Table 4-1. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations									
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits	Included as COPC (Y/N)
Metals									
Aluminum	7429-90-5	2.14E-02		2.03E+00		µg/m³	585/704	0.0201 - 0.265	Y
Arsenic	7440-38-2	4.41E-04	J	4.47E-03		µg/m³	51/704	0.000376 - 0.00129	Y
Barium	7440-39-3	2.04E-02	J	3.58E-02	J	µg/m³	4/506	0.0119 - 0.0237	Y, FD is <5%
Beryllium	7440-41-7	4.14E-06	J	9.94E-05	J	µg/m³	129/506	0.00000287 - 0.00003542	Y
Cadmium	7440-43-9	1.51E-05	J	2.83E-03	J	µg/m³	381/704	0.00001368 - 0.00013464	Y
Calcium	7440-70-2	3.63E-01	J	2.06E+00		µg/m³	51/506	0.307 - 0.751	Y
Chromium, Total	7440-47-3	1.08E-03	J	1.84E-02	J	µg/m³	76/704	0.00101 - 0.00791	Y
Cobalt	7440-48-4	1.43E-03		2.01E-02	J	µg/m³	9/704	0.00097169 - 0.00252	Y, FD is <5%
Copper	7440-50-8	1.78E-03	J	3.61E-01		µg/m³	693/704	0.00162 - 0.0111	Y
Iron	7439-89-6	1.93E-02	J	3.41E+00		µg/m³	412/506	0.011 - 0.145	Y
Lead	7439-92-1	2.00E-04	J	1.16E-02	J	µg/m³	444/506	0.00019563 - 0.00126	Y
Magnesium	7439-95-4	4.68E-02	J	5.98E-01		µg/m³	328/506	0.0478 - 0.224	Y
Manganese	7439-96-5	9.96E-04	J	6.76E-02		µg/m³	617/704	0.00097236 - 0.0141	Y
Mercury	7439-97-6	3.70E-07	J	6.67E-04		µg/m³	115/400	0.00000017 - 0.00017221	Y
Molybdenum	7439-98-7	6.33E-04	J	2.60E-03	J	µg/m³	11/506	0.00037581 - 0.00076336	Y, FD is <5%
Nickel	7440-02-0	6.09E-04	J	2.72E-02		µg/m³	118/704	0.00050697 - 0.00846	Y
Selenium	7782-49-2	9.96E-04	J	1.80E-03	J	µg/m³	7/506	0.0005808 - 0.00116	Y, FD is <5%
Silver	7440-22-4	6.93E-06	J	1.27E-04	J	µg/m³	129/506	0.00000487 - 0.00003603	Y
Sodium	7440-23-5	1.09E+00	J	2.43E+00	J	µg/m³	8/506	0.69 - 1.373	Y, FD is <5%
Sulfate (as SO4)	14808-79-8	2.20E-04	J	5.46E-03		mg/m³	169/193	0.00027577 - 0.00185	Y
Vanadium	7440-62-2	1.06E-03	J	2.40E-02	J	µg/m³	65/506	0.00101 - 0.00461	Y
Zinc	7440-66-6	2.50E-03	J	4.47E-02	J	µg/m³	236/506	0.00213 - 0.0131	Y
Radiochemicals									
Alpha, Gross	ALPHA	5.86E-04	J	4.68E-02		pCi/m³	332/704	0.00003611 - 0.00964	Y
Beta, Gross	BETA	8.34E-04	J	1.25E-01		pCi/m³	474/506	0.00213 - 0.0871	Y
Radium-226	RA-226	9.76E-05	J	3.16E-03		pCi/m³	95/704	0.00002956 - 0.0015	Y
Radium-228	RA-228	7.74E-04	J	2.20E-02		pCi/m³	115/704	0.00052632 - 0.00559	Y
Thorium-228	TH-228	1.62E-04	J	2.63E-03		pCi/m³	12/703	0.00000551 - 0.00124	Y, FD is <5%
Thorium-230	TH-230	1.43E-05	J	1.12E-02		pCi/m³	131/703	0.00000517 - 0.00099299	Y
Thorium-232	TH-232	1.49E-04	J	2.04E-03		pCi/m³	7/703	0.00000524 - 0.00047536	Y, FD is <5%
Uranium-234	U-234	4.85E-05	J	6.51E-03		pCi/m³	8/506	0.00002811 - 0.00146	Y, FD is <5%
Uranium-238	U-238	8.70E-05	J	2.98E-03		pCi/m³	4/506	0.00002697 - 0.00146	Y, FD is <5%

