

**Table A-2: Literature Summary for
Fire Fighter Respiratory Exposure Study
(sorted by Relevance/Author)**

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
008	Anthony, TR	Joggerst, P; James, L; Burgess, JL; Leonard, SS; Shogren, ES	Evaluation of Air Purifying Respirator Cartridges for Fire Overhaul Exposures	Journal of Occupational and Environmental Hygiene	2006 19	Critical TPE 19	Reviews two commonly used respirator cartridges, establishes testing procedures, reports concentrations, reveals avenues of further study, evaluates actual health risk
231	Anthony, TR	Joggerst, P; James, L; Burgess, JL; Leonard, SS; Shogren, ES	Method Development Study for APR Cartridge Evaluation in Fire Overhaul Exposures	Annals of Occupational Hygiene	2007 51 (8) 703-716	Critical TPE	An evaluation of the effectiveness of respirator cartridges during overhaul at residential fire environments, revealing avenues of further study by evaluating health risks.
161	Aronson, KJ	Tomlinson, GA; Smith, L	Mortality Among fire Fighters in Metropolitan Toronto	American Journal of Industrial Medicine, Jul 1994	1994 26 (1) 89-101	Critical P 23	A retrospective cohort study of 5,995 Toronto fire fighters from 1950 through 1989, showing that fire fighters have an increased risk for certain types of cancer and heart disease.
038	Austin, CC	Dussault, G; Ecobichon, DJ	Municipal firefighter exposure groups, time spent at fires and use of self-contained-breathing- apparatus	American Journal of Industrial Medicine	2001 40 683-692	Critical P 13	Study done with the Montreal FD and estimates the proportion of FD personnel actually exposed to smoke, time spent at scene of fires, the # of structural fires attended, # of SCBA cylinders used, and percentage of time spent at fires that respiratory protection is used.
152	Baris, D	Garity, TJ; Telles JL; Heineman, EF; Olshan, A; Zahm, SH	Cohort Mortality Study of Philadelphia Firefighters	American Journal of Industrial Medicine, May 2001	2001 39 (5) 463-476	Critical P 11	A retrospective cohort mortality study of 7,789 Philadelphia fire fighters employed between 1925 and 1986 found no significant increase in overall mortality but did find an increased risk for colon and kidney cancer, and for non-Hodgkin's Lymphoma and multiple myeloma.
148	Bates, MN	Fawcett, J; Garrett, N; Arnold, R; Pearce, N; Woodward, A	Is Testicular Cancer an Occupational Disease of Fire Fighters?	American Journal of Industrial Medicine, Sep 2001	2001 40 (3) 263-270	Critical P 12	A Historical cohort study of mortality and cancer incidence for all career fire fighters in New Zealand from 1977 to 1995 confirms as earlier study that they are at an elevated risk for testicular cancer, for unknown reasons.
153	Bates, MN		Registry-Based Case- Control Study of Cancer in California Firefighters	American Journal of Industrial Medicine, May 2007	2007 50 (5) 339-344	Critical P	A review of records for all male cancers registered in California from 1988 to 2003 confirms certain earlier studies that indicate possible elevated cancer risks to fire fighters.
220	Betchley, C	Koenig, JQ; van Belle, G; Checkoway, H; Reinhardt, T	Pulmonary function and respiratory symptoms in forest firefighters	American Journal of Industrial Medicine, Dec 6 1998	1998 31 (5) 503-509	Critical E 22	This study involved 76 fire fighters and evaluates effects on respiratory health of forest firefighters exposed to high concentrations of smoke during their work shift.
009	Bolstad- Johnson, DM	Burgess, JL; Crutchfield, CD; Storment, S; Gerkin, R; Wilson, JR	Characterization of firefighter Exposures During Fire Overhaul	American Industrial Hygiene Journal	2000 61 636-641	Critical EPT 18	Evaluates presence of harmful airborne gases/particles/chemicals during overhaul, gives sampling methods for future data collection, reports measurable quantities and potential side effects, recommends using SCBA during overhaul for lack of a better alternative respirator
014	Brandt-Rauf, PW	Cosman, B; Fallon, LF; Tarantini, T; Idema, C	Health hazards of firefighters: acute pulmonary effects after toxic exposures	British Journal of Industrial Medicine	1989 46 209-211	Critical PE 12	Reviews changes in respiratory health from known exposure, recommends better information be provided to FFs on when to use respirators

