

Image shown may
not reflect actual package.

CATERPILLAR® ENGINE SPECIFICATIONS

C18 In-Line 6, 4-Stroke-Cycle water-cooled diesel

Bore	145 mm (5.71 in.)
Stroke	183 mm (7.2 in.)
Displacement	18.13 L (1106.36 cu. in.)
Compression Ratio	14.5:1
Aspiration	Air-to-Air Aftercooled
Fuel System	MEUI
Governor Type ..	Caterpillar® ADEM™ A4 control system
Package Weight (estimated)	5032.61 kg (11,095 lb.)

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

Ready to Run

- Shipped from the factory complete and ready to run

Fuel/Emissions Strategy

- Tier 2

Enclosures (design to order)

- Sound attenuated
- Weather protective

Single-Source Supplier

- Fully prototype-tested with certified torsional vibration analysis available
- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities

Worldwide Product Support

- Caterpillar dealers provide extensive post-sale support including maintenance and repair agreements.
- Caterpillar dealers fill 99.7 percent of parts orders within 24 hours.
- Caterpillar dealers have over 2,100 dealer branch stores operating in 200 countries.
- The Cat® S•O•SSM program cost-effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Cat® C18 Tier 2 ATAAC Diesel Engine

- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

Cat Generator

- Designed to match performance and output characteristics of Caterpillar diesel engines
- 2/3 pitch minimizes harmonic distortion and facilitates parallel operation
- UL 1446 Recognized Class H Insulation

Cat EMCP 3 Control Panels

- EMCP 3.1 offers basic engine/generator monitoring, metering, and protection.
- Segregated low voltage (AC/DC) accessory box provides single point access to accessory connections
- Panel lights

Web Site

For all your petroleum power requirements, visit www.cat-oilandgas.com.

STANDARD EQUIPMENT

Air Inlet System

- Dual element air cleaner
- Service indicator

Control Panels

- EMCP 3.1 (package mounted)

Controls

- Electronic governor

Cooling System

- Radiator with guard sized for 50° C
- Low coolant level sensor
- Coolant level sight gauge
- Coolant drain line with valve
- Fan and belt guards
- Caterpillar Extended Life Coolant

Exhaust System

- Turbo outlet elbow

Fuel System

- Primary fuel filter with integral water separator
- Secondary fuel filters
- Fuel priming pump
- Fuel pressure gauge
- Flexible fuel lines

Generator

- Self excited
- Class H insulation
- Class H temperature rise
- Random wound
- Voltage regulator
- Power terminal strip connections
- IP23 Protection
- CDVR 3-phase sensing
- Power center

Governor

- ADEM™ A4

Lube System

- Lubricating oil and filter
- Oil drain line with valves
- Fumes disposal
- Dipstick

Mounting System

- Oilfield skid base
- Hard mounted

Starting/Charging System

- 45-amp charging alternator
- 24-volt starting motor(s)
- Batteries with rack and cables
- Battery disconnect switch

General

- Paint — Caterpillar yellow except rails and radiators (gloss black)
- Flywheel and flywheel housing — SAE No. 1

OPTIONAL EQUIPMENT

Air Inlet System

- Heavy-duty air cleaner with precleaner

Control Panels

- EMCP 3.2 provides comprehensive monitoring, metering, and protection including: power metering, protective relaying and MODBUS communication.
- EMCP 3.3 provides all of the EMCP 3.2 features and adds the ability to expand the system for advanced engine and generator monitoring.
- Local alarm and remote annunciator modules
- Narrow base

OPTIONAL EQUIPMENT (continued)

Exhaust System

- Industrial, residential, and critical mufflers
- Stainless steel exhaust flex and ANSI weld flange

Generator

- Permanent magnet conversion for self-excited generators
- Oversize and premium generators
- Space heaters only available with permanent magnet excitation generators

Governor

- Load share module

Starting/Charging System

- Jacket water heater
- Block heater
- Oversize batteries

SPECIFICATIONS

Cat Generator

Voltage.....	480 V
Excitation.....	Self excited
Pitch	2/3
Number of poles	4
Number of leads	12
Insulation	UL 1446 Recognized Class H with tropicalization and antiabrasion (consult your Caterpillar dealer for available voltages)
IP Rating	Drip Proof IP22
Alignment.....	Pilot Shaft
Overspeed capability.....	125% of rated
Wave form deviation (line-to-line)	2%
Voltage regulation	Less than $\pm 1/2\%$ (steady state) Less than $\pm 1/2\%$ (with 3% speed change)
Harmonic Distortion	Less than 5%

Cat Control Panel

- EMCP 3 Series Controls
- 24-Volt DC control
- EMCP 3.1 (standard)
 - CSA/CE
- NEMA 1, IP22 enclosure
 - Run/Auto/Stop control
 - True RMS metering, 3-phase
 - Speed adjust
- Voltage adjust (optional)
 - Digital indication for:
 - rpm
 - Operating hours
 - Oil pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, phase amps, Hz
 - ekW, kVA, kVAR, kW-hr, % kW, PF (*)
- Shutdowns
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency stop
 - Failure to start (overcrank)
- Programmable protective relaying functions: (*)
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent
- MODUS isolated data link (RS-485 half-duplex) supports serial communication at data rate up to 115.2 kbaud (*)