Table 4-1. Summary Statistics for 24-Hour Average Concentrations PM_{10} and Associated Chemicals and Radiochemicals for All Air Monitoring Stations									
Chemical	CAS Number	Minimum Concentration[a] (Qualifier)		Maximum Concentration[a] (Qualifier)		Units	Detection Frequency	Range of Detection Limits	Included as COPC (Y/N)
Particulate Matter in Ambient Air									
PM_{10}	PM10	1.40E-07		1.66E-04		g/m³	698/704	0.00000005 - 0.00000007	Y

Notes:

[a] minimum and maximum detected concentrations

Acronyms/Abbreviations:

CAS – Chemical Abstract Service
COPC – chemical of potential concern
FD – frequency of detection
g/m³ – grams per cubic meter
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter
pCi/m³ – picoCurrie per cubic meter
PM_{10} – particulate matter less than 10 microns in diameter
(Y/N) – yes/no

Review Qualifiers:

J – indicates a value estimated by the laboratory

Table 4-2. Reasonable Maximum Exposure Values Used for Daily Intake

Exposure Assumption		Units	Resident		Intake Equation
Inhalation of Chemicals in Outdoor Air					
Concentration in outdoor air	C	mg/m³	Chemical specific	Site specific	(C x ET x EF x ED x 1000µg/mg) / (AT_C)
Exposure time	ET	hours/day / day/hour	1	U.S. EPA 2009	(C x ET x EF x ED) / (AT_{NC})
Exposure frequency	EF	days/year	350	U.S. EPA 2009	
Exposure duration	ED	years	30	U.S. EPA 2009	
Averaging time (cancer)	AT_C	days	25,550	U.S. EPA 2009	
Averaging time (noncancer)	AT_{NC}	days	10,950	U.S. EPA 2009	
Inhalation of Radiochemicals in Outdoor Air					
Concentration in outdoor air	C	pCi/m³	Chemical specific	Site specific	(C x EF x [(EDa x IRa)+(EDc x IRc)])
Exposure frequency	EF	days/year	350	U.S. EPA 2009	
Exposure duration (adult)	EDa	years	24	U.S. EPA 2004	
Exposure duration (child)	EDc	years	6	U.S. EPA 2004	
Inhalation rate (adult)	IRa	m³/day	20	U.S. EPA 2004	
Inhalation rate (child)	IRc	m³/day	10	U.S. EPA 2004	

Acronyms/Abbreviations:
- days/year – days per year
- hours/day / day/hour – hours per day per hours in a day
- m³/day - cubic meters per day
- mg/m³ – milligrams per cubic meter
- pCi/m³ - picocuries per cubic meter
- µg/m³ – micrograms per cubic meter
- U.S. EPA – United States Environmental Protection Agency

References:

U.S. EPA 2004. Preliminary Remediation Goals. Region 9 (October).
U.S. EPA 2009. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Regions 3, 6, and 9. (April).

