



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 27, 2010

Mr. Gerardo C. Rios
Chief, Permits Office
U.S. EPA Region IX, AIR 3
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Rios:

Subject: Davis Wire Corp – I.D. No. 7411, Title V Permit Modification

Davis Wire Corp (ID 7411) has proposed to revise their Title V Permit as follows:

- Addition of a boiler

This is a steel wire manufacturing facility located at 5555 Irwindale Ave., Irwindale, CA .

The proposed permit revision is considered as a “de minimis significant permit revision” to their Title V Permit. Enclosed for your review are the permit evaluation and proposed permit for the proposed permit revision. With your receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period will begin on August 26, 2010.

If you have any questions or need additional information regarding the proposed permit revision, please contact Ms. Dixie Richards at (909) 396-2395.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian L. Yeh", written over a horizontal line.

Brian L. Yeh
Senior Manager
Chemical/Mechanical Operations

BLY:DR

Enclosure

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING DIVISION</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 2	PAGE 1
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	PROCESSED BY DR	CHECKED BY

DAVIS WIRE, ID 7411

EQUIPMENT DESCRIPTION

APPLICATION NO. 513493

BOILER (D55), HURST, MODEL S5-X-80-150, FIRE TUBE TYPE, 5.2 MMBTU/HR NATURAL GAS FIRED, WITH ONE LOW NOX BURNER, POWER FLAME, MODEL NP2R-G-520.

APPLICATION NO. 513495

TITLE V/RECLAIM FACILITY MODIFICATION

BACKGROUND

The above applications were received 8/11/2010, with a request for expedited permit processing. Maximum burner rating was discovered to be 5.2 mmbtu/hr (fee schedule C) vs. 3.36 mmbtu/hr as submitted (schedule B). The total fee submitted was not sufficient, even if not expedited. Additional fee was submitted 8/20/2010.

The new boiler will replace boiler D8, rated at 3.78mmbtu/hr. The company is currently renting a boiler until the new boiler is permitted and installed.

PROCESS DESCRIPTION

This facility manufactures steel wire

EMISSION ESTIMATES

See attached calculation sheets

RULE COMPLIANCE

Rule 212: Standards for approving permits

212(c)(1) Using the website Great Schools, the closest school, Alice M. Ellington Elementary School, is 1 mile from the property line. A public notice is not required under this paragraph.

212(c)(2) All pollutant emissions are less than the threshold. A public notice is not required under this paragraph.

212(c)(3) Risk is below R1401 threshold. A public notice is not required under this paragraph.

Rule 401 – Visible Emissions

Compliance is expected.

Rule 402- Nuisance

Compliance is expected.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING DIVISION</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 2	PAGE 2
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R1146

NOx limits not applicable as facility is in RECLAIM. 50 ppm CO guaranteed. Compliance is expected.

New Source Review

BACT

9 ppm NOx, 50 ppm CO is guaranteed. Non major source BACT for firetube boilers < 20 mmbtu/hr is natural gas, 12 ppm NOx, 50 ppm CO. This is a major source, so achieved in practice LAER applies. It is believed that 9 ppm has been achieved for this boiler size, but documentation has not been found. BACT limit of 12 ppm will be put on the permit.

Air Quality Modeling

Below screening levels. Additional analysis is not required.

Emissions Offsets

Old boiler has a NOx BACT limit of 30 ppm; new boiler has a 12 ppm BACT limit. Decrease in maximum NOx emissions is expected. NOx emissions will be covered by their RECLAIM allocation.

Increase in maximum rating, therefore does not qualify as functionally identical replacement for Reg XIII (non-RECLAM) pollutants. All non RECLAIM pollutants are below the facility offset threshold. Offsets are not required.

R1401

See attached emissions calculations and risk assessment. Risk is less than one in one million. Complies. No increase in facility emissions expected due to this replacement.

Rule 3000 – Title V

This is a de minimus significant permit revision. EPA review is required.

RECOMMENDATION

Compliance with all applicable rules and regulation are expected. A conditional permit to construct is recommended after EPA notice.