Table A-2 Page: 1

Figure A-2 Literature Review, Sorted by Relevance/Author; page 1 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
010	Burgess, JL	Brodkin, CA; Daniell, WE; et al	Longitudinal decline in firefighter DLCO measurements: a respiratory surveillance dilemma	American Journal of Respiratory and Critical Care Medicine	1999 159 119-124	Critical P 5	8 year study on FF lung function with spirometry and CO diffusion tests
011	Burgess, JL	Nanson, CJ; Bolstad-Johnson, DM; Gerkin, R; Hysong, TA; Lantz, RC; Sherrill, DL; Crutchfield, CD; Quan, SF; Bernard, AM; Witten, ML	Adverse Respirator Effects Following Overhaul in Firefighters	Journal of Occupational and Environmental Medicine	2001 43 467-473	Critical PT 19	Testing using actual FFs, results correlated with other occupations, cites measurement methods
012	Burgess, JL		Inhalation Hazards Faced by Wildland Firefighters	Position Statement: NFPA Standards Council Agenda Item 07-3-14	2007 July 2007 16-22	Critical PE 7	Offers concise explanation of where wildland respiratory research is at now, whats out there, and what isnt as well as a good list of references
154	Choi, BCK		A Technique to Re-Assess Epidemiologic Evidence in Light of the Healthy Worker Effect: The Case of Firefighting and Heart Disease	Journal of Occupational and Environmental Medicine, Oct 2000	2000 42 (10) 1021-1034	Critical P 9	A review of the Healthy Worker Effect and its possible bias in 23 earlier studies is reviewed. The conclusion indicate evidence of an increased risk of death in fire fighters from heart disease.
135	Coleman, J		SCBA Use During Overhaul	Fire Engineering	2007 Sept 2007 34-44	Critical EPT	Roundtable discussion of fire fighter use of SCBA, with 24 fire departments describing their approach and policy for how they use SCBA during overhaul.
165	Demers, PA	Heyer, NJ; Rosenstock, L	Mortality Among Firefighters from 3 Northwestern United States Cities	British Journal of Industrial Medicine, Sep 1992	1992 49 (9) 664-670	Critical P 43	A study of 4,546 fire fighters in Seattle and Tacoma Washington from 1944 to 1979 show that based on death certificates younger fire fighters and fire fighters with more than 30 years of exposed employment have a higher risk of certain types of cancer.
159	Deschamps, S	Momas, I; Festy, B	Mortality Amongst Paris Fire Fighters	European Journal of Epidemiology, Dec 1995	1995 11 (6) 643-646	Critical P 5	A cohort study of 830 male fire fighters of the Paris Fire Brigade monitored over a 14 year period as compared to the average French male showed a lower overall mortality but a greater number of deaths from certain types of cancer.
208	Edwards, R	Johnson, M;Dunn, KH; Naehler, LP	Application of real-time particle sensors to help mitigate exposures of wildland firefighters	Archives of Environmental Health, Jan-Feb 2005	2005 60 (1) 40-43	Critical TEP	This study demonstrates the feasibility of using small real-time particle sensors to inform wildland firefighters so they may make informed decisions on the use of personal respiratory protection.
163	Glueck, CJ	Kelley, W; Wang, P; Gartside, PS; Black, D; Tracy, T	Risk factors for coronary heart disease among firefighters in Cincinnati	American Journal of Industrial Medicine, Sep 1996	1996 30 (3) 331-340	Critical P 14	A study of 806 fire fighters in the Cincinnati Fire Department measured over an approximate 10 year period indicates a higher risk for certain adverse health ailments.
001	Gold, A	Burgess, WA; Clougherty, EV	Exposure of firefighters to toxic air contaminants	American Industrial Hygiene Journal	1978 39 533-539	Critical PE 20	Study of exposure levels of Boston FFs to a variety of fire gasses, includes plans for gas analyzer mounted in turnout jacket
162	Guidotti, TL		Mortality of Urban Firefighters in Alberta, 1927-1987	American Journal of Industrial Medicine, Jun 1993	1993 23 (6) 921-940	Critical P 30	A study of the mortality of the cause of death of 3,3,28 fire fighters in Edmonton and Calgary from 1927 to 1987, showing an increase in certain cancers, heart disease, and pulmonary disease during certain time periods.
016	Haas, NS	Gochfeld, M; Robson, MG; Wartenber, D	Latent health effects in firefighters	International Journal of Occupational and Environmental Health	2003 9 95-103	Critical P 19	Retrospective summary of FF mortality cohort studies, comprehensive, reports results as SMR for variety of causes, including respiratory disease and lung cancer

Table A-2 Page: 2

Figure A-2 Literature Review, Sorted by Relevance/Author; page 2 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
176	Heyer, N	Weiss, NS; Demers, P; Rosenstock, L	Cohort Mortality Study of Seattle Fire Fighters: 1945-1983	American Journal of Industrial Medicine	1990 17 (4) 493-504	Critical P 27	A cohort study of mortality related to respiratory concerns of fire fighters in Seattle from 1945 to 1983.
002	Jankovic, J	Jones, W; Burkhard, J; Noonan, G	Environmental study of firefighters	Annals of Occupational Hygiene	1991 35 581-602	Critical PE 21	Study measuring FF exposure during knockdown and overhaul, details test methods, separates based on activity, measures inside and outside SCBA
003	Jankovic, J	Jones, W; Castanova, V; Dalal, N	Measurement of short-lived reactive species and long-lived free radicals in air samples from structural fires	Applied Occupational and Environmental Hygiene	1993 8 650-658	Critical EP	Study measuring short-and long-lived free radicals in overhaul situations, for a variety of test methods, concluding enough free-radicals could be present to have a toxicological effect
090	Kinnes, GM	Hine, GA	Health Hazard Evaluation Report HETA 98-0171-2692	ATF; Bureau of Alcohol, Tobacco, and Firearms; Washington, DC	1998 May 1998	Critical E	Measurement of respiratory exposure to fire investigators after two actual fires and three staged fires
141	Kirk, KM		Air Contaminants at Residential Fire Investigation Scenes	Ph.D. Dissertation submitted to the School of Physical and Chemical Sciences, Queensland University of Technology, Brisbane, Australia	2006 July 2006	Critical E	A review of the atmospheric contaminants present at a post fire scene, with a particular focus on the respiratory hazards facing fire investigators.
147	LeMasters, GK	Genaidy, AM; Succop, P; Deedens, J; Sobeih, T; Barriera-Viruet, H; Dunning, K; Lockey, J	Cancer Risk Among Firefighters: A Review and Meta-Analysis of 32 Studies	Journal of Occupational and Environmental Medicine, Nov 2006	2006 48 (11) 1189-1202	Critical P 1	A qualitative and quantitative determination of cancer risk using a meta-analysis of 32 studies on fire fighters. The risk of 21 different cancers was based on patterns using meta-relative risks, study type, and heterogeneity testing. Results indicate elevated risk for certain types of cancer.
151	Ma, FC	Fleming, LE; Lee, DJ; Trapido, E; Gerace, TA	Cancer Incidence in Florida Professional Firefighters, 1981 to 1999	Journal of Occupational and Environmental Medicine, Sep 2006	2006 48 (9) 883-888	Critical P 1	An examination of the cancer risk for professional Florida firefighters as compared to the general Florida population, which indicates an increased risk of selected site-specific cancers in male and female fire fighters, and an overall increased cancer risk in female fire fighters.
155	Ma, FC	Lee, DJ; Fleming, LE; Dosemeci, M	Race-Specific Cancer Mortality in U.S. Firefighters: 1984-1993	Journal of Occupational and Environmental Medicine, Dec 1998	1998 40 (12) 1134-1138	Critical P 11	A study of race-specific cancer risk among firefighters from 24 states using death certificate data from 1984- 1993 shows that elevated risk for certain cancers based on certain race criteria.
156	Ma, FC	Fleming, LE; Lee, DJ; Trapido, E; Gerace, TA; Lai, H; Lai, SH	Mortality in Florida Professional Firefighters, 1972-1999	American Journal of Industrial Medicine, June 2005	2005 47(6) 509-517	Critical P 5	Review of occupational exposure to 34,796 male and 2,017 female professional fire fighters in Florida from 1972 to 1999 as compared to the general Florida population show excess mortality risk for certain types of cancers.
173	McDiarmid, MA	Lees, PSJ; Agnew, J; Midzenski, M; Duffy, R	REproductive Hazards of Fire Fighting: Chemical Hazards	American Journal of Industrial Medicine, Apr 1991	1991 19 (4) 447-472	Critical EP 13	A review of chemical exposures to fire fighters, including a review of the industrial hygiene literature to identify agents commonly found in fire smoke.
119	McKendrick, M		Review of Respiratory Protection During Overhaul Operations	EFO Paper, National fire Academy, Emmitsburg, MD (Tucson AZ FD)	2002 April 2002	Critical E	This paper was written to fulfill the requirements of the National Fire Academy's Executive Development Course, and provides clear recommendations for the Tucson FD to determine when to remove SCBA at structure fires.