(*) Available on EMCP 3.2 and EMCP 3.3

Single location customer connector point

Consult your Caterpillar dealer for available voltages

TECHNICAL DATA
Open Generator Set — 1800 rpm/60 Hz/480 Volts

EPA Certified Tier 2		DM8522
Generator Set Package Performance		
Genset Power Rating @ 0.8 pf	ekW	545
Genset Power Rating with fan	kVA	680
Coolant to Aftercooler		
Coolant to Aftercooler Temperature (maximum)	°C (F°)	49 (120)
Fuel Consumption		
100% Load with fan	L/hr (Gal/hr)	151.0 (39.9)
75% Load with fan	L/hr (Gal/hr)	123.4 (32.6)
50% Load with fan	L/hr (Gal/hr)	89.3 (23.6)
Cooling System¹		
Ambient Air Temperature	°C (F°)	52 (125.6)
Air Flow Restriction (system)	kPa (in. water)	.12 (.50)
Air Flow (max @ rated speed for radiator arrangement)	m³/min (cfm)	1866 (65,888)
Engine Coolant Capacity with Radiator/Expansion Tank	L (gal)	61 (16.1)
Engine Coolant Capacity	L (gal)	20.8 (5.5)
Radiator Coolant Capacity	L (gal)	40.2 (10.6)
Inlet Air		
Combustion Air Inlet Flow Rate	m³/min (cfm)	46.3 (1635.1)
Exhaust System		
Exhaust Stack Gas Temperature	°C (F°)	518.2 (964.8)
Exhaust Gas Flow Rate	m³/min (cfm)	129.6 (4576.8)
Exhaust System Backpressure (maximum allowable)	kPa (in. water)	10 (40.2)
Heat Rejection		
Heat Rejection to Coolant (total)	kW (Btu/min)	240 (13,660)
Heat Rejection to Exhaust (total)	kW (Btu/min)	573.0 (32,586)
Heat Rejection to Atmosphere from Engine	kW (Btu/min)	97 (5,539)
Heat Rejection to Atmosphere from Generator	kW (Btu/min)	21.9 (1245.4)
Alternator²		
Motor Starting Capability @ 30% Voltage Dip	skVA	
Frame		593
Temperature Rise	°C (F°)	105 (221)
Emissions (Nominal)³		
NOx	g/hr (lb/hr)	4,287 (9.45)
CO	g/hr (lb/hr)	340 (.75)
HC	g/hr (lb/hr)	10 (.02)
PM	g/hr (lb/hr)	27 (.06)

¹ Ambient capability at 300 m (984 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory. Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

² Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

³ Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, and NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in. HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility, and engine-to-engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

C18 OIL FIELD GENERATOR SET PACKAGES

Engine Model	60 Hz — Standard		50 Hz — Standard
	C18	C18	C18
ekW Rating	500	545	440
kVA Rating	625	680	550
rpm	1800	1800	1500
Rated PF	0.8	0.8	0.8
Temperature Rise	105° C	105° C	105° C
Tilt Requirements	5° Static	5° Static	5° Static
Insulation Class	H	H	H
Overload	50%/2 min.	50%/2 min.	50%/2 min.
Excitation	SE	SE	SE
Voltage	480	480	400
Voltage Regulator	CDVD	CDVD	CDVD
Configuration	1-Brg	1-Brg	1-Brg
Coastal Protection	Yes	Yes	Yes
Space Heater	Opt.	Opt.	Opt.
Construction	RW	RW	RW
Short Circuit Current	300%/10 sec.	300%/10 sec.	300%/10 sec.
Frame Size	592	593	593

Generator Terminal Box

Terminal box shall be standard with terminals on the right side, top entry or rear depending on size. Normal cable entrance shall be from the top.

C18 OIL FIELD GENERATOR SET PACKAGES — OPTIONAL

Engine Model	60 Hz						50 Hz
	C18	C18	C18	C18	C18	C18	C18
ekW Rating	500	500	500	545	545	545	440
kVA Rating	625	625	625	680	680	680	550
rpm	1800	1800	1800	1800	1800	1800	1500
Rated PF	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Temperature Rise	105° C	105° C	105° C	80° C	105° C	105° C	105° C
Tilt Requirements	5° Static	5° Static	5° Static	5° Static	5° Static	5° Static	5° Static
Insulation Class	H	H	H	H	H	H	H
Overload	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.
Excitation	SE	PM	PM	SE	PM	PM	PM
Voltage	600	480	600	600	480	600	400
Construction	FW	RW	FW	FW	RW	FW	RW
Voltage Regulator	CDVR	CDVR	CDVR	CDVR	CDVR	CDVR	CDVR
Configuration	1-Brg	1-Brg	1-Brg	1-Brg	1-Brg	1-Brg	1-Brg
Coastal Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Space Heater	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Short Circuit Current		300%/10 sec.	300%/10 sec.		300%/10 sec.	300%/10 sec.	—
Frame Size	592	592	592	597	593	593	593

C18 OIL FIELD GENERATOR SET PACKAGES — DESIGN TO ORDER (60 Hz)

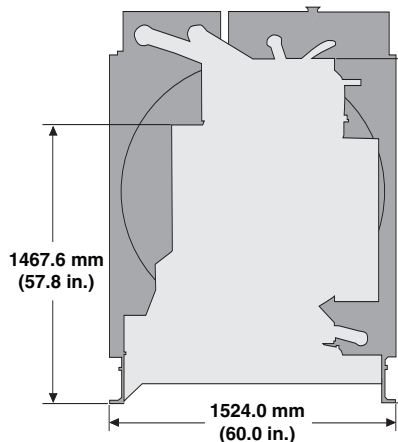
Engine Model	C18	C18	C18	C18	C18	C18
ekW Rating	500	500	500	545	545	545
kVA Rating	715	715	625	780	780	680
rpm	1800	1800	1800	1800	1800	1800
Rated PF	0.7	0.7	0.8	0.7	0.7	0.8
Temperature Rise	80° C	90° C	90° C	80° C	90° C	90° C
Tilt Requirements	5° Static	5° Static	5° Static	5° Static	5° Static	5° Static
Insulation Class	H	H	H	H	H	H
Overload	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.	50%/2 min.
Excitation	SE	PM	SE	SE	PMG	SE
Voltage	600	480	600	600	480	600
Voltage Regulator	CDVR	CDVR	CDVR	CDVR	CDVR	CDVR
Configuration	1-Brg	1-Brg	1-Brg	1-Brg	1-Brg	1-Brg
Coastal Protection	Yes	Yes	Yes	Yes	Yes	Yes
Construction	RW	FW	RW	RW	FW	RW
Short Circuit Current		300%/10 sec.			300%/10 sec.	

Optional Generator

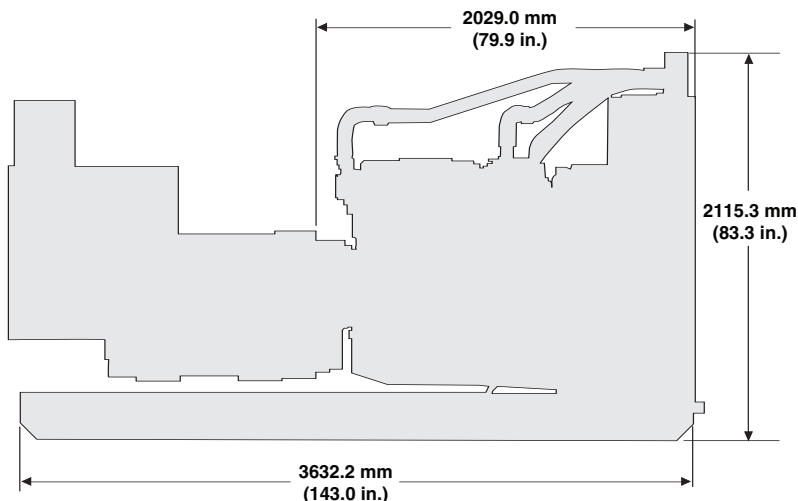
For the 455, 500, and 545 ekW generator set a 600 volt generator shall be available as SE, without a voltage regulator. The 480 volt generator shall be PM for the same ratings. The SCR optional generator is for drill rig applications and the VFD optional generators are for variable frequency down-hole pump and single-unit drilling. The Multiple VFD generators should be developed if the generator costs do not exceed 5% compared to the single VFD generator development costs.