FACILITY PERMIT TO OPERATE DAVIS WIRE CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
[REDACTED]					
BOILER, NATURAL GAS, HURST, MODEL S5-X-80-150, FIRE TUBE TYPE, WITH LOW NOX BURNER, 5.2 MMBTU/HR WITH A/N: BURNER, NATURAL GAS, POWER FLAME, MODEL NP2R-G-520, WITH LOW NOX BURNER, 5.2 MMBTU/HR	D55		NOX: PROCESS UNIT**	CO: 50 PPMV NATURAL GAS (4) ; CO: 400 PPMV NATURAL GAS (5) ; CO: 2000 PPMV (5A) ; NOX: 12 PPMV NATURAL GAS (4) ; NOX: 38.46 LBS/MMSCF NATURAL GAS (1) ; PM: 0.1 GRAINS/SCF (5)	D12.2, D28.1, D332.2

* (1) (1A) (1B) Denotes RECLAIM emission factor
 (3) Denotes RECLAIM concentration limit
 (5) (5A) (5B) Denotes command and control emission limit
 (7) Denotes NSR applicability limit
 (9) See App B for Emission Limits
 (2) (2A) (2B) Denotes RECLAIM emission rate
 (4) Denotes BACT emission limit
 (6) Denotes air toxic control rule limit
 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (10) See section J for NESHAP/MACT requirements

** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

**FACILITY PERMIT TO OPERATE
DAVIS WIRE CORP**

SECTION H: DEVICE ID INDEX

**The following sub-section provides an index
to the devices that make up the facility
description sorted by device ID.**

**FACILITY PERMIT TO OPERATE
DAVIS WIRE CORP**

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Area	Count	Notes
D55	1	6	1

FACILITY PERMIT TO OPERATE DAVIS WIRE CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

DEVICE CONDITIONS

D. Monitoring/Testing Requirements

D12.2 The operator shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage in the gas supply line to the boiler.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D55]

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine the NOX emissions at the outlet.

The test shall be conducted to determine the CO emissions at the outlet.

The test shall be conducted within 90 days after achieving maximum production rate, but no later than 180 days after initial start-up.

Source test shall be conducted when this equipment is operating at low load.

Source test shall be conducted when this equipment is operating at medium load.

Source test shall be conducted when this equipment is operating at maximum load.

The District shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to demonstrate compliance with BACT.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 5-6-2005]

FACILITY PERMIT TO OPERATE DAVIS WIRE CORP

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D55]

D332.2 The operator shall determine compliance with the CO emission limit(s) by conducting a test at least once every five years using a portable analyzer and AQMD-approved test method or, if not available, a non-AQMD approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with Rule 1146 concentration limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 8-11-1995]

[Devices subject to this condition : D55]

BOILER EMISSIONS FOR FIRING ON NATURAL GAS ONLY

1. DATA

Max burner rating	5,200,000	BTU/hr
Max hr/day	24	hr/day
day per week	7	dy/wk
wk/yr	52	wk/yr
Use default NOx E.F.	NO	yes/no
Use default CO E.F.	NO	
Max NOx rate	12	ppm
Max CO rate	50	ppm
30-day ave	30	days
Ave load-Rule 1401	100.0%	
Max load-Reg 13	100.0%	
Fuel HHV	1050	btu/ft3
Fuel rate	4952	ft3/hr
MM cf fuel rate	0.004952	mmcf/hr
monthly fuel limit	3.565714	mmcf/mon
VOC control (Rule 1401)	0%	eff
Deemed complete date	6/7/2002	

Emissions factor

Item	value	units	Ref
ROG	5.5	lb/mmcf	AP-42, table 1.4-1
SOx	0.6	lb/mmcf	AP-42, table 1.4-1
PM	7.6	lb/mmcf	AP-42, table 1.4-1
NOx-default	100	lb/mmcf	AP-42, table 1.4-1
CO-default	85	lb/mmcf	AP-42, table 1.4-1
MMCF/hr	0.004952381	MMCF/hr	
therm/hr	52	therm/hr	

ROG, SOX and PM10 Emissions = lb/mmcf * MMCF/hr * load

2. Combustion Emissions

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.0272	0.65	1	238
NOx	0.08	1.82	2.00	662.48
SO2	0.0030	0.0713	0	25.946
CO	0.19	4.61	5.00	1678.03
PM	0.060	1.44	1	332