Table 4-3. Toxicity Values[a]								
CAS Number	Chemical	Cancer Class	IUR $(\mu g/m^3)^{-1}$		CSF (risk/pCi)		RfCi (mg/m^3)	
Metals								
7429-90-5	Aluminum	NA	—		—		5.0E-03	P
7440-38-2	Arsenic	A	4.3E-03	I	—		1.5E-05	C
7440-39-3	Barium	D	—		—		5.0E-04	H
7440-41-7	Beryllium	B1	2.4E-03	I	—		2.0E-05	I
7440-43-9	Cadmium	B1	1.8E-03	I	—		1.0E-05	A
7440-47-3	Chromium, Total	A	1.2E-02	I	—		1.0E-04	S
7440-48-4	Cobalt	NA	9.0E-03	P	—		6.0E-06	P
7440-50-8	Copper[b]	D	—		—		—	
7439-89-6	Iron[b]	NA	—		—		—	
7439-92-1	Lead[b]	B2	—		—		—	
7439-96-5	Manganese	D	—		—		5.0E-05	I
7439-97-6	Mercury	D	—		—		3.0E-04	I
7439-98-7	Molybdenum[b]	NA	—		—		—	
7440-02-0	Nickel	A	2.6E-04	C	—		5.0E-05	C
PM_{10}	PM_{10}[b]	NA	—		—		—	
7782-49-2	Selenium	D	—		—		2.0E-02	C
7440-22-4	Silver[b]	D	—		—		—	
14808-79-8	Sulfate (as SO4)[b]	NA	—		—		—	
7440-62-2	Vanadium[c]	NA	8.3E-03	P	—		7.0E-06	P
7440-66-6	Zinc[b]	D	—		—		—	
Radiochemicals								
RA-226	Radium-226	NA	—		1.2E-08	H	—	
RA-228	Radium-228	NA	—		5.2E-09	H	—	
TH-228	Thorium-228	NA	—		1.3E-07	H	—	
TH-230	Thorium-230	NA	—		2.9E-08	H	—	
TH-232	Thorium-232	NA	—		1.3E-08	H	—	
U-234	Uranium-234	NA	—		1.1E-08	H	—	
U-238	Uranium-238	NA	—		9.4E-09	H	—	

Notes:

[a] a dash indicates that a toxicity value is not available

[b] see Section 4.3 for discussion of chemicals without toxicity factors

[c] as vanadium pentoxide

Acronyms/Abbreviations:

A – Agency for Toxic Substances Disease Registry (ATSDR)
C – California Environmental Protection Agency
CAS – chemical abstract services number
CSF - cancer slope factor
EPA – United States Environmental Protection Agency
H – Heatlh Effects Assessment Summary Tables (HEAST)
I – Integrated Risk Information System (IRIS)
IUR – inhalation unit risk factor
mg/m^3 – milligrams per cubic meter
$(\mu g/m^3)^{-1}$ – cubic meters per micrograms
P – Provisional Peer Reviewed Toxicity Value (PPRTV)
pCi - picocuries
PM_{10} – particulate matter less than 10 micron in size.
RfCi – inhalation reference concentration
RfDo – oral reference dose
S – values based on hexavalent chromium

Cancer class:

A – human carcinogen
B1 – probable human carcinogen with limited human data
B2 – probable human carcinogen with sufficient evidence in animals and inadequate or no evidence in humans
D – not classifiable as to human carcinogenicity
NA – not assessed

Sources:

EPA 2009. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Regions 3, 6, and 9. (December)

IRIS 2010. http://cfpub.epa.gov/ncea/iris/index.cfm?fuseaction=iris.showSubstanceList

