

Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

The reference to FPEIS Test Series is filed elsewhere

8.13 Ref # 9

Contains Particle Composition

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
FPEIS SERIES REPORT

SERIES FORM 1
PAGE 1
DATE 06/21/83

FPEIS TEST SERIES NO: 219 DESCRIBES SAMPLING AT SITE FROM 01/12/78 TO 01/12/78 BY KVB, INC.

SPONSOR ORGANIZATION: CALIFORNIA AIR RESOURCES BOARD
CONTRACT NUMBER: A6-191-30 PURPOSE OF TEST: ENVIRONMENTAL ASSESSMENTS (MULTIMEDIA)
TASK/DIRECTIVE NUMBER: 000

SOURCE DESCRIPTION

SOURCE CATEGORY: CONSUMER PRODUCTS
SOURCE TYPE: GLASS & GLASS PROD
PRODUCT/DEVICE: GLASS BOTTLES
PROCESS TYPE: MANUFACTURE
DESIGN PROCESS RATE: 13900 KG/HR
FEED MATERIAL CATEGORY: INORG CHEM
PRIMARY CONTROL DEVICE:
SIC CODE: 3221
LOS ANGELES, CA 00000

EADS WASTE STREAM DATA BASES

WASTE STREAM DATA FROM OTHER MEDIA WHICH WERE COLLECTED CONCURRENTLY WITH THIS TEST SERIES
ARE AS FOLLOWS (TEST SERIES NUMBER-TSN):
LEDS TSN: GEDS TSN: 00071 SDDS TSN:

REFERENCE REPORT

TITLE
AUTHOR
SPONSOR REPORT NUMBER NTIS NUMBER PUBLICATION DATE
FINE PARTICLE EMISSIONS FROM STATIONARY AND MISCELLANEOUS SOURCES
IN THE SOUTH COAST AIR BASIN.
TABACK H.J.
KVB REPORT 5806-783 PB 293 923/AS FEBRUARY 1979

TEST SERIES COMMENTS

PROGRAM OBJECTIVES TO INVENTORY TSP EMISSIONS, TO PREPARE A COMPREHENSIVE INVENTORY OF EMISSIONS (I.E. BY SIZE DISTRIBUTION AND CHEMICAL COMPOSITION), AND TO DESCRIBE ALT. METHODS OF CONTROL.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01

SERIES FORM 2 PAGE 2
DATE 06/21/83

EFFLUENT STREAM DESIGN CHARACTERISTICS-----

STREAM NAME: FURNACE OUTLET

STREAM DESIGN DATA AT SOURCE

MOISTURE CONTENT= PCT MASS/VOLUMETRIC FLOW RATE= VELOCITY= M/S

TEMPERATURE= C PRESSURE= CM HG STACK HEIGHT= 26.2 METERS

COMMENTS: DESIGN CHARACTERISTICS UNKNOWN

CONTROL/TREATMENT SYSTEM CHARACTERISTICS-----

DEVICE 01

GENERIC SYSTEM TYPE: ESP

DESIGN TYPE: SPECIFIC PROCESS/DEVICE:

DEVICE CLASS: CONVENTIONAL
COMMERICAL NAME: PRECIPITAIR MODEL 13-2320-3
MANUFACTURER:

DEVICE/PROCESS DESIGN PARAMETERS:

01	ELECTRICAL RATING	1.03E+02	KVA
02	COLLECTION AREA	2.98E+03	M2
03	BLOWER SIZE	3.00E+02	HP
04	HOPPER HEATER SIZE	2.50E+01	KM
05	NO. FIELDS	6.00E+00	NONE

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1

SERIES FORM 3 PAGE 3
DATE 06/21/83

SOURCE/PROCESS CONDITIONS DATA-----

TEST CONDITIONS-----

TEST DATE: 01/12/77 TEST START TIME: 1215 FINISH TIME: 1548

SOURCE OPERATING MODE: CONTINUOUS, 8736 HRS/YR PERCENT OF DESIGN CAPACITY= 100.0

CONTROL SYSTEM OPERATING PARAMETERS

DEVICE	01		
	01	FLOW RATE AT INLET	1.29E+01 M3/SEC
	02	TEMPERATURE AT INLET	2.83E+02 DEG C
	03	PRESSURE AT INLET	1.01E+02 KPA ABS.

COMMENTS:

OUTLET FLOW RATE GREATER THAN INLET DUE TO ESP OUTLET BLOWER

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SEQ. NO: 1

SERIES FORM 4 PAGE 4
DATE 06/21/83

FUELS AND FEEDSTOCKS CHARACTERISTICS-----

SOURCE FUEL/FEED MATERIAL: INORG CHEMICAL

FEED MATERIAL RATE: 13900 KG/HR

NAME OF ANALYTICAL LABORATORY:

QA AUDIT CODE:

SAMPLE MASS:

SAMPLE VOLUME:

CHARACTERISTICS:

PARAMETER	ANALYTICAL METHOD	HIGH DETECTION LIMIT	LOW DETECTION LIMIT	DETECTION LIMIT UNITS	VALUE	UNITS/TEXT
BARYTES	NOT SPECIFIED				2.43E+02	KG/HR
LIMESTONE	NOT SPECIFIED				1.75E+04	KG/HR
SAND	NOT SPECIFIED				7.35E+04	KG/HR
SODA ASH	NOT SPECIFIED				2.44E+04	KG/HR
CULLET	NOT SPECIFIED				1.00E+01	KG/HR
BRUMCARB	NOT SPECIFIED				2.30E+01	KG/HR
CEC2	NOT SPECIFIED				7.00E+00	KG/HR
NAS04	NOT SPECIFIED				6.00E+01	KG/HR