By EPA Method 19
 By the Ideal Gas Law
 =[PV = nRT]
 =[n/V = P/RT]
 =[lbmol/dscf@68F.]

$$= [1 \text{ atm} / (0.73 \text{ ft}^3\text{-atm/lb-mole-R}^*(460 \text{ F}+68\text{F}))]$$
$$= [0.00259 \text{ lbmol/dscf}]$$

lbNOx/btu

$$= [\text{dscf/mmbtu}] [(10^{-6} \text{ mmbtu})/\text{btu}] [20.9/(20.9 - 3\% \text{O}_2)] [\text{ppmv}] [\text{Vol Nox/ppm}] [\text{Mol.Wt. lb/lbmol}] [\text{lbmol/dscf@68F.}]$$
$$= [8710] [0.000001] [20.9/(20.9-3)] [12] [0.000001] [46] [0.00259]$$
$$= [1.456\text{E-}08]$$

lbNOx/hr

$$= [\text{lb/btu}] [\text{Rating, btu/hr}]$$
$$= [1.456\text{E-}08] [5.20\text{E}+06]$$
$$= [0.08 \text{ lb/hr}]$$

lbNox/day

$$= [\text{lbNOx/hr}] [\text{hr/day}]$$
$$= [0.08 \text{ lb/hr}] [24\text{hr/day}]$$
$$= [1.82 \text{ lb/day}]$$

30 day NOx ave

$$= [\text{lbNox/day}] [\text{days/mon}] / [30 \text{ days/mon}]$$
$$= [1.82 \text{ lb/day}] [30\text{days/mon}] / [30 \text{ days/mon}]$$
$$= [1.82 \text{ lb/day}]$$

lbNox/year

$$= [\text{lbNox/day}] [\text{days/wk}] [\text{wk/yr}]$$
$$= [1.82 \text{ lb/day}] [7\text{days/wk}] [52\text{wk/yr}]$$
$$= [662 \text{ lb/year}]$$

By EPA Method 19

lbCO/btu

$$= [\text{dscf/mmbtu}] [(10^{-6} \text{ mmbtu})/\text{btu}] [20.9/(20.9 - 3\% \text{O}_2)] [\text{ppmv}] [\text{Vol CO/ppm}] [\text{Mol.Wt. lb/lbmol}] [\text{lbmol/dscf@68F.}]$$
$$[8710] [0.000001] [20.9/(20.9-3)] [50] [0.000001] [28] [0.00259]$$
$$= [3.694\text{E-}08]$$

lbCO/hr

$$= [\text{lb/btu}] [\text{Rating, btu/hr}]$$
$$= [3.694\text{E-}08] [5.20\text{E}+06]$$
$$= [0.19 \text{ lb/hr}]$$

lbCO/day

$$= [\text{lbCO/hr}] [\text{hr/day}]$$
$$= [0.19 \text{ lb/hr}] [24\text{hr/day}]$$
$$= [4.61 \text{ lb/day}]$$

30 day CO ave

$$= [\text{lbCO/day}] [\text{days/mon}] / [30 \text{ days/mon}]$$
$$= [4.61 \text{ lb/day}] [30\text{days/mon}] / [30 \text{ days/mon}]$$
$$= [4.61 \text{ lb/day}]$$

lbCO/year

= $[\text{lbCO/day}][\text{days/wk}][\text{wk/yr}]$
= $[4.61 \text{ lb/day}][7\text{days/wk}][52\text{wk/yr}]$
= $[1678 \text{ lb/year}]$

lbROG/hr

$[\text{ROG E.F.}][\text{Firing Rate}][\text{Boiler Rating}]$
 $[5.50 \text{ lb/mmcf}][100\%][5.2\text{mmbtu/hr}][1\text{cf}/1050\text{btu}]$
 $[0.0272$
 $\text{lb/hr}]$

lbROG/day

$[\text{lbROG/hr}] \times [\text{hr/day}]$
 $[0.03 \text{ lb/hr}] \times [24 \text{ hr/day}]$
 $[0.65 \text{ lb/day}]$