Table 4-4. Summary of Chronic Cancer Risks by Chemical and Radiochemical							
Chemical	**AM-1**	**AM-2**	**AM-3**	**AM-4**	**AM-5**	**AM-6**	**All Stations**
Metals							
Aluminum	—	—	—	—	—	—	—
Arsenic	1E-06	9E-07	1E-06	2E-06	2E-06	1E-06	9E-07
Barium	—	—	—	—	—	—	—
Beryllium	7E-09	8E-09	6E-09	6E-09	9E-09	9E-09	7E-09
Cadmium	3E-08	3E-08	4E-08	3E-08	1E-07	3E-08	4E-08
Chromium, Total	9E-06	8E-06	8E-06	8E-06	9E-05	9E-06	8E-06
Cobalt	1E-05	1E-05	5E-06	6E-06	6E-06	2E-05	6E-06
Manganese	—	—	—	—	—	—	—
Mercury	—	—	—	—	—	—	—
Nickel	1E-07	3E-07	1E-07	1E-07	4E-07	9E-08	1E-07
Selenium	—	—	—	—	—	—	—
Vanadium	6E-06	6E-06	5E-06	6E-06	8E-06	6E-06	5E-06
Subtotal	**3E-05**	**3E-05**	**2E-05**	**2E-05**	**1E-04**	**3E-05**	**2E-05**
Radiochemicals							
Radium-226	5E-07	5E-07	5E-07	4E-07	7E-07	7E-07	4E-07
Radium-228	1E-06	1E-06	2E-06	1E-06	1E-06	1E-06	1E-06
Thorium-228	4E-06	4E-06	5E-06	9E-06	7E-06	2E-05	4E-06
Thorium-230	8E-07	8E-07	2E-06	8E-07	1E-06	9E-07	7E-07
Thorium-232	5E-07	4E-07	5E-06	8E-07	4E-07	2E-06	4E-07
Uranium-234	2E-07	1E-06	1E-05	2E-07	6E-06	5E-07	2E-07
Uranium-238	8E-07	2E-07	5E-06	2E-07	4E-06	2E-07	2E-07
Subtotal	**8E-06**	**9E-06**	**3E-05**	**1E-05**	**2E-05**	**3E-05**	**7E-06**
TOTAL	**3E-05**	**4E-05**	**5E-05**	**3E-05**	**1E-04**	**6E-05**	**3E-05**

Note:

A dash indicates the chemical is not considered a known or potential carcinogen

See Section 4.3 for discussion of chemicals not included in the risk calculations

Table 4-5. Summary of Chronic Hazards by Chemical							
Chemical	**AM-1**	**AM-2**	**AM-3**	**AM-4**	**AM-5**	**AM-6**	**All Stations**
Metals							
Aluminum	0.03	0.02	0.03	0.03	0.03	0.05	0.03
Arsenic	0.04	0.03	0.04	0.06	0.08	0.04	0.03
Barium	0.07	0.04	0.04	0.04	0.06	0.04	0.04
Beryllium	0.0004	0.0004	0.0003	0.0003	0.0005	0.0004	0.0003
Cadmium	0.004	0.004	0.005	0.004	0.01	0.004	0.005
Chromium, Total	0.02	0.02	0.02	0.02	0.2	0.02	0.02
Cobalt	0.4	0.6	0.2	0.2	0.2	0.7	0.2
Manganese	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Mercury	0.00004	0.00012	0.00002	0.00003	0.00002	0.00004	0.00004
Nickel	0.02	0.05	0.02	0.02	0.06	0.02	0.02
Selenium	0.00005	0.00005	0.00005	0.00005	0.00005	0.00007	0.00005
Vanadium	0.2	0.2	0.2	0.2	0.3	0.2	0.2
TOTAL	**1**	**1**	**0.7**	**0.7**	**1**	**1**	**0.7**

Note:

A dash indicates toxicity data is not available

See Section 4.3 for discussion of chemicals not included in the risk calculations

Table 5-1. Comparison to Acute Health-Based Guidelines
24-Hour Average Concentrations of PM_{10}, TSP and Associated Chemicals and Radiochemicals for All Air Monitoring Stations