FPEIS TEST SERIES NUMBER: 00219 STREAM NO: 001 TEST ID NO: 1

SERIES FORM C6 PAGE 5
DATE 06/21/83

PARTICLE DIAMETERS BASED ON CLASSIC AERODYNAMIC DEFINITION (TASK GROUP ON LUNG DYNAMICS)

PARTICLE SIZE SUMMARY-----

SAMPLE NO.		SAMPLE LOCATIONS		UG/DNM3	PARTICLE DIAMETER IN MICROMETERS							
DEVICE	SYSTEM				20.0	15.0	10.0	6.0	2.5	1.25	1.0	0.625
01	INLET	I	CUM MASS CONC	7.22E+04	7.16E+04	7.09E+04	7.06E+04	7.04E+04	6.48E+04	6.10E+04	5.06E+04	
			DM/DLOG D	5.07E+03	4.97E+03	2.62E+03	7.01E+02	7.01E+02	3.66E+04	4.35E+04	0.00E+00	
02	OUTLET	O	CUM MASS CONC	EXTRAPOL	EXTRAPOL	EXTRAPOL	INTERPOL	INTERPOL	INTERPOL	INTERPOL	INTERPOL	
				1.08E+03	9.53E+02	8.14E+02	7.14E+02	5.76E+02	0.00E+00	0.00E+00	0.00E+00	
				9.75E+02	9.63E+02	5.38E+02	3.88E+02	4.12E+02	0.00E+00	0.00E+00	0.00E+00	
			EXTRAPOL	EXTRAPOL	EXTRAPOL	INTERPOL	INTERPOL	MISSING	MISSING	MISSING		

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 01

SERIES FORM 6 PAGE 6
DATE 06/21/83

SAMPLING ACTIVITY DESCRIPTION-----

MEASUREMENT INSTRUMENT/METHOD TYPE: 1 NAME: OTHER CYCLONES

SAMPLING START TIME: 1215 DURATION: 223 MIN

SAMPLING CONDITIONS-- MASS/VOLUMETRIC FLOWRATE= 13.1 M3/SEC FLOWRATE METHOD: PILOT TUBE TEMPERATURE= 283 C

MOISTURE CONTENT=10.6 PCT VELOCITY= 19.2 M/SEC PRESSURE= 735 MM HG

SAMPLE DENSITY= 1.0 G/CM3 DENSITY DETERMINATION: ASSUMED

DEVICE SAMPLING LOCATION=INLET DEVICE/PROCESS NUMBER= 1 SAMPLING LOCATION DESCRIPTION: 6 M FROM ESP INLET

SYSTEM SAMPLING LOCATION= INLET OR UNCONTROLLED CORRESPONDING SAMPLE NUMBER:

VOLUME OF SAMPLE COLLECTED= 5.55 M3 TOTAL MASS OF SAMPLE COLLECTED= 457.50 MG

MEASUREMENT INSTRUMENT: TEMPERATURE= 199 C INLET PRESSURE= 743 MM HG FLOW RATE= 44.2 L/MIN

ESTIMATED TIME BETWEEN SAMPLING AND CHEM ANALYSIS: DAYS -SAMPLING AND RADIOASSAY: DAYS

COLLECTION SURFACE/SUBSTRATE:

PERCENT ISOKINETIC SAMPLING= 90 GAS ANALYSIS (PCT BY WEIGHT)-- CO2= 5.90 CO= 0.00 O2= 12.30 N2= 81.80

OTHER TRACE GASES (IN PPM): SO2-5,NOX-330,HCN-2.5

DILUTION FACTOR= 1.0

PARTICLE MEASUREMENTS WERE MADE ON THE BASIS OF MASS UPPER BOUNDARY DIAMETER= 30.00 UM

PARTICLE DIAMETERS ARE DEFINED ACCORDING TO THE FOLLOWING DEFINITION: CLASSIC AERODYNAMIC

PARTICLE DIAMETERS WERE DETERMINED FROM CALIBRATION

COMMENTS ON THE SAMPLING ACTIVITY-----

OF TOTAL MASS 57 MG IS INORGANIC & 9.4 MG IS ORGANIC CAUGHT IN
THE IMPINGERS, SEE GEDS TSN 71.
THREE CYCLONES WERE FABRICATED AND USED IN SERIES WITH A
JOY TRAIN.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 01

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DATE 06/21/83

EFFLUENT STREAM DESIGN CHARACTERISTICS-----

COMPONENT		DESCRIPTION		VALUE
NO	NAME			
1	PROBE+10 CYC	STAGE/FILTER CUT SIZE:	8.30	UM
		STAGE WEIGHT:	1.31E+01	MG
		CHEMICAL ANALYSIS LABORATORY NAME:	ARRAME	
2	3 UM CYCLONE	STAGE/FILTER CUT SIZE:	1.90	UM
		STAGE WEIGHT:	2.40E+00	MG
3	1 UM CYCLONE	STAGE/FILTER CUT SIZE:	.60	UM
		STAGE WEIGHT:	1.11E+02	MG
		COMPONENT (ALIQUT) MASS/VOLUME:	111.000	MG
4	FILTER	STAGE/FILTER CUT SIZE:	.01	UM
		STAGE WEIGHT:	2.65E+02	MG
		COMPONENT (ALIQUT) MASS/VOLUME:	265.000	MG