INSTALLATION DRAWINGS

Front View



Right Side View



Note: Package dimensions may change depending on generator arrangement selection.

Package Dimensions		
Length	3632.2 mm	143.0 in.
Width	1524.0 mm	60.0 in.
Height	2115.8 mm	83.3 in.
Weight (estimated)	5032.61 kg	11,095 lb.

Note: Do not use for installation design. See general dimension drawings for detail.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications:

AS1359, AS2789, CSA, EGSA101P, IEC60034, ISO3046, ISO8528, NEMA MG 1-32, UL508, 72/23/EEC, 89/336/EEC, 98/37/EEC.

Prime output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10 percent overload power in accordance with ISO3046, AS2789, and BS5514 available on request. Prime power ambients shown indicate ambient at 100 percent load which results in a coolant top tank temperature just below the alarm temperature.

Ratings are based on SAE J1995 standard conditions.

These ratings also apply at ISO3046 standard conditions. Fuel rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.
CAT, CATERPILLAR, their respective logos, S•O•S, ACERT, ADEM, "Caterpillar Yellow" and the POWER EDGE trade dress,
as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

MATANUSKA VALLEY 16, ALASKA

Period of Record General Climate Summary - Precipitation

Station:(509759) MATANUSKA VALLEY 16														
From Year=1949 To Year=1999														
	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.	>= 0.01 in.	>= 0.10 in.	>= 0.50 in.	>= 1.00 in.		Mean	High	Year
	in.	in.	-	in.	-	in. dd/yyyy or yyyyymmdd	# Days	# Days	# Days	# Days		in.	in.	-
January	0.75	4.50	1963	0.00	1959	1.18 12/1963	5	3	0	0		8.4	25.0	1993
February	0.87	2.32	1956	0.00	1950	1.03 06/1981	5	3	0	0		8.9	29.9	1955
March	0.62	2.65	1979	0.00	1956	0.85 16/1995	5	2	0	0		5.7	22.5	1979
April	0.55	1.77	1975	0.00	1957	0.86 17/1975	4	2	0	0		2.5	13.1	1977
May	0.83	2.96	1997	0.00	1951	0.74 27/1969	6	3	0	0		0.1	3.0	1971
June	1.60	3.56	1980	0.12	1963	0.91 13/1955	9	5	1	0		0.0	0.0	1950
July	2.45	5.01	1959	0.49	1973	1.81 20/1986	12	7	1	0		0.0	0.0	1950
August	2.72	6.94	1997	0.27	1978	1.73 08/1971	12	7	1	0		0.0	0.0	1950
September	2.70	6.67	1961	0.32	1969	1.52 13/1982	11	7	2	0		0.0	0.0	1949
October	1.82	3.78	1983	0.22	1960	1.48 11/1986	8	5	1	0		4.6	25.0	1982
November	1.17	4.63	1979	0.00	1975	1.79 25/1966	6	3	1	0		8.7	26.5	1994
December	1.04	3.56	1990	0.00	1968	1.04 29/1955	6	3	0	0		12.8	48.5	1974
Annual	17.14	24.21	1967	11.00	1969	1.81 19860720	90	50	8	1		51.9	99.0	1990
Winter	2.67	5.88	1968	0.41	1997	1.18 19630112	17	9	1	0		30.2	64.0	1990
Spring	2.00	4.56	1963	0.68	1978	0.86 19750417	14	7	0	0		8.3	28.0	1995
Summer	6.76	11.71	1981	2.56	1976	1.81 19860720	34	19	3	0		0.0	0.0	1950
Fall	5.70	10.48	1961	2.31	1950	1.79 19661125	25	15	3	1		13.4	48.0	1982

Table updated on Jul 28, 2006

For monthly and annual means, thresholds, and sums:

Months with 5 or more missing days are not considered

Years with 1 or more missing months are not considered

Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Western Regional Climate Center, wrcc@dri.edu

MATANUSKA VALLEY 16, ALASKA

Period of Record General Climate Summary - Temperature

Station:(509759) MATANUSKA VALLEY 16															
From Year=1949 To Year=1999															
	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Days
January	22.2	5.5	13.8	52	20/1961	-40	04/1975	35.3	1981	-1.8	1989	0.0	21.9	29.3	11.8
February	27.3	9.8	18.5	53	27/1968	-42	03/1999	33.3	1977	2.5	1990	0.0	17.5	26.5	7.8
March	35.9	16.8	26.4	55	08/1965	-30	07/1971	37.7	1981	15.3	1971	0.0	9.2	28.3	4.0
April	47.6	27.5	37.6	68	17/1965	-8	11/1985	42.5	1993	26.6	1972	0.0	0.8	23.0	0.2
May	59.7	35.9	47.8	80	24/1969	14	09/1964	52.1	1981	43.5	1972	0.0	0.0	8.9	0.0
June	66.6	43.8	55.2	90	15/1969	29	04/1950	60.3	1957	50.8	1963	0.0	0.0	0.3	0.0
July	69.4	48.3	58.9	87	05/1972	32	16/1976	61.8	1997	56.5	1959	0.0	0.0	0.0	0.0
August	67.2	46.0	56.6	98	06/1966	27	27/1984	60.2	1977	53.0	1969	0.0	0.0	0.4	0.0
September	58.5	38.7	48.6	76	05/1957	14	26/1992	54.0	1995	40.3	1992	0.0	0.0	6.5	0.0
October	42.7	26.3	34.5	88	17/1963	-11	31/1982	41.5	1969	23.7	1996	0.0	3.8	22.1	0.6
November	28.9	13.2	21.0	56	02/1986	-25	29/1990	34.6	1979	7.4	1955	0.0	17.8	27.7	6.1
December	22.8	6.6	14.7	51	11/1963	-38	27/1949	30.2	1969	-2.5	1980	0.0	22.1	29.7	10.8
Annual	45.7	26.5	36.1	98	19660806	-42	19990203	40.1	1981	33.0	1972	0.0	93.2	202.7	41.3
Winter	24.1	7.3	15.7	53	19680227	-42	19990203	30.0	1977	5.0	1950	0.0	61.5	85.5	30.4
Spring	47.8	26.8	37.3	80	19690524	-30	19710307	42.5	1981	28.5	1972	0.0	10.1	60.1	4.2
Summer	67.7	46.0	56.9	98	19660806	27	19840827	59.9	1977	54.1	1965	0.0	0.0	0.7	0.0
Fall	43.4	26.1	34.7	88	19631017	-25	19901129	42.2	1979	28.1	1996	0.0	21.6	56.3	6.7