	Site Data			Regulatory Criteria			
	99.7 UCL Concentration	Estimate of Maximum Short-Term Concentrations		Health-Based Guidelines			Are Health-Based Guidelines
Chemical	($\mu g/m^3$)	EPA-Estimate	Wost-Case Estimate	($\mu g/m^3$)	Exposure Time (hour)	Source	Exceeded?
Metals							
Aluminum	0.17	1.68	16.13	5,000	0.25	TEEL-0	no
Arsenic	0.00054	0.0013	0.013	0.2	1	CalEPA REL	no
Barium	0.021	0.21	1.98	500	0.25	TEEL-0	no
Beryllium	0.0000069	0.000017	0.00017	25	1	ERPG-2	no
Cadmium	0.000054	0.00054	0.0051	5	0.25	TEEL-0	no
Calcium	0.43	4.26	40.90	10,000	0.25	TEEL-0	no
Chromium, total	0.0016	0.016	0.16	1,000	0.25	TEEL-0	no
Cobalt	0.0016	0.016	0.15	100	0.25	TEEL-0	no
Copper	0.02	0.04	0.37	100	1	CalEPA REL	no
Iron	0.23	2.31	22.18	1,500	0.25	TEEL-0	no
Lead	0.0011	0.011	0.11	50	0.25	TEEL-0	no
Magnesium	0.12	1.16	11.14	1,250	0.25	TEEL-0	no
Manganese	0.0068	0.068	0.65	200	0.25	TEEL-0	no
Mercury	0.000013	0.000033	0.00031	0.6	1	CalEPA REL	no
Molybdenum	0.00065	0.0065	0.062	15,000	0.25	TEEL-0	no
Nickel	0.00096	0.0024	0.023	6	1	CalEPA REL	no
PM_{10}[a]	12.18	121.82	1,169	10,000	0.25	TEEL-0	no
Selenium	0.0010	0.010	0.10	200	0.25	TEEL-0	no
Silver	0.000010	0.00010	0.0010	10	0.25	TEEL-0	no
Sodium	1.11	11.05	106.08	500	0.25	TEEL-0	no
Sulfates	1.02	2.55	24.48	120	1	CalEPA REL	no
TSP[a]	27.57	275.74	2,647	10,000	0.25	TEEL-0	no
Vanadium[b]	0.0015	0.0038	0.036	30	1	CalEPA REL	no
Zinc	0.0049	0.049	0.47	2,000	0.25	TEEL-0	no

Notes:

[a] Value based on PNOS (particulates not otherwise specified)

[b] Value based on vanadium pentoxide

CalEPA REL = California EPA Reference Exposure Levels for 1 or 4 hr maximum concentration, intermittent exposure lasts less than 24 hr and occurs no more than 1 time per month, or no more frequently than every two weeks in a given year. December 2008

ERPG = Emergency Response Planning Guidelines; 1-hour exposure developed by American Industrial Hygiene Association. October 2009

TEEL-0 = Temporary Emergency Exposure Limits; intended for use until ERPGs are adopted. TEEL-0 is the concentration below which most people will experience no adverse health effects. Concentrations are peak, 15-min time-weighted averages. Revision 25 for Chemicals of Concern. August 2009.

PM_{10} – particulate matter less than 10 micron in size.
TSP – total suspended particulates.
UCL - upper confidence limit
µg/m3 – micrograms per cubic meter.

For the EPA estimates, the following adjustments were made based on the Exposure Time:
a. 4 hour exposure (arsenic) - divide the maximum by 0.9
b. 1 hour exposure - divide the maximum by 0.4
c. 15 minute exposure take the number for 1 hour exposure and multiply by 4.

For Worst Case estimates, the following adjustments were made based on the Exposure Time:
a. 4 hour exposure - multiply the maximum by 6
b. 1 hour exposure - mulitply the maximum by 24
c. 15 minute exposure - multiply the maximum by 96

Table 5-2. Summary Statistics and Comparison to Acute Health-Based Guidelines
Hourly Average PM_{10} Concentrations for AM-1, AM-3 and AM-6

		Site Data					Regulatory Criteria			
Chemical	Units	Detection Frequency	Minimum Concentration[a]	Maximum Concentration[a]	99.7 UCL Concentration	Estimate of Maximum Short-Term Concentrations	Health-Based Guidelines	Exposure Time (hour)	Source	Are Health-Based Guidelines Exceeded?
AM-1	µg/m³	9863/9863	0.1	435	13	13	10,000	0.25	TEEL-0	no
AM-3	µg/m³	9318/9318	0.1	1,000	14	14	10,000	0.25	TEEL-0	no
AM-6	µg/m³	9499/9499	0.1	1,200	16	16	10,000	0.25	TEEL-0	no

Notes:
[a] minimum and maximum detected concentrations
TEEL-0 = Temporary Emergency Exposure Limits; intended for use until ERPGs are adopted. TEEL-0 is the concentration below which most people will experience no adverse health effects. Concentrations are peak, 15-min time-weighted averages. Revision 25 for Chemicals of Concern (08/2009). Value based on PNOS (particulates not otherwise specified).
PM_{10} – particulate matter less than 10 micron in size.
UCL - upper confidence limit
µg/m3 – micrograms per cubic meter.