Table A-2 Page: 3

Figure A-2 Literature Review, Sorted by Relevance/Author; page 3 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Relevance/		Notes
					Volume/ Pages	Category/ # Citations	
120	Medina, C		Utilization of Portable Monitors to Determine the Level of Respiratory Protection for Overhaul Operations	EFO Paper, National Fire Academy, Emmitsburg, MD (Fresno CA FD)	2001 Feb 2001	Critical E	This paper was written to fulfill the requirements of the National Fire Academy's Executive Development Course, and clarifies a possible Fresno FD policy for when to remove SCBA at structure fires.
145	Miedinger, D	Chhajed, PM; Stolz, D; Gysin, C; Wanzenried, AB; Schindler, C; Surber, C; Bucher, HC; Tamm, M; Leuppli, JD	Respiratory Symptoms, Atopy and Bronchial Hyperreactivity in Professional Firefighters	European Respiratory Journal, Sept 2007	2007 30 (3) 538-544	Critical P	An assessment of respiratory health in professional fire fighters conducted on 101 male professional fire fighters in Switzerland, against a control group of 735 Swiss males. The results show that the fire fighters has a greater rate of atopy and bronchial hyperactivity.
136	Reinhardt, TE	Ottmar, RD	Smoke Exposure Among Wildland Firefighters: A Review and Discussion of Current Literature	Gen Tech Report; PNW-6tr-373; USDA Forest Service, Pacific Northwest Research Station	1997 Feb 1997 53	Critical E 6	Review of literature on smoke exposure and resulting adverse health effects among wildland firefighters, indicating that smoke exposure at wildfires and prescribed fires is usually no more than an inconvenience, but on occasion approaches or exceeds legal and recommended occupational exposure limits.
137	Reinhardt, TE	Ottmar, RD	Baseline Measurement of Smoke Exposure Among Wildland Firefighters	Journal of Occupational and Environmental Hygiene	2004 1(9) 593-606	Critical EP 7	Extensive measurements of smoke exposure among wildland firefighters are summarized, showing that firefighters can be exposed to significant levels of carbon monoxide and respiratory irritants
219	Reinhardt, TE	Ottmar, RD; Hanneman	Smoke Exposure Among Wildland Firefighters At Prescribed Burns in the Pacific Northwest	Research Paper: PNW-RP-526; USDA Forest Service, Pacific Northwest Research Station	2000 Oct 2000 54	Critical E 9	Smoke exposure at prescribed burns between 1991 and 1994 are studied involving 200 firefighters, and shows that the highest respiratory irritant exposures were about 6 times the recommended limits and peak exposures exceeded recommended limits for short-term exposures.
222	Reinhardt, TE	Ottmar, RD	Smoke Exposure At Western Wildfires	Research Paper: PNW-RP-525; USDA Forest Service, Pacific Northwest Research Station	2000 Jul 2002 84	Critical E 9	Smoke exposure measurements among fire fighters at wildfires in the Western U. S. between 1992 - 1995 showed that although most exposures were not significant, 3 - 5 % of the shift-average exposures exceeded occupational exposure limits for CO & respiratory irritants.
221	Reinhardt, TE	Ottmar, RD; Hallet, MJ	Guide to Monitoring Smoke Exposure of Western Wildfires	Research Paper: PNW-GTR-448; USDA Forest Service, Pacific Northwest Research Station	1999 Mar 1999 24	Critical E 6	Guidance is provided for using electronic CO monitors, referred to as dosimeters, to track and prevent overexposure to smoke, and includes a protocol for sampling smoke exposure and establishing a smoke-exposure monitoring program.
004	Rothman, N	Ford, DP; Baser, ME; Hansen, JA; O'Toole, T; Tockman, MS; Strickland, PT	Pulmonary function and respiratory symptoms in wildland firefighters	Journal of Occupational Medicine	1991 33 1163-1167	Critical PE 15	Study of lung function in forest and wildland FFs, draws comparisons between urban and wildland exposure
005	Sherman, CB	Barnhart, S; Miller, MF; Segal, MR; Aitken, M; Schoene R; Daniell, W; and Rosenstock, L	Firefighting acutely increases airway responsiveness	American Review of Respiratory Diseases	1989 140 185-190	Critical PE 20	Study showing that FF activity can increase airway responsiveness, which may lead to a higher loss of ventilary function
168	Stang, A	Jockel, KH; Baumgardt-Elms, C; Ahrens, W	Firefighting and risk of testicular cancer: Results from a German population-based case-control study	American Journal of Industrial Medicine, Mar 2003	2003 43 (3) 291-294	Critical P 9	A study of testicular cancer in Germany shows confirms another study in New Zealand that fire fighters have a higher risk of testicular cancer.