Table updated on Jul 28, 2006

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Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Western Regional Climate Center, wrcc@dri.edu

January 22, 1996

MEMORANDUM

SUBJECT: Release of Interim Policy on Federal Enforceability of
Limitations on Potential to Emit

FROM: John S. Seitz, Director
Office of Air Quality Planning and Standards (MD-10)
Office of Air and Radiation

Robert I. Van Heuvelen, Director
Office of Regulatory Enforcement (2241A)
Office of Enforcement and Compliance Assurance

TO: Regional Office Addressees (see below):

The purpose of this memorandum is to notify you that the Agency is today releasing detailed guidance (referred to below as the "Interim Policy") clarifying the immediate impacts of two recent decisions by the U.S. Court of Appeals for the D.C. Circuit regarding EPA regulations requiring federal enforceability of limitations on a source's potential to emit ("PTE") under certain CAA programs. This cover memorandum briefly summarizes the court decisions, and briefly summarizes the immediate impacts of the decisions on current regulations. A more detailed discussion of the impacts of the two court decisions is attached. The policy will remain in place until January 1997, but may be extended if necessary to coincide with the promulgation of revised regulations.

The Court Decisions

In National Mining Association v. EPA, 59 F.3d 1351 (D.C. Cir. 1995), the court addressed hazardous air pollutant programs under section 112. The court found that EPA had not adequately explained why only federally enforceable measures should be considered as limits on a source's potential to emit. Accordingly, the court remanded the section 112 General Provisions regulation to EPA for further proceedings. EPA must either provide a better explanation as to why federal enforceability promotes the effectiveness of state controls, or remove the exclusive federal enforceability requirement. The court did not vacate the section 112 regulations, that is, the

court did not declare the regulations null and void. The regulations remain in effect pending completion of new rulemaking.

In Chemical Manufacturers Ass'n v. EPA, No. 89-1514 (D.C. Cir. Sept. 15, 1995), the court, in light of National Mining, remanded the PTE definition in the PSD and NSR regulations to EPA. The court also vacated the federal enforceability requirement of the PTE definitions in the PSD and NSR regulations.

Summary of Immediate Impacts of the Court Decisions

EPA plans to propose rulemaking amendments in spring 1996 that would address the federal enforceability issue as it relates to section 112, title V, and Prevention of Significant Deterioration & New Source Review ("PSD/NSR") regulations. Pending this rulemaking, the immediate impacts are as follows:

Effects on Section 112. Because the court did not vacate the rule, the current part 63 regulations, requiring federal enforceability, remain in effect.

Effects on title V. Although neither court case addressed the title V regulations, industry challenges to the part 70 requirements are pending. Because the federal enforceability provision of the title V regulations are closely related to the regulations addressed in the two decided cases, EPA will ask the court to leave part 70 in place as the rulemaking amendments are being developed.

Effects on PSD/NSR. Because the court vacated the rules, the requirements in the nationwide rules for PSD and major source NSR concerning federal enforceability are not in effect. In many cases, however, individual State rules implementing these programs have been individually approved in the State Implementation Plan (SIP). The court did not vacate any requirements for federal enforceability in these individual State rules, and these requirements remain in place. As discussed in detail in the Interim Policy, the immediate practical impacts on the PSD/NSR programs are not substantial for newly constructed major sources. Greater impacts may exist for existing major sources seeking to avoid review by demonstrating a net emissions decrease.

Effects on January 25, 1995 Transition Policy. The transition policy remains in effect with one change. For sources emitting more than 50% of the major source threshold, and holding

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State-enforceable limits, EPA is no longer requiring that the source submit a certification to EPA.

Distribution/Further Information

The Regional Offices should send this memorandum to States within their jurisdiction. Questions concerning specific issues and cases should be directed to the appropriate Regional Office. Regional Office staff may contact Tim Smith of the Integrated Implementation Group at 919-541-4718, Adan Schwartz of the Office of General Counsel at 202-260-7632, or Julie Domike of the Office of Enforcement and Compliance Assurance at 202-564-6577. The document is also available on the technology transfer network (TTN) bulletin board, under "Clean Air Act, Title V, Policy Guidance Memos." (Readers unfamiliar with this bulletin board may obtain access by calling the TTN help line at 919-541-5384).

Attachment

Addressees:

Director, Office of Ecosystem Protection, Region I
Director, Air and Waste Management Division, Region II
Director, Air, Radiation, and Toxics Division, Region
III
Director, Air, Pesticides, and Toxics Management
Division, Region IV
Director, Air and Radiation Division, Region V
Director, Multimedia Planning and Permitting Division,
Region VI
Director, Air, RCRA, and TSCA Division, Region VII
Assistant Regional Administrator, Office of Pollution
Prevention, State and Tribal Assistance, Region VIII
Director, Air and Toxics Division, Region IX
Director, Office of Air, Region X

Regional Counsels, Regions I-X

Director, Office of Environmental Stewardship, Region I
Director, Division of Enforcement and Compliance
Assurance, Region II
Director, Enforcement Coordination Office, Region III
Director, Compliance Assurance and Enforcement
Division, Region VI
Director, Enforcement Coordination Office, Region VII
Assistant Regional Administrator, Office of
Enforcement, Compliance and Environmental Justice,
Region VIII
Enforcement Coordinator, Office of Regional Enforcement
Coordination, Region IX

EPA INTERIM POLICY ON FEDERAL ENFORCEABILITY REQUIREMENT
FOR LIMITATIONS ON POTENTIAL TO EMIT
January 1996

This document provides guidance clarifying the immediate impacts of recent court decisions related to federal enforceability of limitations on a source's potential to emit ("PTE"). In brief, most current regulatory requirements and policies regarding PTE, including the interim policy recognizing state-enforceable limits under section 112 and Title V in some circumstances, remain in effect while EPA conducts expedited rulemaking to address these issues in detail. However, at present, certain netting transactions involving PTE limits under new source review programs may now take place without federal enforceability. Today's guidance will be superseded upon completion of the new rulemaking.