Table 5-3. Summary Statistics and Comparison to Acute Health-Based Guidelines Dust Event Data for AM-6										
			Site Data				Regulatory Criteria			
Chemical	CAS Number	Units	Detection Frequency	Minimum Concentration[a]	Maximum Concentration[a]	Estimate of Maximum Short-Term Concentrations	Health-Based Guidelines	Exposure Time (hour)	Source	Are Health-Based Guidelines Exceeded?
Metals										
Aluminum	7429-90-5	µg/m³	4/5	0.12	4.68	4.68	5,000	0.25	TEEL-0	no
Antimony	7440-36-0	µg/m³	1/5	0.0071	0.0071	0.0071	500	0.25	TEEL-0	no
Barium	7440-39-3	µg/m³	3/5	0.0025	0.0032	0.0032	500	0.25	TEEL-0	no
Cadmium	7440-43-9	µg/m³	1/5	0.052	0.052	0.052	5	0.25	TEEL-0	no
Calcium	7440-70-2	µg/m³	5/5	0.00070	2.11	2.11	10,000	0.25	TEEL-0	no
Cerium	7440-45-1	µg/m³	4/5	0.0011	0.054	0.054	10,000	0.25	TEEL-0	no
Cesium	7440-46-2	µg/m³	1/5	0.0036	0.0036	0.0036	6,000	0.25	TEEL-0	no
Chlorine	7782-50-5	µg/m³	1/5	0.51	0.51	0.51	210	1	CalEPA REL	no
Chromium	7440-47-3	µg/m³	4/5	0.0050	0.85	0.85	1,000	0.25	TEEL-0	no
Cobalt	7440-48-4	µg/m³	1/5	0.25	0.25	0.25	100	0.25	TEEL-0	no
Copper	7440-50-8	µg/m³	4/5	0.0011	0.27	0.27	100	1	CalEPA REL	no
Europium	7440-53-1	µg/m³	1/5	0.014	0.014	0.014	10,000	0.25	TEEL-0	no
Gallium	7440-55-3	µg/m³	3/5	0.0090	0.027	0.027	10,000	0.25	TEEL-0	no
Hafnium	7440-58-6	µg/m³	1/5	0.064	0.064	0.064	500	0.25	TEEL-0	no
Indium	7440-74-6	µg/m³	3/5	0.0025	0.022	0.022	100	0.25	TEEL-0	no
Iridium	7439-88-5	µg/m³	2/5	0.012	0.017	0.017	6,000	0.25	TEEL-0	no
Iron	7439-89-6	µg/m³	5/5	0.060	143.09	143.09	1,500	0.25	TEEL-0	no
Lead	7439-92-1	µg/m³	4/5	0.0068	0.067	0.067	50	0.25	TEEL-0	no
Magnesium	7439-95-4	µg/m³	5/5	0.013	1.02	1.02	1,250	0.25	TEEL-0	no
Manganese	7439-96-5	µg/m³	5/5	0.022	0.32	0.32	200	0.25	TEEL-0	no
Molybdenum	7439-98-7	µg/m³	2/5	0.0059	0.024	0.024	15,000	0.25	TEEL-0	no
Nickel	7440-02-0	µg/m³	2/5	0.12	0.35	0.35	6	1	CalEPA REL	no
Niobium	7440-03-1	µg/m³	1/5	0.0036	0.0036	0.0036	40,000	0.25	TEEL-0	no
Palladium	7440-05-3	µg/m³	4/5	0.0092	0.036	0.036	2,000	0.25	TEEL-0	no
Phosphorous[b]	7723-14-0	µg/m³	3/5	0.0076	3.07	3.07	10,000	1	ERPG-2	no
PM_{10}[c]	PM10	µg/m³	5/5	10.98	438.55	438.55	10,000	0.25	TEEL-0	no
Potassium	7440-09-7	µg/m³	3/5	0.31	6.95	6.95	75	0.25	TEEL-0	no
Rubidium	7440-17-7	µg/m³	5/5	0.0011	0.034	0.034	5,000	0.25	TEEL-0	no
Samarium	7440-19-9	µg/m³	2/5	0.0018	0.24	0.24	10,000	0.25	TEEL-0	no
Scandium	7440-20-2	µg/m³	1/5	0.0068	0.0068	0.0068	10,000	0.25	TEEL-0	no
Selenium	7782-49-2	µg/m³	2/5	0.0087	0.021	0.021	200	0.25	TEEL-0	no
Silicon	12597-37-4	µg/m³	5/5	0.023	13.48	13.48	15,000	0.25	TEEL-0	no
Silver	7440-22-4	µg/m³	3/5	0.0072	0.66	0.66	10	0.25	TEEL-0	no
Sodium	7440-23-5	µg/m³	3/5	0.46	11.11	11.11	500	0.25	TEEL-0	no
Strontium	7440-19-9	µg/m³	5/5	0.0018	0.71	0.71	40,000	0.25	TEEL-0	no
Sulfate	18785-72-3	µg/m³	2/4	1.74	2.80	2.80	120	1	CalEPA REL	no