PARTICLE SIZE TABLE-----

STAGE #	1	2	3	4
D50(MICRONS)	8.30	1.90	.60	.01
STAGE WEIGHTS(MILLIGRAMS)	1.31E+01	2.40E+00	1.11E+02	2.65E+02
MICROGRAMS/DNCH/STAGE	2.45E+03	4.49E+02	2.08E+04	4.95E+04
NUMBER/DNCH/STAGE	7.73E+08	1.37E+10	3.26E+13	2.04E+17
CUM. %MASS<D50	96.65	96.04	67.69	
CUM. MICROGRAMS/ACM<D50	3.84E+04	3.81E+04	2.69E+04	0.00E+00
CUM. MICROGRAMS/DNCH<D50	7.07E+04	7.03E+04	4.95E+04	0.00E+00
GEOM D50	1.82E+01	3.97E+00	1.07E+00	7.75E-02
DN/DLOGD-(UG/DNM3)	3.59E+03	7.01E+02	4.15E+04	2.79E+04
DN-LOGD/(NUMBER/DNM3)	1.13E+09	2.14E+10	6.50E+13	1.14E+17

COMMENTS ON THE EFFLUENT CHARACTERISTICS-----

COMPONENT NO.	NAME	REMARKS
1	PROBE+10 CYC	ONLY 100 MG SAMPLE CUTS GIVEN CHEMICAL ANALYSIS. PARTICULATE WEIGHT CAUGHT BY PROBE IS 7.5 MG & BY 10 UM CYCLONE IS 5.6 MG.

TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 001 SAMPLE: 01

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DATE 06/21/83

EFFLUENT CHARACTERISTICS SUMMARY-----

COMMENTS ON THE EFFLUENT CHARACTERISTICS-----

COMPONENT NO. NAME		REMARKS
3	1 UM CYCLONE	ARRAMENT LAB DID ELEMENTAL ANALYSES AND ROCKWELL DID SULFATE, NITRATE AND CARBON ANALYSIS.
3	1 UM CYCLONE	ARRAMENT LAB DID ELEMENTAL ANALYSES AND ROCKWELL DID SULFATE, NITRATE AND CARBON ANALYSIS.
4	FILTER	ARRAMENT LAB DID ELEMENTAL ANALYSIS AND ROCKWELL DID SULFATE, NITRATE,AND CARBON ANALYSIS.

FPETS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 01

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SERIES FORM 8 DATE 06/21/83

INORGANIC/NON-LEVEL 1 ORGANIC CHEMISTRY DATA SUMMARY

MEG NUMBER	CAS NUMBER	SPECIES PREFERRED NAME COMPONENT ANALYTICAL METHOD	COMPONENT NAME	DETECTION LIMITS HIGH LOW	UNITS	TOTAL MG RECOVERED	SOURCE CONCENTRATION (UG/M3)
29A100	07440-09-7	POTASSIUM POTASSIUM METAL	1 UM CYCLONE FILTER			2.300 6.090	4.19E+02 1.11E+03
34A100	07440-70-2	03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY CALCIUM CALCIUM METAL	1 UM CYCLONE FILTER			3.100	5.62E+02
42A100	01333-86-4	03 X-RAY FLUORESCENCE SPECTROMETRY CARBON CARBON BLACK LAMP BLACK	1 UM CYCLONE FILTER			14.400 6.500	2.62E+03 1.18E+03
45A100	07440-31-5	03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY TIN	1 UM CYCLONE FILTER			1.110 12.200	<2.02E+02 2.22E+03
46A100	07439-92-1	03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY LEAD PLUMBUM	1 UM CYCLONE FILTER			1.110 2.650	<2.02E+02 <4.83E+02
49A100	07440-38-2	03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY ARSENIC	1 UM CYCLONE FILTER			1.110 2.650	<2.02E+02 <4.83E+02
53A300	14265-45-3	03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY SULFITE ION	1 UM CYCLONE FILTER			67.600 142.400	1.23E+04 2.59E+04
54A100	07782-49-2	03 MET CHEMICAL ANALYSIS (NOT SPECIFIED) 04 MET CHEMICAL ANALYSIS (NOT SPECIFIED) SELENIUM	1 UM CYCLONE FILTER			2.650	<4.83E+02
68A100	07440-47-3	04 X-RAY FLUORESCENCE SPECTROMETRY CHROMIUM 03 X-RAY FLUORESCENCE SPECTROMETRY 04 X-RAY FLUORESCENCE SPECTROMETRY	1 UM CYCLONE FILTER			1.110 2.650	<2.02E+02 <4.83E+02

COMMENTS ON THE CHEMICAL RESULTS-----

COMPONENT NO.	NAME	REMARKS
3	1 UM CYCLONE	ARSENIC, CHROMIUM, LEAD & TIN DETECTED AT <1 TO 0.1 PERCENT OF TOTAL CYCLONE MT.
4	FILTER	ARSENIC, CHROMIUM, LEAD, & SELENIUM DETECTED AT <1 TO 0.1 PERCENT OF TOTAL FILTER MT.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 02