Background

Several important Clean Air Act programs apply to only major sources, i.e., those that "emit or have the potential to emit" amounts exceeding major source thresholds listed in the Act. The EPA has promulgated regulations defining the term "potential to emit" for most of these programs. In particular, five sets of regulations are in place implementing the major source prevention of significant deterioration (PSD) and nonattainment area new source review (NSR) permitting programs (40 CFR 51.166, 40 CFR 52.21, 40 CFR 51.165, Appendix S of 40 CFR Part 51, and 40 CFR 52.24). Regulations governing approvability of state operating permit programs under Title V of the CAA are contained in 40 CFR Part 70, and EPA has proposed regulations implementing a federal operating permits program that are to be promulgated at 40 CFR Part 71. Regulations implementing the requirements of section 112 of the Act related to major sources of hazardous air pollutants are contained in 40 CFR Part 63, subpart A.

For each of the above Clean Air Act programs, the EPA regulations provide that "controls" (i.e., both pollution control equipment and operational restrictions) that limit a source's maximum capacity to emit a pollutant may be considered in determining its potential to emit. Historically, large numbers of new or modified sources that otherwise would be subject to PSD and NSR permitting requirements have limited their PTE in order to obtain "synthetic minor" status and thereby avoid major source requirements. With the advent of operating permit programs under Title V and the MACT program under section 112, many sources that otherwise would be subject to these new requirements under the Clean Air Act Amendments of 1990 also have obtained, or plan to obtain, PTE limits to avoid coverage. For each of these

programs, EPA regulations have required that PTE limits be "federally enforceable" in order to be considered in determining PTE.

These federal enforceability requirements were the subject of two recent decisions of the D.C. Circuit Court of Appeals. The first decision, National Mining Association v. EPA, 59 F.3d 1351 (D.C. Cir. July 21, 1995), dealt with the potential to emit definition under the hazardous air pollutant programs promulgated pursuant to CAA section 112. In this decision, the Court implicitly accepted EPA's argument that only "effective" state-issued controls should be cognizable in limiting potential to emit. In addition, the court did not question the validity of current federally enforceable mechanisms in limiting PTE. However, the court found that EPA had not adequately explained why only federally enforceable measures should be considered in assessing the effectiveness of state-issued controls. Accordingly, the Court remanded the section 112 General Provisions regulation to EPA for further proceedings. Thus, EPA must either provide a better explanation as to why federal enforceability promotes the effectiveness of state controls, or remove the exclusive federal enforceability requirement. The court did not vacate the section 112 regulations, and they remain in effect pending completion of EPA rulemaking proceedings in response to the court's remand.

The second decision, Chemical Manufacturers Ass'n v. EPA, No. 89-1514 (D.C. Cir. Sept. 15, 1995), dealt with the potential to emit definition in the PSD and NSR programs. Specifically, this case challenged the June 1989 rulemaking in which the EPA reaffirmed the requirement for federal enforceability of PTE limits taken to avoid major source permitting requirements in these programs. In a briefly worded judgment, the court, in light of National Mining, remanded the PSD and NSR regulations to EPA. In addition, in contrast to its disposition of the section 112 regulations in National Mining, the court in Chemical Manufacturers vacated the federal enforceability requirement of the PTE definitions in the PSD and NSR regulations.

In a third set of cases, industry challenges to the federal enforceability requirements in Part 70 are pending before the D.C. Circuit. The Title V cases have not been briefed. However, since the federal enforceability provisions of these Title V regulations are closely related to the regulations addressed in the two decided cases, EPA plans to ask the court to remand the regulations to EPA for further rulemaking, and to leave Part 70 in place during the new rulemaking.

Plans for Rulemaking Amendments

EPA plans to hold discussions with stakeholders and propose rulemaking amendments by spring 1996, and to issue final rules by spring 1997, that would address the court decisions impacting regulations promulgated pursuant to section 112 and the PSD/NSR regulations. At the same time, EPA will propose a parallel approach to cognizable PTE limits for major sources subject to title V. EPA currently plans to address the following options, after discussions with stakeholders:

- (a) An approach that would recognize "effective" State-enforceable limits as an alternative to federally enforceable limits on a source's potential to emit. Under this option, a source whose maximum capacity to emit without pollution controls or operational limitations exceeds relevant major source thresholds may take a State or local limit on its potential to emit. In such circumstances, the source must be able to demonstrate that the State-enforceable limits are (1) enforceable as a practical matter, and (2) being regularly complied with by the facility.
- (b) An approach under which the EPA would continue to require federal enforceability of limits on a source's potential to emit. Under this approach, in response to specific issues raised by the court in National Mining, EPA would present further explanation regarding why the federal enforceability requirement promotes effective controls. Under this approach, EPA would propose simplifying changes to the administrative provisions of the current federal enforceability regulations.

The remainder of this guidance memorandum addresses the immediate impacts of the court decisions on each of the three programs, in light of the upcoming rulemaking.

Effects on PSD/NSR

EPA interprets the court's decision to vacate the PSD/NSR federal enforceability requirement in the Chemical Manufacturers case as causing an immediate change in how EPA regulations should be read, although EPA expects that the effect of this change will be limited. Specifically, provisions of the definitions of "potential to emit" and related definitions requiring that physical or operational changes or limitations be "federally enforceable" to be taken into account in determining PSD/NSR applicability, the term "federally enforceable" should now be read to mean "federally enforceable **or legally and practicably**

enforceable by a state or local air pollution control agency."¹
For the reasons discussed below, however, the practical effects of the vacatur will be limited during the period prior to completion of new EPA rulemaking on this issue. During this interim period, federal enforceability is still required to create "synthetic minor" new and modified sources in most circumstances pending completion of EPA's rulemaking.