Table A-2 Page: 4

Figure A-2 Literature Review, Sorted by Relevance/Author; page 4 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
169	Tornling, G	Gustavsson, P; Hogstedt, C	Mortality and Cancer Incidence in Stockholm Fire Fighters	American Journal of Industrial Medicine, Feb 1994	1994 25 (2) 219-228	Critical P 25	A study of Stockholm fire fighters from 1931 to 1983 based on the number of fires fought show an increase in certain types of cancer as compared to the local population.
007	Treitman, RD	Burgess, WA; Gold, A	Air contaminants encountered by firefighters	American Industrial Hygiene Journal	1980 41 796-802	Critical EP 29	Data reporting concentration of several gasses and particulate matter from FF mounted sampling devices
013	Varone, JC		Report of the Investigation Committee into the Cyanide Poisonings of Providence Firefighters	Providence Fire Department	2006	Critical PET	Goes all the way through from a FF heart attack backwards covering treatment, exposure, FF activities, potential sources, etc. From a case of FF cyanide poisoning. While solely a CN related report, the findings have broad implications for FF smoke exposure
146	Youakim, S		Risk of Cancer Among Firefighters: A Quantitative Review of Selected Malignancies	Archives of Environmental & Occupational Health, Sept-Oct 2006	2006 61 (5) 223-231	Critical P	Estimate of the risk of colon, bladder, kidneys, and brain cancers, and non-Hodgkins lymphoma and leukemia, among fire fighters. Results indicate elevated risk exists depending on second, third or fourth decade of fire fighting service.
224	Yves, A		Toxicity of Fire Smoke	Critical Reviews in Toxicology, July-Aug 2002	2002 32 (4) 259-289	Critical EP 30	Describes the major immediate toxic threats in a fire situation, which are CO, a multitude of irritating organic chemicals, O2 depletion, and heat. Certain polymers that have become widespread in buildings in the last 50 years also result in hydrogen cyanide and inorganic acids.
139	Austin, C		Municipal Firefighter Exposures to Toxic Gases and Vapours	Ph.D. Dissertation, Dept. of Occupational Health, Faculty of Medicine, McGill University, Montreal, Quebec, Canada	1997 April 1997	Major EPT 1	Comprehensive overview of respiratory hazards facing municipal fire fighters
127	Austin, CC	Wang, D; Ecobichon, DJ; Dussault, G	Characterization of Volatile Organic Compounds in Smoke at Experimental Fires	Journal of Toxicology and Environmental Health, Part A	2001 63 191-206	Major E 13	Clear analysis of smoke from a series of experimental fires.
128	Austin, CC	Wang, D; Ecobichon, DJ; Dussault, G	Characterization of Volatile Organic Compounds in Smoke at Municipal Structure Fires	Journal of Toxicology and Environmental Health, Part A	2001 63 437-458	Major E 9	Clear analysis of smoke from a series of nine municipal structure fires, when incident still had smoke but when at least some fire fighters had removed respiratory protection.
129	Austin, CC	Goyer, N	Respiratory Protection for Wildland Firefighters - Much Ado About Nothing or Time to Revisit Accepted Thinking?	Poster Session Paper - Wildfire 2007, Seville Spain	2007	Major EPT	Review of the respiratory exposure hazards for wildland fire fighters.
143	Bansemmer, B	Wittbecker, FW	Scientific Methods for the Assessment of Smoke Gas Toxicity in Concrete Risk Solutions	vfdB - Zeitschrift: Forschung, Technik und Management im Brandschutz. Vereinigung zur Forderung des Deutschen Brandschutzes	2007 Aug 08 / 3 133-140	Major E	Provides a scientific assessment of the toxic effect of fire atmospheres based on smoke gas toxicity, and on this basis addresses safety as quantified by the difference between evacuation time and maximum time before escape time becomes untenable.
170	Beaumont, JJ	Chu, GST; Jones, JR; Schenker, MB; Singleton, JA; Piantanida, LG; Reiterman, M	An Epidemiologic Study of Cancer and Other Causes of Mortality in San Francisco Firefighters	American Journal of Industrial Medicine, Mar 1991	1991 19 (3) 357-372	Major P 32	A study of 3,066 San Francisco fire fighters from 1940 to 1970 indicate a higher occurrence of certain types of cancer and other ailments, including cirrhosis and other liver diseases which may be related to alcohol consumption.