SERIES FORM 6 PAGE 10
DATE 06/21/83

SAMPLING ACTIVITY DESCRIPTION-----

MEASUREMENT INSTRUMENT/METHOD TYPE: I NAME: SASS TRAIN-WITH CYCLONES SAMPLING START TIME: 1150 DURATION: 240 MIN
SAMPLING CONDITIONS-- MASS/VOLUMETRIC FLOWRATE= 16.7 M3/SEC FLOWRATE METHOD: PILOT TUBE TEMPERATURE= 216 C
MOISTURE CONTENT= 6.8 PCT VELOCITY= 9.6 M/SEC PRESSURE= 743 MM HG
SAMPLE DENSITY= 1.0 G/CM3 DENSITY DETERMINATION: ASSUMED

DEVICE SAMPLING LOCATION=OUTLET DEVICE/PROCESS NUMBER= 1 SAMPLING LOCATION DESCRIPTION: 25 M FROM ESP BLOWER OUTLET
SYSTEM SAMPLING LOCATION= OUTLET CORRESPONDING SAMPLE NUMBER:

VOLUME OF SAMPLE COLLECTED= 28.40 M3 TOTAL MASS OF SAMPLE COLLECTED= 396.50 MG
MEASUREMENT INSTRUMENT: TEMPERATURE= 198 C INLET PRESSURE= 743 MM HG FLOW RATE= 204.6 L/MIN
ESTIMATED TIME BETWEEN SAMPLING AND CHEM ANALYSIS: DAYS -SAMPLING AND RADIOASSAY: DAYS
COLLECTION SURFACE/SUBSTRATE:

PERCENT ISOKINETIC SAMPLING= 145 GAS ANALYSIS (PCT BY WEIGHT)-- CO2= 5.80 CO= 0.00 O2= 12.70 N2= 81.50
OTHER TRACE GASES (IN PPM): SO2-5.0, NOX-300, DILUTION FACTOR= 1.0
PARTICLE MEASUREMENTS WERE MADE ON THE BASIS OF MASS UPPER BOUNDARY DIAMETER= 30.00 UM

PARTICLE DIAMETERS ARE DEFINED ACCORDING TO THE FOLLOWING DEFINITION: CLASSIC AERODYNAMIC
PARTICLE DIAMETERS WERE DETERMINED FROM CALIBRATION

COMMENTS ON THE SAMPLING ACTIVITY-----

OF TOTAL SAMPLE MASS 359 MG IS INORGANIC & 2 MG IS ORGANIC CAUGHT
IN THE IMPINGERS, SEE GEDS TSN 71.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 02

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DATE 06/21/83

EFFLUENT STREAM DESIGN CHARACTERISTICS-----

COMPONENT NO NAME	DESCRIPTION	VALUE
1 PROBE+10 CYC	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	9.20 UM 1.29E+01 MG
2 3 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	3.80 UM 4.10E+00 MG
3 1 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	1.30 UM 5.40E+00 MG
4 FILTER	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	.01 UM 1.27E+01 MG

PARTICLE SIZE TABLE-----

STAGE #	1	2	3	4
D50(MICRONS)	9.20	3.80	1.30	.01
STAGE WEIGHTS(MILLIGRAMS)	1.29E+01	4.10E+00	5.40E+00	1.27E+01
MICROGRAMS/DNCH/STAGE	4.63E+02	1.47E+02	1.94E+02	4.56E+02
NUMBER/DNCH/STAGE	1.25E+08	1.36E+09	3.37E+10	5.88E+14
CUM. ZMASS<D50	63.25	51.57	36.18	
CUM. MICROGRAMS/ACM<D50	4.52E+02	3.69E+02	2.59E+02	0.00E+00
CUM. MICROGRAMS/DNCH<D50	7.97E+02	6.50E+02	4.56E+02	0.00E+00
GEOM D50	1.92E+01	5.91E+00	2.22E+00	1.14E-01
DN/DLOGD-(UG/DNM3)	7.26E+02	3.84E+02	4.16E+02	2.16E+02
DN-LOGD/(NUMBER/DNM3)	1.96E+08	3.54E+09	7.24E+10	2.78E+14

HASH-SERIES = 00000397300
HASH-STREAM = 000000006671
HASH-SOURCE = 000001420640
HASH-SAMPLE = 000000921619
CUM-1200 = 000006042646
CUM-1300 = 000000436014
CUM-1410 = 000000000000
CUM-1620 = 000000560731
CUM-2520 = 000000000000
CUM-2570 = 000000000000
CUM-3020 = 000000000000
CUM-3200 = 000000000000
CUM-3360 = 000000000000
HASH-TOTAL = 000006346230
C78 = 000006346230

HASH-E-FAC = 000000000000
HASH-PAORE = 000000066662

ADMINISTRATION SECTION

0005
KVB
17332 IRVINE BLVD
TUSTIN ,CA 92680

SERIES STATUS-----

DATA BASE: FPEIS
TSN: 00219
SPONSOR: TERL-RTP
SPONSOR PROJECT OFFICER: GARY L. JOHNSON
CONTRACTOR CONTACT: MICHAEL J. BERLANT
CONTRACTOR PHONE: 714-832-9020
CONTRACT NUMBER: 68-02-3175 TASK/TD NO. 001
NUMBER OF CARDS RECEIVED: 86
DATA CARDS RECEIVED: 04/14/80
TEST SERIES ASSIGNED: 11/14/79