30 day ROG ave

$[\text{lbROG/day}][\text{days/mon}]/[30 \text{ days/mon}]$
 $[0.65 \text{ lb/day}][30\text{days/mon}]/[30 \text{ days/mon}]$
 $[0.65 \text{ lb/day}]$

lbROG/year

$[\text{lbROG/day}][\text{days/wk}][\text{wk/yr}]$
 $\text{lbROG/day}[7\text{days/wk}][52\text{wk/yr}]$
 $[238 \text{ lb/year}]$

lbSOx/hr

$[\text{SOx E.F.}][\text{Firing Rate}][\text{Boiler Rating}]$
 $[0.60 \text{ lb/mmcf}][100\%][5.2\text{mmbtu/hr}][1\text{cf}/1050\text{btu}]$
 $[0.0030 \text{ lb/hr}]$

lbSOx/day

$[\text{lbSOx/hr}] \times [\text{hr/day}]$
 $[0.0030 \text{ lb/hr}] \times [24 \text{ hr/day}]$
 $[0.0713 \text{ lb/day}]$

30 day SOx ave

$[\text{lbSOx/day}][\text{days/mon}]/[30 \text{ days/mon}]$
 $[0.0713 \text{ lb/day}][30\text{days/mon}]/[30 \text{ days/mon}]$
 $[0.0713 \text{ lb/day}]$

lbSOx/year

$[\text{lbSOx/day}][\text{days/wk}][\text{wk/yr}]$
 $[0.0713 \text{ lb/day}][7\text{days/wk}][52\text{wk/yr}]$
 $[26 \text{ lb/year}]$

lbPM/hr

$[\text{PM E.F.}][\text{Firing Rate}][\text{Boiler Rating}]$
 $[7.60 \text{ lb/mmcf}][100\%][5.2\text{mmbtu/hr}][1\text{cf}/1050\text{btu}]$
 $[0.0380 \text{ lb/hr}]$

lbPM/day

$[\text{lbPM/hr}] \times [\text{hr/day}]$
 $[0.0380 \text{ lb/hr}] \times [24 \text{ hr/day}]$

[0.9120 lb/day]

30 day PM ave

[lbPM/day][days/mon]/[30 days/mon]

[0.9120 lb/day][30days/mon]/[30 days/mon]

[0.9120 lb/day]

lbPM/year

[lbPM/day][days/wk][wk/yr]

[0.9120 lb/day][7days/wk][52wk/yr]

[332 lb/year]

3. Rule 1303 (b)(1)-Screen Table A-1

Item	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.47	0.08	Yes
CO	25.9	0.19	Yes
PM10	2.8	0.06	Yes

4. Rule 1401 Emissions Calculations

VOC reduction	0% percent					
Fuel usage	0.004952381	mmcf/hr		nsr	nsr	nsr
item	EF(lb/mmcf)	R1-lb/hr	R2lb/hr	R1 E-06	R1 E-06	R2 lb/yr
toluene	3.66E-02	1.81E-04	0.000181257	181.26	181.26	1.5834624
xylenes	2.72E-02	0.000134705	0.000134705	134.70	134.70	1.1767808
naphthalene	3.00E-04	1.48571E-06	1.48571E-06	1.49	1.49	0.0129792
PAH	1.00E-04	4.95238E-07	4.95238E-07	0.50	0.50	0.0043264
acrolein	2.70E-03	1.33714E-05	1.33714E-05	13.37	13.37	0.1168128
acetaldehyde	4.30E-03	2.12952E-05	2.12952E-05	21.30	21.30	0.1860352
benzene	8.00E-03	3.9619E-05	3.9619E-05	39.62	39.62	0.346112
formaldehyde	1.70E-02	8.41905E-05	8.41905E-05	84.19	84.19	0.735488
propylene	7.31E-01	3.62E-03	0.00362019	3620.19	3620.19	31.625984
ethy benzene	9.50E-03	4.70E-05	4.70476E-05	47.05	47.05	0.411008
hexane	6.30E-03	3.12E-05	0.0000312	31.20	31.20	0.2725632