Table A-2 Page: 5

Figure A-2 Literature Review, Sorted by Relevance/Author; page 5 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
134	Bledsoe, B		The Perils of CO	FireRescue Magazine	2007 68-73	Major EP	Overview of the effects of CO poisoning for fire fighters exposed to structural fires.
101	Bryant, RA	Butler, K; Vettori, RL; Greenberg, P	Real-Time Particulate Monitoring: Detecting Respiratory Threats for First Responders	White Paper Report; National Institute of Standards and Technology, and NASA Glenn Research Center	2007	Major TE	Explores the use of hand-held direct-reading particulate detectors to provide real-time information to first responders and event commanders.
042	Burgess, JL	Crutchfield, CD	Quantitative respirator fit tests of Tucson fire fighters and measurement of negative pressure excursions during exertion	Applied Occupational and Environmental Hygiene	1995 10 29-36	Major T 5	Focus on face piece leakage for pressure demand self contained breathing apparatus, based on testing done with Tucson Fire Department.
094	Burgess, JL	Anthony, R; Bolstad-Johnson, DM	University of Arizona Filter Study (Fire Fighter Overhaul and Wildland Operations)	Poster Paper, University of Arizona	2007	Major ETP	Intends to address risk assessment of exposures while wearing APRs during overhaul, and provide recommendations for using respirators in overhaul activities.
194	Burgess, JL	Fierro, MA; Lantz, RC; Hysong, TA; Fleming, JE; Gerkin, R; Hnizdo, E; Conley, SM; Klimecki, W	Longitudinal Decline in Lung Function: Evaluation of Interleukin-10 Genetic Polymorphisms in Firefighters	Journal of Occupational and Environmental Medicine, Oct 2004	2004 46 (10) 1013-1022	Major P 3	A study of 1204 fire fighters helps to explain some of the variations in rate of decline in lung function.
015	Burgess, WA	Lynch, JJ; Buchanan, P; Clougherty, E	Minimum protection factors for respiratory protective devices for firefighters	American Industrial Hygiene Journal	1977 38 18-23	Major ET 5	Old study of in fire exposure to CO gas and O2 levels to determine protection factors for respirators
075	Burgess, WA	Treitman, RD; Gold, A	Air Contaminants in Structural Firefighting: A final report prepared for the National Fire Prevention and Control Administration and The Society of the Plastics Industry, Inc.	NFPCA Grant 7X008 and SPI Grant (Fire Ground Survey of Air Contaminants); Harvard School of Public Health, Boston MA	1979 March	Major E 13	Presents data on the airborne concentrations of a series of toxic gases, vapors, and particulates obtained by samplers worn by Boston fire fighters.
164	Burnett, CA	Halperin, WE; Lalich, NR; Sestito, JP	Mortality Among Fire Fighters - A 27 State Survey	American Journal of Industrial Medicine, Dec 1994	1994 26 (6) 831-833	Major P 13	Review of the occupational hazards to fire fighters based on death certificate data.
078	Claudy, WD		Respiratory Hazards of the Fire Service	NFPA	1957	Major TP	Although outdated, very comprehensive, reporting mask and canister workings, usage, and pros and cons, respiration techniques, possible toxic gasses and their health effects, harmful concentrations, and treatment methods. Recommends matching the mask to the man
124	Claudy, WD		Carbon Monoxide in Fire Fighting; Part 1	Firemen	1954 June 1954 12-22	Major EP	Overview of the dangers of CO for fire fighters
125	Claudy, WD		Carbon Monoxide in Fire Fighting; Part 2	Firemen	1954 July 1954 8-9	Major EP	Overview of the dangers of CO for fire fighters
093	Cone, DC	MacMillan, D; Parwani, V; Van Gelder, C	Threats to Life in Residential Structure Fires	Poster Paper, Section of Emergency Medicine, Yale University School of Medicine, New Haven CT	2007	Major PE	In residential structure fires, CO poses a greater threat to life than do either O2 deprivation or heat.

Table A-2 Page: 6

Figure A-2 Literature Review, Sorted by Relevance/Author; page 6 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
130	Coye, MJ		Carbon Monoxide Exposure in Wildland Firefighting	Technical Report No. OSH-92-003; California Occupational Health Program, Berkeley, CA	1992	Major ETP	Field test comparison of three methods of assessing CO exposure to wildland fire fighters.
043	De Vos, AJ	Cook, A; Devine, B; Thompson, PJ; Weinstein, P	Effect of protective filters on fire fighter respiratory health during simulated bushfire smoke exposure	American Journal of Industrial Medicine	2006 49 740-750	Major TEP	The effect of protective filters on the respiratory health of Western Australian urban career fire fighters is investigated under controlled conditions, with results showing filters that protect against particulate/organic vapor/formaldehyde offer significantly better protection than other filter types.
126	Dickinson, ET	Mechem, CC; Thom, SR; Shofer, FS; Band, RA	The Non-Invasive Carboxyhemoglobin Monitoring of Firefighters Engaged in Fire Suppression and Overhaul Operations	International Fire Service Journal of Leadership and Management	2008 2(2)	Major PE	This article is scheduled to be published in 2008, and involves three full sets of data collected on 18 fire fighters to measure COHgb levels.
026	Fabian, TZ	Gandhi, PD	Smoke Characterization Project	Fire Protection Research Foundation	2007	Major ET	Reports smoke composition and material chemistry info for flaming and non-flaming small- intermediate- and large-scale tests of common materials, as well as detector response
081	Fahy, RF	LeBlanc, PR; Molis, JL	Firefighter Fatalities Studies 1977-2006 What's Changed Over the Past Thirty Years	NFPA Journal	2007 July 2007 49-55	Major P	Reviews the trends in FF fatality studies
095	Fahy, RF	LeBlanc, P; Molis, JL	Fire Fighter Fatalities 2006	NFPA Journal	2007 July 2007 58-66	Major P	Reviews the details of FF fatalities in 2006
210	Frankenberg, E	McKee, D; Thomas, D	Health consequences of forest fires in Indonesia	Demography, Feb 2005	2005 42 (1) 109-129	Major E 2	Data from a population-based longitudinal survey with satellite measures of aerosol levels assess the impact of smoke from forest fires that blanketed the Indonesian islands of Kalimantan and Sumatra in late 1997.
149	Golden, AL	Markowitz, SB; Landrigan, PJ	The Risk of Cancer in Firefighters	Occupational Medicine - State of the Art Reviews, Oct-Dec 1995	1995 10 (4) 803-820	Major P 21	An review of the risk of cancer in fire fighters.
179	Gu, TL	Liou, SH; Hsu, CH; Hsu, JC; Wu, TN	Acute Health Hazards of Firefighters After Fighting a Department Store Fire	Industrial Health	1996 34 (1) 13-23	Major P 1	The health of fire fighters is reviewed after a 40 hour department store fire, with the respiratory symptoms of 168 fire fighters collected and measured. The results show that fire fighters are exposed to irritants during fire fighting, which could lead to pulmonary function defects.
047	Guidotti, TL		Human factors in firefighting: ergonomic-, cardiopulmonary-, and psychogenic stress-related issues	International Archives of Occupational and Environmental Health	1992 64 1-12	Major P 18	Correlates many studies to provide a comprehensive look at FF health problems
181	Hansen, ES		A Cohort Study on the Mortality of Firefighters	British Journal of Industrial Medicine, Dec 1990	1990 47 (12) 805-809	Major P 21	A mortality study on fire fighters.
085	Henderson, R		Measurement Techniques for Fuel and VOC Vapors	International Fire Protection	2005	Major E	Expounds on volatile organic combustible detection methods, recommending combination detectors instead of only LEL detectors

