0.09	1.1	0.24	14,618.62
Forum Meeting Center	1.38	1.38	6.17	4.29	0.09	0.82	0.21	12,732.06
Insignificant Activities	5.74	3.91	1.95	1.64	0.04	3.02	1.41	2326.86
Total	**76.11**	**74.28**	**442.25**	**188.76**	**2.34**	**30.26**	**7.34**	**357245.43**

[1]In units of CO_2e

Table XII-3: Source PTE and Applicability Emission for Diesel Engine

EU#	BA21		Horsepower:	260		Emission Factor	Potential Emissions		
Make:	Cummins		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	QSB6.7		Hours/Year	500	PM10	2.45E-04	0.06	1.53	0.02
S/N:	73884312				NOx	5.46E-03	1.42	34.05	0.35
					CO	2.63E-03	0.68	16.41	0.17
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.08	0.01
PM10	0.111	g/hp-hr			VOC	1.37E-04	0.04	0.85	0.01
NOx	2.475	g/hp-hr			HAP	2.71E-05	0.01	0.17	0.01
CO	1.193	g/hp-hr							
SO_2		g/hp-hr							
VOC	0.062	g/hp-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

Table XII-4: GHG Calculations for Diesel Engine

EU	Rating (hp)	Fuel Consumption (gal/yr)	HHV (MMBtu/gal)	Pollutant	EF (kg/MMBtu)	Convert (kg→lb)	GHG (ton/yr)	GWP	CO2e (ton/yr)
BA21	260	6,500	0.138	CO_2	73.96	2.205	73.14	1	73.14
		6,500	0.138	CH_4	0.003	2.205	0.003	25	0.07
		6,500	0.138	N_2O	0.0006	2.205	0.001	298	0.18
								Total	73.39