First, EPA interprets the order vacating certain provisions of EPA regulations as not affecting the provisions of any current SIP, or of any permit issued under any current SIP. Thus, previously issued federally enforceable permits, such as permits issued under federally enforceable state operating permit programs under Title I ("FESOPPs") remain in effect. Likewise, EPA-approved state PSD and NSR SIP rules requiring that all pollution controls or operational restrictions limiting potential to emit be federally enforceable remain in place, even though

¹Both National Mining and Chemical Manufacturers directly addressed only the definition of potential to emit, and not related definitions that also employ the federal enforceability requirement, in particular, those related to netting. (See, e.g., 40 CFR § 52.21(b)(3)(vi)(b) providing that an emissions decrease is creditable only if it is "federally enforceable.") The court's concerns regarding the adequacy of EPA's rationale, however, appear to extend to these netting provisions; consequently, EPA interprets the vacatur as extending to them as well. Conversely, EPA reads the vacatur as not extending to aspects of the PTE definition other than the federal enforceability provision. Such other aspects (e.g., determining a source's "maximum capacity" to emit in the absence of controls) were not at issue in the litigation and not addressed by the court decisions. In addition, EPA interprets Chemical Manufacturers as not addressing the regulatory requirements for federal enforceability of offsets used to comply with NSR requirements. CAA § 173(a) expressly requires that any emissions reductions required as a precondition to the issuance of a nonattainment NSR permit to be "federally enforceable" before the permit may be issued. This requirement is not affected by the court decisions.

such provisions may have been based on the now-vacated terms of EPA regulations.²

Second, a new or modified source that seeks to lawfully avoid compliance with the "major" source requirements of either PSD or nonattainment NSR by limiting its potential to emit to achieve synthetic minor status must still obtain a general or "minor" NSR preconstruction permit under section 110(a)(2)(C) of the Act and 40 C.F.R. § 51.160-164. Every SIP contains a minor NSR program that applies generally to new or modified sources of air pollutants, without regard to whether those sources are "major." Permits under such programs are, like all other SIP measures, federally enforceable. See CAA section 113(b)(1); 40 CFR § 52.23.³ The requirement under section 110(a)(2)(C) to

²The situation is somewhat different in the several states lacking approved PSD programs, which are governed instead by the federal PSD program at 40 CFR § 52.21. (In most instances, these states have been delegated authority to issue PSD permits under the federal program pursuant to § 52.21(u).) Since these states do not have an EPA-approved PSD program, their SIPs presumably also lack state rules containing a blanket requirement that new or modified sources use only federally enforceable limits on PTE when seeking synthetic minor status to avoid PSD. Rather, sources in these states have been subject to the federal enforceability requirements of § 52.21. As noted above, Chemical Manufacturers vacated the requirements in § 52.21 that physical or operational changes be "federally enforceable" to be taken into account in determining the applicability of PSD to a proposed new source or modification. Accordingly, in states governed by § 52.21, a limit that is either "federally enforceable or legally and practicably enforceable by a state or local air pollution control agency" may now be used in determining PSD applicability in some circumstances. The effect of the vacatur in these states is limited, however, because as discussed below, new and modified sources in these states are still subject to the requirement to obtain federally enforceable minor source permits.

³Consider, for example, an existing source in a moderate ozone nonattainment area that plans to add a new emissions unit that would have the potential to emit 100 tons per year ("TPY") of VOC if uncontrolled, and would therefore be considered a major modification subject to major NSR requirements, including a requirement to install pollution controls representing LAER that would reduce emissions in this instance by 90%. The source may instead seek to avoid major NSR by installing cheaper controls

obtain a federally enforceable minor NSR permit was not at issue in the Chemical Manufacturers case, and is unaffected by the court's ruling.

As noted above, the court's action does not affect FESOPPs that many states have adopted as an additional mechanism for avoiding PSD/NSR or for creating an emissions reduction credit that may be tradeable to another source. Permits issued under such programs continue to be valid for purposes of limiting PTE. States are free to submit SIP revisions to remove such provisions in light of the vacatur, and to substitute mechanisms that are legally and practicably enforceable by the state for limiting potential to emit in some circumstances under the PSD/NSR program. However, we expect few states to do so pending the outcome of new EPA rulemaking on the broader federal enforceability issue.

Likewise, states conceivably might now seek to reduce the scope of SIP-approved minor NSR programs where they are presently broader than minimum federal requirements (e.g., to no longer cover changes at existing emissions units that reduce emissions to create a netting credit or tradeable emission reduction credit), and to substitute state-enforceable mechanisms. Here also, however, EPA does not expect states to seek such changes pending the outcome of EPA rulemaking. In addition, regarding the minimum scope of minor NSR programs, section 110(a)(2)(C) provides that state minor NSR programs must regulate all new or modified sources "as necessary" to insure consistency with air quality planning goals. Given the central role of new and modified synthetic minor sources in the overall PSD/NSR regulatory scheme, and the adverse environmental consequences if controls were not effective in limiting PTE, it is unlikely that states would have the legal ability to exclude from such programs transactions that are intrinsic to the avoidance of major NSR permitting requirements.

The principal immediate impact of the vacatur of the PSD/NSR federal enforceability regulations likely will occur in cases involving "netting" exercises at existing sources, where a source seeks to internally offset an emissions increase at a new or modified emissions unit by installing pollution controls or accepting operational limitations at another unit within the

that reduce emissions by 61% and thereby limit the emissions increase to 39 TPY -- just below the "major" modification threshold. Such a source would still need to obtain a minor NSR permit to construct the new unit, and that permit would be federally enforceable.

plant. For the reasons discussed above, in such cases the new or modified unit would still need to obtain a federally enforceable minor NSR permit. In contrast, the vacatur ordered by the court may allow the unit that is limiting its emissions to rely in some circumstances on controls that are legally and practicably enforceable by the state.⁴ Note, however, that under the terms of many state minor NSR programs, the unit undergoing an emissions reduction would still need to be included in the minor NSR permit. Also, if the state's SIP has a general requirement that PTE limits be federally enforceable, the unit reducing emissions would still need a federally enforceable limit. Such programs would not be affected by the court's ruling. In sum, the precise impact of the vacatur on PSD/NSR applicability in any state can be definitively established only by reviewing the provisions of a particular SIP.

Effects on Section 112 and Title V

The National Mining decision did not vacate the current definition of a major source under section 112 program in the General Provisions to Part 63, and neither of the court decisions addressed the definition of a major source for the title V program in 40 CFR part 70. Both of these current definitions, therefore, remain in effect. As discussed above, however, these regulations will be affected by the rulemaking EPA is conducting in response to the court decisions.