Table A-2 Page: 7

Figure A-2 Literature Review, Sorted by Relevance/Author; page 7 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
174	Howe, GR	Burch, JD	Fire Fighters and Risk of Cancer - An Assessment and Overview of the Epidemiological Evidence	American Journal of Epidemiology, Dec 1990	1990 132 (6) 1039-1050	Major P 22	An overview and assessment of cancer risks to fire fighters.
100	Josyula, AB	Kurzius-Spencer, M; Littau, SR; Yucesoy, B; Fleming, J; Burgess, JL	Cytokine Genotype and Phenotype Effects on Lung Function Decline in Firefighters	Journal of Occupational and Environmental Medicine	2007 49 1-7	Major P	Specific medical findings on 67 fire fighters based on four pulmonary function tests.
172	Lees, PSJ		Combustion products and other firefighter exposures	Occupational Medicine - State of the Art Reviews, Oct-Dec 1995	1995 10 (4) 691-706	Major PE 6	Study of combustion products that routinely expose fire fighters.
197	Leonard, SS	Castanova, V; Chen, BT; Schwegler-Berry, D; Hoover, M; Piacitelli, C; Gaughan, DM	Particle Size-Dependent Radical Generation from Wildland Fire Smoke	Toxicology, Jul 1 2007	2007 236 (1-2) 103-113	Major E	A laboratory analysis of wildfire smoke from samples taken in Alaska .
182	Liou, SH	Jacobsonkram, D; Poirier, MC; Nguyen, D; Strickland, PT; Tockman, MS	Biological Monitoring Of Fire Fighters - Sister Chromatid Exchange And Polycyclic Aromatic Hydrocarbon-dna Adducts In Peripheral-Blood Cells	Cancer Research, Sep 1 1989	1989 49 (17) 4929-4935	Major P 66	A review of certain physiological concerns in fire fighters.
104	Liu, D	Tager, LD; Balmes, JR; Harrison, RJ	The Effect of Smoke Inhalation on Lung Function and Airway Responsiveness in Wildland Fire Fighters	The American Review of Respiratory Disease	1992 146(6) 1469-1473	Major P 27	An evaluation of the effect of smoke on forced airway expiratory volumes and airway responsiveness as measured in 63 wildland fire fighters during a single fire season.
076	Lowry, WT	Juarez, L; Petty, CS; Roberts, B	Studies of toxic gas production during actual structural fires in the Dallas area	Journal of Forensic Science	1985 30 59-72	Major E 13	The potential toxicity's of gases produced during 72 residential structural fires is studied, and the results indicate that carbon monoxide was the only gas measured in concentrations considered to be lethal.
225	Materna, BL	Koshland, CP; Harrison, RJ	Carbon monoxide exposure in wildland firefighting: A comparison of monitoring methods	Applied Occupational & Environmental Hygiene	1993 8 (5) 479-487	Major ET 2	Three methods of measuring CO for wildland fire fighters are compared.
157	Melius, J		Occupational Health for Firefighters	Occupational Medicine - State of the Art Reviews, Jan-Mar 2001	2001 16 (1) 101-108	Major P 5	A review of the risk of coronary heart disease and pulmonary function in fire fighters.
171	Moen, BE	Ovrebo, S	Assessment of exposure to polycyclic aromatic hydrocarbons during firefighting by measurement of urinary 1-hydroxypyrene	Journal of Occupational and Environmental Medicine, Jun 1997	1997 39 (6) 515-519	Major PE 12	A study indicates that based on urine samples fire fighters are exposed to polycyclic aromatic hydrocarbons.
207	Naeher, LP	Achtemeier, GL; Glitzenstein, JS; Streng, DR; Macintosh, D	Real-time and time-integrated PM2.5 and CO from prescribed burns in chipped and non-chipped plots: firefighter and community exposure and health implications	Journal of Exposure Science and Environmental Epidemiology, Jul 2006	2006 16 (4) 351-361	Major EP 1	Smoke data collected from prescribed burns in South Carolina are analyzed for a chipped plot and a non-chipped plot, showing that respiratory exposure to wildland fire fighters is significantly lower for chipped plots.