Reference AB-2588 Emissions factors

Intro**Boiler**

Max burner rating	5,200,000	BTU/hr
Fuel HHV	1050	btu/ft3
Fuel rate	4952	ft3/hr
MM cf fuel rate	0.004952	mmcf/hr
VOC control (Rule 1401)		eff

Pollutant	EF(lb/mmcf)	R1-lb/hr	R2lb/hr	NSR Data Entry (E-06 lb/hr)
Acetaldehyde	4.30E-03	2.13E-05	2.13E-05	21.2952381
Acrolein	2.70E-03	1.337E-05	1.337E-05	13.37142857
Benzene (including benzene fr	8.00E-03	3.962E-05	3.962E-05	39.61904762
Ethyl benzene	9.50E-03	4.705E-05	4.705E-05	47.04761905
Formaldehyde	1.70E-02	8.419E-05	8.419E-05	84.19047619
Hexane (n-)	6.30E-03	0.0000312	0.0000312	31.2
Napthalene	3.00E-04	1.486E-06	1.486E-06	1.485714286
PolyCyclic Aromatic Hydrocar	1.00E-04	4.952E-07	4.952E-07	0.495238095
Propylene	7.31E-01	0.0036202	0.0036202	3620.190476
Toluene (methyl benzene)	3.66E-02	0.0001813	0.0001813	181.2571429
Xylenes (isomers and mixtures	2.72E-02	0.0001347	0.0001347	134.7047619

TIER 2 SCREENING RISK ASSESSMENT REPORT

A/N: 513493
 Fac: Davis Wire

Application deemed complete date: 08/25/10

2. Tier 2 Data

MET Factor	1.28
4 hr	0.94
6 or 7 hrs	0.78

Dispersion Factors tables

3	For Chronic X/Q
6	For Acute X/Q

Dilution Factors (ug/m3)/(tons/yr)

Receptor	X/Q	X/Qmax
Residential	4.512695748	52.19873702
Commercial	4.512695748	52.19873702

Adjustment and Intake Factors

	AFann	DBR	EVF
Residential	1	302	0.96
Worker	1	149	0.38

A/N: 513493

Application deemed complete date: 08/25/10

TIER 2 RESULTS

5a. MICR

MICR = CP (mg/(kg-day))⁻¹ * Q (ton/yr) * (X/Q) * AFann * MET * DBR * EVF * 1E-6* MP

Compound	Residential	Commercial
Acetaldehyde	1.40E-09	2.74E-10
Acrolein		
Benzene (including benzene from gasoline)	2.61E-08	5.09E-09
Ethyl benzene	2.69E-09	5.26E-10
Formaldehyde	1.16E-08	2.27E-09
Hexane (n-)		
Naphthalene	1.17E-09	2.29E-10
PolyCyclic Aromatic Hydrocarbon (PAHs)	3.78E-07	3.63E-08
Propylene		
Toluene (methyl benzene)		
Xylenes (isomers and mixtures)		
Total	4.21E-07	4.47E-08
	PASS	PASS

No Cancer Burden, MICR<1.0E-6

5b. Cancer Burden	NO
X/Q for one-in-a-million:	
Distance (meter)	
Area (km2):	
Population:	
Cancer Burden:	

6. Hazard Index

HIA = [Q(lb/hr) * (X/Q)max] * AF / Acute REL

HIC = [Q(ton/yr) * (X/Q) * MET * MP] / Chronic REL

Target Organs	Acute	Chronic	Acute Pass/Fail	Chronic Pass/Fail
Alimentary system (liver) - AL		5.34E-07	Pass	Pass
Bones and teeth - BN			Pass	Pass
Cardiovascular system - CV			Pass	Pass
Developmental - DEV	1.35E-06	2.92E-05	Pass	Pass
Endocrine system - END		5.34E-07	Pass	Pass
Eye	3.35E-03	5.70E-03	Pass	Pass
Hematopoietic system - HEM	1.12E-06	1.50E-05	Pass	Pass
Immune system - IMM	4.32E-05		Pass	Pass
Kidney - KID		5.34E-07	Pass	Pass
Nervous system - NS	2.30E-07	3.32E-05	Pass	Pass
Reproductive system - REP	1.35E-06		Pass	Pass
Respiratory system - RES	3.35E-03	5.80E-03	Pass	Pass
Skin			Pass	Pass