EPA today reiterates that independent from the decision in National Mining, current EPA policy already recognizes State-enforceable PTE limits under section 112 and Title V in many circumstances under a transition policy intended to provide for orderly implementation of these new programs under the Clean Air

⁴Consider, for example, an existing source like the one addressed above in Footnote 3, that also plans to install a new unit that would have the potential to emit 100 tons per year of VOC per year if uncontrolled. In contrast to the earlier example, however, this source plans to avoid major NSR not by controlling the new unit, but instead by installing controls at another emissions unit at the plant whose baseline emissions are 100 TPY that will reduce actual emissions by 61 TPY. The overall result of this netting transaction is the same as in the earlier example: a net emissions increase of 39 TPY at the plant. The new unit would still need to obtain a minor NSR permit, and that permit would still be federally enforceable. In light of the vacatur in Chemical Manufacturers, however, the existing unit that is adding controls now may be able to limit its PTE using a state-enforceable permit.

Act Amendments of 1990. This policy is set forth in a memorandum, "Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act" (January 25, 1995). The transition policy is summarized below; as noted, EPA is now making one significant change in that policy in light of National Mining.

In recognition of the absence in some states of suitable federally enforceable mechanisms to limit PTE applicable to sources that might otherwise be subject to section 112 or Title V, EPA's policy provides for the consideration of State-enforceable limits as a gap-filling measure during a transition period that extends until January 1997.⁵ Under this policy, for the 2-year transition period, restrictions contained in State permits issued to sources that actually emit more than 50 percent, but less than 100 percent, of a relevant major source threshold are treated by EPA as acceptable limits on potential to emit, provided: (a) the permit and the restriction in particular are enforceable as a practical matter; (b) the source owner submits a written certification to EPA accepting EPA and citizen enforcement. In light of National Mining, EPA believes that the certification requirement is no longer appropriate as part of this policy. Accordingly, **EPA hereby amends the January 1995 transition policy by deleting the certification requirement.**

In addition, under the transition policy, sources with consistently low levels of actual emissions relative to major source thresholds can avoid major source requirements even absent any permit or other enforceable limit on PTE. Specifically, the policy provides that sources which maintain their emissions at levels that do not exceed 50 percent of any applicable major source threshold are not treated as major sources and do not need a permit to limit PTE, so long as they maintain adequate records to demonstrate that the 50 percent level is not exceeded.

Under the terms of EPA's transition policy, the transition period is to end in January 1997. In addition, completion of EPA's rulemaking in response to the recent court decisions, which EPA anticipates will occur by early 1997, may render the transition policy unnecessary after that time. However, in conjunction with the rulemaking, EPA will consider whether it is appropriate to extend the transition period beyond January 1997.

⁵Since PSD and nonattainment NSR are mature programs, minor NSR permits to limit PTE were available in all states well prior to enactment of the Clean Air Act Amendments of 1990. Hence, EPA's transition policy does not extend to those programs.

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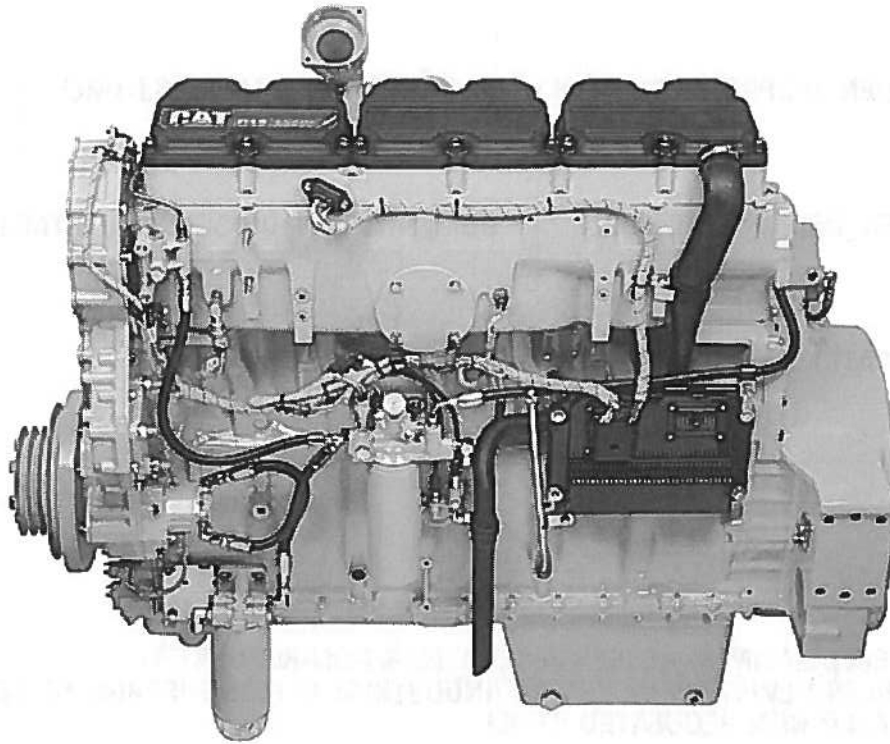
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GENERAL

Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel
Bore	145 mm (5.71 in)
Stroke	183 mm (7.2 in)
Displacement	18.1 L (1104.5 in ³)
Aspiration	Turbocharged Aftercooled (TA)
Compression Ratio	16.3:1
Combustion System	Direct Injection
Rotation (from flywheel end)	Counterclockwise

ENGINE DIMENSIONS (APPROXIMATE. FINAL DIMENSIONS DEPENDENT ON SELECTED

OPTIONS)

Length	1388.2-1414 mm (54.6-55.7 in)
Width	921-974 mm (36.3-38.3 in)
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Weight, Net Dry (Basic Operating Engine Without Optional Attachments)	1673 kg (3688 lb)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

January 21, 1986

MEMORANDUM

SUBJECT: Receptor Locations In Ambient Air

FROM: Joseph A. Tikvart, Chief /s/
Source Receptor Analysis Branch (MD-14)

TO: Regional Modeling Contacts, Regions I-X

As the attachments indicate, OAQPS has reinforced the position that the ambient air policy has been clearly defined and does not require review. The Regional Meteorologists' memorandum (dated 5/16/85) harmonizes modeling procedures with this long-standing policy. In future Model Clearinghouse actions we will use that memorandum to ensure consistent Regional implementation of that policy and to resolve questions about pollutant concentrations at receptor locations where the public has access.