Table A-2 Page: 8

Figure A-2 Literature Review, Sorted by Relevance/Author; page 8 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
211	Naehler, LP	Carlton, C; MacIntosh, D	Respiratory function and PM2.5 exposure in a cohort of forest firefighters doing prescribed forest burns in the southeastern United States	Epidemiology, Jul 2004	2004 15 (4) S47-S48	Major E	Data for prescribed burns in the Southeastern U.S. is analyzed.
142	NIOSH		Fire Fighter Dies After Performing Overhaul at a Fire in a Three-Story Dwelling – Pennsylvania	Fatality Assessment and Control Evaluation Investigative Report #F2006-09. U. S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, NIOSH, 4676 Columbia Parkway, MS C-13, Cincinnati, OH 45226 1998	2006 F2006-09	Major EPT	Provides a case study of a fire fighter Line of Duty Death (LODD) that occurred during overhaul not caused by any sudden external event (e.g., fall, structural collapse, electrocution, etc), as investigated by the National Institute for Occupational Safety and Health (NIOSH).
175	Rosenstock, L	Demers, P; Heyer, NJ; Barnhart, S	Respiratory Mortality Among Firefighters	British Journal of Industrial Medicine, Jul 1990	1990 47 (6) 462-465	Major P 15	A review of mortality of fire fighters related to respiratory concerns.
184	Rosenstock, L	Olsen, J	Firefighting and Death from Cardiovascular Causes	New England Journal of Medicine, Mar 22 2007	2007 356 (12) 1261-1263	Major P	Review of cardiovascular risks for fire fighters.
167	Sama, SR	Martin, TR; Davis, LK; Kriebel, D	Cancer Incidence Among Massachusetts Firefighters, 1982-1986	American Journal of Industrial Medicine	1990 18 (1) 47-54	Major P 26	A review of cancer incidence among fire fighters in Massachusetts from 1982 to 1986.
158	Scannell, CH	Balmes, JR	Pulmonary Effects of Firefighting	Occupational Medicine-State of the Art Reviews, Oct-Dec 1995	1995 10 (4) 789-801	Major P 6	A review of the health hazards to fire fighters due to smoke inhalation and exposure to contaminants.
212	Schollnberger, H	Aden, J; Scott, BR	Respiratory tract deposition efficiencies: Evaluation of effects from smoke released in the Cerro Grande Forest Fire	Journal of Aerosol Medicine- Deposition Clearance and Effects in the Lung	2002 15 (4) 387-399	Major EP 1	Health effects from the May 2000 wildfire in Northern New Mexico known as the Cerro Grande Forest Fire.
187	Sjogren, B	Johanson, G	Mortality in Florida Professional Firefighters, 1972-1999	American Journal of Industrial Medicine, Feb 2006	2006 49 (2) 138-140	Major P	A review of mortality among fire fighters in Florida from 1972 until 1999.
006	Slaughter, JC	Koenig, JQ; Reinhardt, TE	Association between lung function and exposure to smoke among firefighters at prescribed burns	Journal of Occupational and Environmental Hygiene	2004 1 45-49	Major PE 7	Study reporting changes in FF spirometry as a result of exposure to known quantities of fire products, as well as over the course of a shift
067	Smith, DL	Petruzzello, SJ	Selected physiological and psychological responses to live-fire drills in different configurations of firefighting gear	Ergonomics	1998 41/8 1141-1154	Major TPE 11	An examination of multiple live fire training situations to compare selected physiological and psychological responses based on different configurations of fire fighting gear.
068	Smith, DL	Petruzzello, SJ; Kramer, JM; Misner, JE	The effects of different thermal environments on the physiological and psychological responses of firefighters to a training drill	Ergonomics	1997 40/4 500-510	Major P 23	An examination of selected responses to fire fighters in training drills in different thermal environments, which shows an increased cardiovascular and psychological strain at a standardized workload.