A/N: 513493

Application deemed complete date:

08/25/10

6a. Hazard Index Acute

$$\text{HIA} = [\text{Q}(\text{lb/hr}) * (\text{X}/\text{Q})_{\text{max}}] * \text{AF} / \text{Acute REL}$$

Compound	HIA - Residential									
	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Acetaldehyde				3.31E-03					3.31E-03	
Acrolein										
Benzene (including benzene from gasoline)			1.12E-06		1.12E-06	1.12E-06		1.12E-06		
Ethyl benzene										
Formaldehyde				4.21E-05		4.21E-05			4.21E-05	
Hexane (n-)										
Naphthalene										
PolyCyclic Aromatic Hydrocarbon (PAHs)										
Propylene										
Toluene (methyl benzene)			2.30E-07	2.30E-07			2.30E-07	2.30E-07	2.30E-07	
Xylenes (isomers and mixtures)				2.88E-07					2.88E-07	
Total			1.35E-06	3.35E-03	1.12E-06	4.32E-05	2.30E-07	1.35E-06	3.35E-03	

Compound	HIA - Commercial									
	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Acetaldehyde				3.31E-03					3.31E-03	
Acrolein										
Benzene (including benzene from gasoline)			1.12E-06		1.12E-06	1.12E-06		1.12E-06		
Ethyl benzene										
Formaldehyde				4.21E-05		4.21E-05			4.21E-05	
Hexane (n-)										
Naphthalene										
PolyCyclic Aromatic Hydrocarbon (PAHs)										
Propylene										
Toluene (methyl benzene)			2.30E-07	2.30E-07			2.30E-07	2.30E-07	2.30E-07	
Xylenes (isomers and mixtures)				2.88E-07					2.88E-07	
Total			1.35E-06	3.35E-03	1.12E-06	4.32E-05	2.30E-07	1.35E-06	3.35E-03	

6b. Hazard Index Chronic

$$HIC = [Q(\text{ton/yr}) * (X/Q) * MET * MP] / \text{Chronic REL}$$

Compound	HIC - Residential												
	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN
Acetaldehyde						5.06E-03						5.37E-05	
Acrolein												5.06E-03	
Benzene (including benzene from gasoline)				1.50E-05			1.50E-05			1.50E-05			
Ethyl benzene	5.34E-07			5.34E-07	5.34E-07				5.34E-07				
Formaldehyde						6.37E-04						6.37E-04	
Hexane (n-)										1.01E-07			
Naphthalene												3.75E-06	
PolyCyclic Aromatic Hydrocarbon (PAHs)												2.74E-05	
Propylene												1.37E-05	
Toluene (methyl benzene)				1.37E-05						1.37E-05		1.37E-05	
Xylenes (isomers and mixtures)										4.37E-06		4.37E-06	
Total	5.34E-07			2.92E-05	5.34E-07	5.70E-03	1.50E-05		5.34E-07	3.32E-05		5.80E-03	

6b. Hazard Index Chronic (cont.)

A/N: 513493

Application deemed complete date:

08/25/10

Compound	HIC - Commercial											RESP	SKIN	
	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP			
Acetaldehyde						5.06E-03							5.37E-05	
Acrolein													5.06E-03	
Benzene (including benzene from gasoline)				1.50E-05			1.50E-05			1.50E-05				
Ethyl benzene	5.34E-07			5.34E-07	5.34E-07					5.34E-07				
Formaldehyde						6.37E-04							6.37E-04	
Hexane (n-)											1.01E-07			
Naphthalene													3.75E-06	
PolyCyclic Aromatic Hydrocarbon (PAHs)														2.74E-05
Propylene														1.37E-05
Toluene (methyl benzene)				1.37E-05							1.37E-05		1.37E-05	
Xylenes (isomers and mixtures)											4.37E-06		4.37E-06	
Total	5.34E-07			2.92E-05	5.34E-07	5.70E-03	1.50E-05			5.34E-07	3.32E-05		5.80E-03	