Attachments

cc: R. Campbell
T. Helms
R. Rhoads
D. Tyler
D. Wilson

(Attachments Following)

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

January 22, 1986

William F. O'Keefe, Vice President
American Petroleum Institute
1220 L Street Northwest
Washington, D. C. 20005

Dear Mr. O'Keefe:

Mr. Elkins has asked me to respond to your letter of December 18, 1985, in which you perceive a change in our policy with regard to the location of receptors for air quality dispersion modeling.

Let me assure you there is no change in our long-standing national policy with regard to the definition of ambient air. That policy is based on 40 CFR Part 50.1 (e) which defines ambient air as ". . . that portion of the atmosphere, external to buildings, to which the general public has access." A letter dated December 19, 1980, from Douglas Costle to Senator Jennings Randolph, reaffirmed and clarified this definition by stating the exemption from ambient air is available only for the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers. A copy of Mr. Costle's letter is enclosed. The codified definition plus the 1980 clarification essentially constitute the national policy on ambient air.

The Regional Meteorologists' memorandum to which you refer does not imply any change in this national policy and simply harmonizes modeling procedures with our long-standing policy. It is intended to ensure consistent Regional implementation of that policy and to dispel any questions about pollutant concentrations at locations where the general public has access.

Thus, since the Regional Meteorologists' memorandum does not imply any change in our policy, I do not believe there is any need for policy review at this time.

Sincerely,

/s/

Gerald A. Emison
Director
Office of Air Quality Planning
and Standards

Enclosure

cc: W. Quanstrom
E. Elkins

Attachment

December 19, 1980

Honorable Jennings Randolph
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for your letter of October 23, 1980 expressing your continued interest in the Agency's definition of "ambient air." During the time since David Hawkins, my Assistant Administrator for Air, Noise, and Radiation, met with you last February, the definition has been extensively reviewed and debated.

After reviewing the issues and alternatives, I have determined that no change from the existing policy is necessary. We are retaining the policy that the exemption from ambient air is available only for the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers. EPA will continue to review individual situations on a case-by-case basis to ensure that the public is adequately protected and that there is no attempt by sources to circumvent the requirement of Section 123 of the Clean Air Act.

I hope that this has been responsive to your needs.

Sincerely yours,

/s/ Douglas M. Costle

Douglas M. Costle

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

DATE: May 16, 1985
SUBJECT: Ambient Air
FROM: Regional Meteorologists, Regions I-X
TO: Joseph Tikvart, Chief (MD-14)
Source Receptor Analysis Branch

At the recent Regional Meteorologists' meeting in Dallas, we identified inconsistencies among the Regional Offices on what areas are to be considered as ambient air for regulatory purposes. The existing inconsistency on ambient air is due to both the lack of clear National guidance and the allowed Regional Office discretion. A standardized

approach is necessary both to satisfy the consistency requirements of Section 301 of the Clean Air Act and in order for those responsible for Regional modeling activities to provide effective and efficient review of and guidance on modeling analysis. Accordingly, the Regional Meteorologists have decided to address the problem at the working level through the use of a consistent modeling approach.

40 CFR Part 50.1(e) defines ambient air as ". . . that portion of the atmosphere, external to buildings, to which the general public has access." A letter dated December 19, 1980, from Douglas Costle to Senator Jennings Randolph, clarified this definition by stating that the exemption from ambient air is available only for the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers." The codified definition plus the 1980 clarification essentially constitute the National policy on ambient air.

The Regional Meteorologists propose that for modeling purposes the air everywhere outside of contiguous plant property to which public access is precluded by a fence or other effective physical barrier should be considered in locating receptors. Specifically, for stationary source modeling, receptors should be placed anywhere outside inaccessible plant property. For example, receptors should be included over bodies of water, over unfenced plant property, on buildings, over roadways, and over property owned by other sources. For mobile source modeling (i.e., CO modeling), receptors should continue to be sited in accordance with Volume 9 of the "Guidelines for Air Quality Maintenance Planning".

Unless you disagree with our position, we will require new actions with modeling analyses submitted to EPA after January 1, 1986, to conform to this modeling policy. Please note that all 10 Regional Meteorologists have reviewed and concur with this memo.

cc: Regional Meteorologist, Regions I-X

As previously described, UCM plans to operate the plant under maximum production of seven days per week, three 8-hour shifts per day. According to UCM (oral communication August 22, 2011), the plant is most likely to operate using two 8-hour shifts, 5-6 days per week. No chemicals other than inert flocculent (magnetite) used to settle the fine coal waste will be used in the washing process UCM is not planning on thermal drying; instead, drying will be performed using a centrifuge.

The air pathway is important and a new permit application by UCM is pending. From an HIA and public health perspective, there are several important data considerations:

- Obtaining or modeling for site-specific PM_{2.5} emissions. The HIA team desires this information in order to help assess this well-known pollutant of concern (discussed at length in Chapter 5).
- A modeled receptor grid that extends beyond the proposed project fence line to a distance sufficient for evaluating exposures to residential areas. This model receptor grid should include a plot plan of the concentration gradients.
- Estimating tail-pipe PM_{2.5} emissions from mobile sources. This would be a sub-part of the overall PM_{2.5} assessment that the HIA team desires.
- Modeling offsite deposition of potential fugitive dust emissions.

When the new air permit application is available it will be analyzed and considered by the HIA team. Relevant data can be added to a future update of the HIA. Potential impacts can be considered when the relevant data are available.

4.5.9 Physical Exposures- Noise and Visual Effects

Two important physical effects for potentially affected communities are noise and visual effects (night illumination). Both issues were raised in stakeholder comments.

In November 2008 a noise consultant, Mullins Acoustics, performed baseline noise measurements. According to their study:

“The background noise levels in some locations were quite low, since this is a very rural area. We saw average levels as low as 26 dBA for nighttime hours on a calm night. Noise levels were considerably higher when the wind began blowing through this area, which occurred starting at 3 am on Saturday. Hourly sound levels increased from 35 dBA when calm, to as high as 55 dBA, with the only difference being the wind noise. Wind is a common occurrence in the Matanuska valley.

“Many home sites are fairly far from the Glenn Highway, and are further sheltered by terrain. The highway is located mostly in the river canyon, whereas most of the homes are up on ridges and plateaus. In these more remote areas, the primary noise events are local traffic coming to and from the neighborhoods, wind noise, and general aviation aircraft flyovers.”