EDIT PHASE-----

DATE STARTED: 07/24/80
NUMBER OF RUNS: 10
DATE ENCODED: 08/05/80
DATE RECEIVED: 12/10/80
DATE APPROVAL: 06/30/81
DATE LAST RUN: 07/06/81
NUMBER OF FATAL ERRORS: 00000
NUMBER OF WARNING ERRORS: 00000
EDIT HASH TOTAL: 0000000000000

LOAD PHASE-----

DATE LOADED: 09/05/81
DATE RELOADED:
CRITERIA DATA LOADED:
CYCLE NO.:
LOAD HASH TOTAL: 0000000000000

SERIES PHASE-----

DATE LAST RUN: 06/21/83
NUMBER OF RUNS: 24
SERIES HASH TOTAL: 63462.30

F00219

THIS EADS INFORMATION REPRESENTS SOURCE TEST DATA FROM A VARIETY OF SOURCES INCLUDING FEDERAL, STATE, AND PRIVATE INDUSTRY ORGANIZATIONS. THE TECHNICAL CONTENT AND VALIDITY OF THE DATA ARE THE SOLE RESPONSIBILITY OF THE ORGANIZATIONS THAT PERFORMED THE TESTING AND DATA ENCODING FOR ENTRY INTO THE EADS. THE EPA AND ITS EADS CONTRACTORS HAVE REVIEWED THE DATA FOR EADS COMPUTER FORMATTING REQUIREMENTS AND CONSISTENT ENGINEERING UNITS. THE DATA HAVE BEEN APPROVED FOR ENTRY INTO EADS BY THE TESTING ORGANIZATIONS (OR DATA ENCODERS) AND TECHNICAL QUESTIONS SHOULD BE ADDRESSED TO THEM. WHEN AVAILABLE, REFERENCES FROM WHICH THE DATA HAVE BEEN ENCODED ARE GIVEN. APPROVAL FOR EADS LOADING DOES NOT SIGNIFY THAT THE CONTENTS OF THE TEST SERIES NECESSARILY REFLECT THE VIEWS AND POLICIES THE GOVERNMENT, NOR DOES THE MENTION OF TRADE NAMES OR COMMERCIAL PRODUCTS CONSTITUTE ENDORSEMENT OR RECOMMENDATION FOR USE.

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
FPEIS SERIES REPORT

SERIES FORM 1 PAGE 1
DATE 10/02/86

FPEIS TEST SERIES NO: 219 DESCRIBES SAMPLING AT SITE FROM 01/12/78 TO 01/12/78 BY KVB, INC.

SPONSOR ORGANIZATION: CALIFORNIA AIR RESOURCES BOARD
CONTRACT NUMBER: A6-191-30 PURPOSE OF TEST: ENVIRONMENTAL ASSESSMENTS (MULTIMEDIA)
TASK/DIRECTIVE NUMBER: 000

SOURCE DESCRIPTION-----

SOURCE CATEGORY:	CONSUMER PRODUCTS	SOURCE NAME:	CONFIDENTIAL
SOURCE TYPE:	GLASS & GLASS PROD	SITE NAME:	
PRODUCT/DEVICE:	GLASS BOTTLES	ADDRESS:	
PROCESS TYPE:	MANUFACTURE	LOS ANGELES	,CA 00000
DESIGN PROCESS RATE:	13900 KG/HR		
FEED MATERIAL CATEGORY:	INORG CHEM		
PRIMARY CONTROL DEVICE:		SIC CODE:	3221

EADS WASTE STREAM DATA BASES-----

WASTE STREAM DATA FROM OTHER MEDIA WHICH WERE COLLECTED CONCURRENTLY WITH THIS TEST SERIES
ARE AS FOLLOWS(TEST SERIES NUMBER-TSN):
LEDS TSN: GEDS TSN: 00071 SDDS TSN: FEIS TSN: CMDS TSN:

REFERENCE REPORT-----

TITLE	AUTHOR	SPONSOR REPORT NUMBER	NTIS NUMBER	PUBLICATION DATE
FINE PARTICLE EMISSIONS FROM STATIONARY AND MISCELLANEOUS SOURCES IN THE SOUTH COAST AIR BASIN. TABACK H.J. KVB REPORT 5806-783 PB 293 923/AS FEBRUARY 1979				

TEST SERIES COMMENTS-----

PROGRAM OBJECTIVES TO INVENTORY TSP EMISSIONS, TO PREPARE A COM-
PREHENSIVE INVENTORY OF EMISSIONS(I.E. BY SIZE DISTRIBUTION AND
CHEMICAL COMPOSITION), AND TO DESCRIBE ALT. METHODS OF CONTROL.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01

SERIES FORM 2 PAGE 2
DATE 10/02/86

EFFLUENT STREAM DESIGN CHARACTERISTICS-----

STREAM NAME: FURNACE OUTLET

STREAM DESIGN DATA AT SOURCE

MOISTURE CONTENT= PCT MASS/VOLUMETRIC FLOW RATE= VELOCITY= M/S

TEMPERATURE= C PRESSURE= CM HG STACK HEIGHT= 26.2 METERS

COMMENTS: DESIGN CHARACTERISTICS UNKNOWN

CONTROL/TREATMENT SYSTEM CHARACTERISTICS-----

DEVICE 01

GENERIC SYSTEM TYPE: ESP

DESIGN TYPE:
SPECIFIC PROCESS/DEVICE:

DEVICE CLASS: CONVENTIONAL
CONVERTICAL NAME: PRECIPITAIR MODEL 13-2320-3
MANUFACTURER:

DEVICE/PROCESS DESIGN PARAMETERS:

01	ELECTRICAL RATING	1.03E+02	KVA
02	COLLECTION AREA	2.98E+03	M2
03	BLOWER SIZE	3.00E+02	HP
04	HOPPER HEATER SIZE	2.50E+01	KM
05	NO. FIELDS	6.00E+00	NONE

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1

SERIES FORM 3 PAGE 3
DATE 10/02/86

SOURCE/PROCESS CONDITIONS DATA-----

TEST CONDITIONS-----

TEST DATE: 01/12/77 TEST START TIME: 1215 FINISH TIME: 1548

SOURCE OPERATING MODE: CONTINUOUS, 6736 HRS/YR PERCENT OF DESIGN CAPACITY= 100.0

CONTROL SYSTEM OPERATING PARAMETERS

DEVICE 01	01 FLOW RATE AT INLET	1.29E+01	M3/SEC
	02 TEMPERATURE AT INLET	2.83E+02	DEG C
	03 PRESSURE AT INLET	1.01E+02	KPA ABS.

COMMENTS:

OUTLET FLOW RATE GREATER THAN INLET DUE TO ESP OUTLET BLOWER

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SEQ. NO: 1

SERIES FORM 4 PAGE 4
DATE 10/02/86

FUELS AND FEEDSTOCKS CHARACTERISTICS-----

SOURCE FUEL/FEED MATERIAL: INORG CHEMICAL

FEED MATERIAL RATE: 13900 KG/HR

NAME OF ANALYTICAL LABORATORY:

QA AUDIT CODE:

SAMPLE MASS:

SAMPLE VOLUME:

CHARACTERISTICS:

PARAMETER	ANALYTICAL METHOD	HIGH DETECTION LIMIT	LOM DETECTION LIMIT	DETECTION LIMIT UNITS	VALUE	UNITS/TEXT
BARYTES	NO ANALYTICAL METHOD				2.43E+02	KG/HR
LIMESTONE	NO ANALYTICAL METHOD				1.75E+04	KG/HR
SAND	NO ANALYTICAL METHOD				7.35E+04	KG/HR
SODA ASH	NO ANALYTICAL METHOD				2.44E+04	KG/HR
CULLET	NO ANALYTICAL METHOD				1.00E+01	KG/HR
BRUMCARB	NO ANALYTICAL METHOD				2.30E+01	KG/HR
CEO2	NO ANALYTICAL METHOD				7.00E+00	KG/HR
NASO4	NO ANALYTICAL METHOD				6.00E+01	KG/HR

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SERIES FORM C6 DATE 10/02/86

PARTICLE SIZE SUMMARY-----

SAMPLE NO.	SAMPLE LOCATIONS		UG/DM ³	PARTICLE DIAMETER IN MICROMETERS							
	DEVICE	SYSTEM		20.0	15.0	10.0	6.0	2.5	1.25	1.0	0.625
01	INLET	I	CUM MASS CONC DM/DLOG D	7.22E+04	7.16E+04	7.09E+04	7.06E+04	7.04E+04	6.48E+04	6.10E+04	5.06E+04
				5.07E+03	4.97E+03	2.62E+03	7.01E+02	7.01E+02	3.66E+04	4.35E+04	0.00E+00
02	OUTLET	O	CUM MASS CONC DM/DLOG D	1.08E+03	9.53E+02	8.14E+02	7.14E+02	5.76E+02	0.00E+00	0.00E+00	0.00E+00
				9.75E+02	9.63E+02	5.38E+02	3.88E+02	4.12E+02	0.00E+00	0.00E+00	0.00E+00
			EXTRAPOL	EXTRAPOL	EXTRAPOL	INTERPOL	INTERPOL	INTERPOL	MISSING	MISSING	MISSING

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 01

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SAMPLING ACTIVITY DESCRIPTION-----

MEASUREMENT INSTRUMENT/METHOD TYPE: I NAME: OTHER CYCLONES

SAMPLING START TIME: 1215 DURATION: 223 MIN

SAMPLING CONDITIONS-- MASS/VOLUMETRIC FLOWRATE= 13.1 M3/SEC FLOWRATE METHOD: PITOT TUBE TEMPERATURE= 283 C

MOISTURE CONTENT=10.6 PCT VELOCITY= 19.2 M/SEC PRESSURE= 735 MM HG

SAMPLE DENSITY= 1.0 G/CM3 DENSITY DETERMINATION: ASSUMED

DEVICE SAMPLING LOCATION=INLET DEVICE/PROCESS NUMBER= 1 SAMPLING LOCATION DESCRIPTION: 6 M FROM ESP INLET

SYSTEM SAMPLING LOCATION= INLET OR UNCONTROLLED CORRESPONDING SAMPLE NUMBER:

VOLUME OF SAMPLE COLLECTED= 5.55 M3 TOTAL MASS OF SAMPLE COLLECTED= 457.50 MG

MEASUREMENT INSTRUMENT: TEMPERATURE= 199 C INLET PRESSURE= 743 MM HG FLOW RATE= 44.2 L/MIN

ESTIMATED TIME BETWEEN SAMPLING AND CHEM ANALYSIS: DAYS -SAMPLING AND RADIOASSAY: DAYS

COLLECTION SURFACE/SUBSTRATE:

PERCENT ISOKINETIC SAMPLING= 90 GAS ANALYSIS (PCT BY VOLUME)-- CO2= 5.90 CO= 0.00 O2= 12.30 N2= 81.80

OTHER TRACE GASES (IN PPM): SO2-5,NOX-330,HCN-2.5 DILUTION FACTOR= 1.0

PARTICLE MEASUREMENTS WERE MADE ON THE BASIS OF MASS UPPER BOUNDARY DIAMETER= 30.00 UM

PARTICLE DIAMETERS ARE DEFINED ACCORDING TO THE FOLLOWING DEFINITION: CLASSIC AERODYNAMIC

PARTICLE DIAMETERS WERE DETERMINED FROM CALIBRATION

COMMENTS ON THE SAMPLING ACTIVITY-----

OF TOTAL MASS 57 MG IS INORGANIC & 9.4 MG IS ORGANIC CAUGHT IN
THE IMPINGERS, SEE GEDS TSN 71.
THREE CYCLONES WERE FABRICATED AND USED IN SERIES WITH A
JOY TRAIN.

EFFLUENT STREAM DESIGN CHARACTERISTICS-----

COMPONENT NO NAME	DESCRIPTION	VALUE
1 PROBE+10 CYC	STAGE/FILTER CUT SIZE: STAGE WEIGHT: CHEMICAL ANALYSIS LABORATORY NAME:	8.30 UM 1.31E+01 MG ARNAME
2 3 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	1.90 UM 2.40E+00 MG
3 1 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT: COMPONENT (ALiquOT) MASS/VOLUME:	.60 UM 1.11E+02 MG 111.000 MG
4 FILTER	STAGE/FILTER CUT SIZE: STAGE WEIGHT: COMPONENT (ALiquOT) MASS/VOLUME:	.01 UM 2.65E+02 MG 265.000 MG

PARTICLE SIZE TABLE-----

STAGE #	1	2	3	4
D50(MICRONS)	8.30	1.90	.60	.01
STAGE WEIGHTS(MILLIGRAMS)	1.31E+01	2.40E+00	1.11E+02	2.65E+02
MICROGRAMS/DNCH/STAGE	2.45E+03	4.49E+02	2.08E+04	4.95E+04
NUMBER/DNCH/STAGE	7.73E+08	1.37E+10	3.26E+13	2.04E+17
CUM. ZMASS<D50	96.65	96.04	67.69	0.00E+00
CUM. MICROGRAMS/ACH<D50	3.84E+04	3.81E+04	2.69E+04	0.00E+00
CUM. MICROGRAMS/DNCH<D50	7.07E+04	7.03E+04	4.95E+04	0.00E+00
GEOM D50	1.82E+01	3.97E+00	1.07E+00	7.75E-02
DN/DLOGD--(UG/DN/M3)	3.59E+03	7.01E+02	4.15E+04	2.79E+04
DN-LOGD/(NUMBER/DN/M3)	1.13E+09	2.14E+10	6.50E+13	1.14E+17

COMMENTS ON THE EFFLUENT CHARACTERISTICS-----

COMPONENT NO. NAME	REMARKS
1 PROBE+10 CYC	ONLY 100 MG SAMPLE CUTS GIVEN CHEMICAL ANALYSIS. PARTICULATE WEIGHT CAUGHT BY PROBE IS 7.5 MG & BY 10 UM CYCLONE IS 5.6 MG.

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EFFLUENT CHARACTERISTICS SUMMARY-----

COMMENTS ON THE EFFLUENT CHARACTERISTICS-----

COMPONENT		REMARKS
NO.	NAME	
3	1 UM CYCLONE	ARMAMENT LAB DID ELEMENTAL ANALYSES AND ROCKWELL DID SULFATE, NITRATE AND CARBON ANALYSIS.
3	1 UM CYCLONE	ARMAMENT LAB DID ELEMENTAL ANALYSES AND ROCKWELL DID SULFATE, NITRATE AND CARBON ANALYSIS.
4	FILTER	ARMAMENT LAB DID ELEMENTAL ANALYSIS AND ROCKWELL DID SULFATE, NITRATE, AND CARBON ANALYSIS.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 01

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INORGANIC/NON-LEVEL 1 ORGANIC CHEMISTRY DATA SUMMARY

MEG NUMBER	CAS NUMBER	SPECIES PREFERRED NAME COMPONENT ANALYTICAL METHOD	COMPONENT NAME	DETECTION LIMITS HIGH LOW	UNITS	TOTAL MG RECOVERED	SOURCE CONCENTRATION (UG/M3)
29A100	07440-09-7	POTASSIUM POTASSIUM METAL	1 UM CYCLONE FILTER			2.300	4.19E+02
34A100	07440-70-2	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD CALCIUM				6.090	1.11E+03
42A100	01333-86-4	03 NO ANALYTICAL METHOD CARBON CARBON BLACK	1 UM CYCLONE			3.100	5.62E+02
45A100	07440-31-5	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD TIN	1 UM CYCLONE FILTER			14.400	2.62E+03
						6.500	1.18E+03
46A100	07439-92-1	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD LEAD PLUMBUM	1 UM CYCLONE FILTER			1.110	<2.02E+02
						12.200	2.22E+03
49A100	07440-38-2	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD ARSENIC	1 UM CYCLONE FILTER			1.110	<2.02E+02
						2.650	<4.83E+02
53A320	14808-79-8	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD SULFATE ION	1 UM CYCLONE FILTER			1.110	<2.02E+02
						2.650	<4.83E+02
54A100	07782-49-2	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD SELENIUM	1 UM CYCLONE FILTER			67.600	1.23E+04
						142.400	2.59E+04
68A100	07440-47-3	03 NO ANALYTICAL METHOD 04 NO ANALYTICAL METHOD CHROMIUM	1 UM CYCLONE FILTER			2.650	<4.83E+02
						1.110	<2.02E+02
						2.650	<4.83E+02