Table 5-3. Summary Statistics and Comparison to Acute Health-Based Guidelines Dust Event Data for AM-6										
			Site Data				Regulatory Criteria			
Chemical	CAS Number	Units	Detection Frequency	Minimum Concentration[a]	Maximum Concentration[a]	Estimate of Maximum Short-Term Concentrations	Health-Based Guidelines	Exposure Time (hour)	Source	Are Health-Based Guidelines Exceeded?
Sulfur	9073-75-0	µg/m³	5/5	0.029	46.45	46.45	125	0.25	TEEL-0	no
Tantalum	7440-25-7	µg/m³	1/5	0.065	0.065	0.065	5,000	0.25	TEEL-0	no
Terbium	7440-27-9	µg/m³	2/5	0.0068	1.03	1.03	1,500	0.25	TEEL-0	no
Thallium	82870-81-3	µg/m³	1/5	0.012	0.012	0.012	150	0.25	TEEL-0	no
Tin	7440-31-5	µg/m³	3/5	0.0058	0.13	0.13	2,000	0.25	TEEL-0	no
Titanium	7440-32-6	µg/m³	4/5	0.0040	0.37	0.37	600	0.25	TEEL-0	no
Uranium	7440-61-1	µg/m³	1/5	0.014	0.014	0.014	250	0.25	TEEL-0	no
Vanadium[d]	7440-62-2	µg/m³	3/5	0.0065	0.018	0.018	30	1	CalEPA REL	no
Yttrium	7440-65-5	µg/m³	2/5	0.0076	0.015	0.015	1,000	0.25	TEEL-0	no
Zinc	7440-66-6	µg/m³	2/5	0.064	0.10	0.10	2,000	0.25	TEEL-0	no
Zirconium	7440-67-7	µg/m³	2/5	0.0022	0.0057	0.0057	5,000	0.25	TEEL-0	no

Notes:

[a] minimum and maximum detected concentrations

[b] Value based on phosphorous pentoxide

[c] Value based on PNOS (particulates not otherwise specified)

[d] Value based on vanadium pentoxide

CalEPA REL = California EPA Reference Exposure Levels for 1 or 4 hr maximum concentration, intermittent exposure lasts less than 24 hr and occurs no more than 1 time per month, or no more frequently than every two weeks in a given year. December 2008

ERPG = Emergency Response Planning Guidelines; 1-hour exposure developed by American Industrial Hygiene Association. October 2009.

TEEL-0 = Temporary Emergency Exposure Limits; intended for use until ERPGs are adopted. TEEL-0 is the concentration below which most people will experience no adverse health effects. Concentrations are peak, 15-min time-weighted averages. Revision 25 for Chemicals of Concern. August 2009.

CAS – Chemical Abstract Service

µg/m³ – micrograms per cubic meter

PM_{10} – particulate matter less than 10 microns in diameter