COMMENTS ON THE CHEMICAL RESULTS-----

COMPONENT NO.	NAME	REMARKS
3	1 UM CYCLONE	ARSENIC, CHROMIUM, LEAD & TIN DETECTED AT <1 TO 0.1 PERCENT OF TOTAL CYCLONE MT.
4	FILTER	ARSENIC, CHROMIUM, LEAD, & SELENIUM DETECTED AT <1 TO 0.1 PERCENT OF TOTAL FILTER MT.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 02

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SAMPLING ACTIVITY DESCRIPTION-----

MEASUREMENT INSTRUMENT/METHOD TYPE: 1 NAME: SASS TRAIN-WITH CYCLONES SAMPLING START TIME: 1150 DURATION: 240 MIN
SAMPLING CONDITIONS-- MASS/VOLUMETRIC FLOWRATE= 16.7 M3/SEC FLOWRATE METHOD: PITOT TUBE TEMPERATURE= 216 C
MOISTURE CONTENT= 6.8 PCT VELOCITY= 9.6 M/SEC PRESSURE= 743 MM HG
SAMPLE DENSITY= 1.0 G/CM3 DENSITY DETERMINATION: ASSUMED

DEVICE SAMPLING LOCATION=OUTLET DEVICE/PROCESS NUMBER= 1 SAMPLING LOCATION DESCRIPTION: 25 M FROM ESP BLOWER OUTLET
SYSTEM SAMPLING LOCATION= OUTLET CORRESPONDING SAMPLE NUMBER:

VOLUME OF SAMPLE COLLECTED= 28.40 M3 TOTAL MASS OF SAMPLE COLLECTED= 396.50 MG

MEASUREMENT INSTRUMENT: TEMPERATURE= 198 C INLET PRESSURE= 743 MM HG FLOW RATE= 204.6 L/MIN

ESTIMATED TIME BETWEEN SAMPLING AND CHEM ANALYSIS: DAYS -SAMPLING AND RADIOASSAY: DAYS

COLLECTION SURFACE/SUBSTRATE:

PERCENT ISOKINETIC SAMPLING= 145 GAS ANALYSIS (PCT BY VOLUME)-- CO2= 5.80 CO= 0.00 O2= 12.70 N2= 81.50

OTHER TRACE GASES (IN PPM): SO2-5.0, NOX-300, DILUTION FACTOR= 1.0

PARTICLE MEASUREMENTS WERE MADE ON THE BASIS OF MASS UPPER BOUNDARY DIAMETER= 30.00 UM

PARTICLE DIAMETERS ARE DEFINED ACCORDING TO THE FOLLOWING DEFINITION: CLASSIC AERODYNAMIC

PARTICLE DIAMETERS WERE DETERMINED FROM CALIBRATION

COMMENTS ON THE SAMPLING ACTIVITY-----

OF TOTAL SAMPLE MASS 359 MG IS INORGANIC & 2 MG IS ORGANIC CAUGHT
IN THE IMPINGERS, SEE GEDS TSN 71.

FPEIS TEST SERIES NO: 00219 STREAM NO: 01 TEST ID NO: 1 SAMPLE NO: 02

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EFFLUENT STREAM DESIGN CHARACTERISTICS-----

COMPONENT NO NAME	DESCRIPTION	VALUE
1 PROBE+10 CYC	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	9.20 UM 1.29E+01 MG
2 3 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	3.80 UM 4.10E+00 MG
3 1 UM CYCLONE	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	1.30 UM 5.40E+00 MG
4 FILTER	STAGE/FILTER CUT SIZE: STAGE WEIGHT:	.01 UM 1.27E+01 MG

PARTICLE SIZE TABLE-----

STAGE #	1	2	3	4
D50(MICRONS)	9.20	3.80	1.30	.01
STAGE WEIGHTS(MILLIGRAMS)	1.29E+01	4.10E+00	5.40E+00	1.27E+01
MICROGRAMS/DNCH/STAGE	4.63E+02	1.47E+02	1.94E+02	4.56E+02
NUMBER/DNCH/STAGE	1.25E+08	1.36E+09	3.37E+10	5.88E+14
CUM. ZMASS<D50	63.25	51.57	36.18	
CUM. MICROGRAMS/ACN<D50	4.52E+02	3.69E+02	2.59E+02	0.00E+00
CUM. MICROGRAMS/DNCH<D50	7.97E+02	6.50E+02	4.56E+02	0.00E+00
GEOM D50	1.92E+01	5.91E+00	2.22E+00	1.14E-01
DN/DLOGD-(UG/DNM3)	7.26E+02	3.84E+02	4.16E+02	2.16E+02
DN-LOGD/(NUMBER/DNM3)	1.96E+08	3.54E+09	7.24E+10	2.78E+14

DATA QUALITY CONTROL CHECKS FOLLOW:
HASH-SERIES = 0003997300
HASH-STREAM = 00000006671
HASH-SOURCE = 0001420640 HASH-E-FAC = 00000000000
HASH-SAMPLE = 0000921619 HASH-PADRE = 00000086662
HASH-TOTAL = 00006346230
C78 = 00006346230

END OF REPORT