Table A-2 Page: 9

Figure A-2 Literature Review, Sorted by Relevance/Author; page 9 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Relevance/		Notes
					Volume/ Pages	Category/ # Citations	
190	Stefanidou, M	Athanaselis, S	Toxicological Aspects of Fire	Veterinary and Human Toxicology, Aug 2004	2004	Major	A review of the toxicology of the toxic substances in fires and the specific chemical hazards to fire fighters.
					46 (4)	EP	
					196-199	2	
109	Varone, JC		Cyanide Poisoning: How Much of a Threat?	Fire Engineering	2006	Major	Overview of the Providence Fire Department Study on Cyanide Poisoning of fire fighters.
					Sept 2006	PET	
					61-69		
183	Vena, JE	Fiedler, RC	Mortality of a Municipal Worker Cohort: Fire Fighters	American Journal of Industrial Medicine	1987	Major	A cohort study of mortality rates for fire fighters.
					11 (6)	P	
					671-684	39	
086	Wrenn, C		PIDs as a HazMat Response Tool	International Fire Protection	2003	Major	Recommends using photoionization detectors for emergency response
					14	T	
						2	
091	Yue	Hartley, T; Cunnigham, D; Jones, RL; Petersen, SR; Vethanayagam, D	Lung Function and Airway Inflammation Firefighting Trainees Following Live-Fire Exercises	American Journal of Respiratory and Critical Care Medicine	2007	Major	Nineteen healthy non-smoking fire fighter trainees were measured for various respiratory function over a 12 week period, and results showed significant alterations in pulmonary function and venous CO levels during live-fire training.
					175	P	
					A805		
097	Anderson, DO	Webb, TL	Fire Fighters Health and Safety During Overhaul Operations	Occupational Health and Safety	1997	Minor	Overview of health and safety issues facing fire fighters during overhaul operations.
					66(8)	PET	
					44-45		
117	Augustine, J	Walsh, DW	Smoke Associated Cyanide Exposure: The Importance of Prompt Recognition and Protocols for Prehospital Treatment	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstandings		Minor	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
					159(8)	EP	
138	Austin, C	Dussault, G	Toxic Risk Assessment for Fire Fighters	Paper Presented at NFPA World Safety Congress and Exposition	2003	Minor	Applicable information; however, this is only available as a set of power point slides and not as a full paper.
						PE	
206	Banauch, GI	Hall, C; Weiden, M; Cohen, HW; Aldrich, TK; Christodoulou, V; Arcentales, N; Kelly, KJ; Prezant, DJ	Pulmonary function after exposure to the World Trade Center collapse in the New York City Fire Department	American Journal of Respiratory and Critical Care Medicine, Aug 1 2006	2006	Minor	A study to quantify the respiratory health effects of WTC exposure in the NEW York City Fire Department, involving 12, 079 fire fighters.
					174 (3)	P	
					312-319	8	
108	Bergstrom, CE	Tomling, G; Unge, G	Acquired Progressive Asthma in a Fire Fighter	The European Respiratory Journal; Official Journal of the European Society for Clinical Respiratory Physiology	1988	Minor	Physiological discussion of a fire fighter who developed severe asthma after exposure to decomposition products of plastics during routine fire fighting.
					1(5)	P	
					469-470	6	
039	Bernard, A	Hermans, C; Van Houte, G	Transient increase of serum Clara cell protein (CC16) after exposure to smoke	Occupational and Environmental Medicine	1997	Minor	Study to evaluate whether toxic effects of smoke on the respiratory tract can be detected by measuring Clara cell protein (CC16), a described serum marker of lung function.
					54	P	
					63-65	30	
040	Betchley, C	Koenig, JQ; van Belle, G; Checkoway, H; Reinhardt, T	Pulmonary function and respiratory symptoms in forest firefighters	American Journal of Industrial Medicine	1997	Minor	Evaluates the effects of respiratory health of forest fire fighters exposed to high concentrations of smoke during their work shifts.
					31	P	
					503-509	22	
195	Burgess, JL	Witten, ML; Nanson, CJ; Hysong, TA; Sherrill, DL; Quan, SF; Gerkin, R; Bernard, AM	Serum Pneumoproteins: A Cross-Sectional Comparison of Firefighters and Police	American Journal of Industrial Medicine, Sep 2003	2003	Minor	A cross-sectional study of 105 fire fighters and 44 police show no significant difference based on certain physiological measurements.
					44 (3)	P	
					246-253	4	

Table A-2 Page: 10

Figure A-2 Literature Review, Sorted by Relevance/Author; page 10 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
203	Buyantseva, LV	Tulchinsky, M; Kapalka, GM; Chinchilli, VM; Qian, Z; Gillio, R; Roberts, A; Bascom, R	Evolution of Lower Respiratory Symptoms in New York Police Officers After 9/11: A Prospective Longitudinal Study	Journal of Occupational and Environmental Medicine, Mar 2007	2007 49 (3) 310-317	Minor P	A study of 1588 New York police officers to examine lower respiratory symptoms as a result of the WTC collapse.
021	CDC		Interim Domestic Guidance on the Use of Respirators to Prevent Transmission of SARS	CDC webpage: www.cdc.gov/ncidod/sars	2003	Minor TP	Describes respirator practices used in the health industry that are potentially applicable to FFs
204	Cha, SI	Kim, CH; Lee, JH; Park, JY; Jung, TH; Choi, WI; Han, SB; Jeon, YJ; Shin, KC; Chung, JH; Lee, KH; Kim, YJ; Lee, BK	Isolated smoke inhalation injuries: Acute respiratory dysfunction, clinical outcomes, and short-term evolution of pulmonary functions with the effects of steroids	Burns, Mar 2007	2007 33 (2) 200-208	Minor P	A review of the respiratory injuries experienced by 96 survivors of a subway fire that caused smoke inhalation injuries.
178	Choi, BCK		Mathematical Procedure to Adjust for the Healthy Worker Effect: The Case of Firefighting, Diabetes, and Heart Disease	Journal of Occupational and Environmental Medicine, Dec 2001	2001 43 (12) 1057-1063	Minor P 3	A mathematical procedure is provided to adjust for one component of the healthy worker effect (HWE) on diabetes involving fire fighters and heart disease.
122	Clark, S	Rene, A; Theurer, WM; Marshall, M	Association of Body Mass Index and Health Status in Firefighters	Journal of Occupational and Environmental Medicine	2002 22(10) 940-946	Minor P 10	Review of how body mass index relates to the health of fire fighters.
071	Commins, BT		Formation of Polycyclic Aromatic Hydrocarbons during Pyrolysis and Combustion of Hydrocarbons	Atmosphere and Environment	1969 3 65-77	Minor E 6	Discusses the effect of variations in mixture strength of a combination of fuel vapour and air on the production of polycyclic aromatic hydrocarbons.
092	Cone, DC	MacMillan, DS; Van Gelder, C; Brown, DJ; Weir, SD; Bogucki, S	Noninvasive Fireground Assessment of Carboxyhemoglobin Levels in Firefighters	Prehospital Emergency Care	2005 9 8-13	Minor P	A hand-held CO monitoring device adapted for estimation of COHb levels by exhaled breath analysis can feasibly be deployed on the fireground to assess CO exposure in fire fighters.
113	Costa, DD		Foreword: Smoke - Perceptions, Myths, and Misunderstanings	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstanings	159(8) 2-3	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
110	Donahue, ML		Occupational Safety and Health Programs for Fire Investigators	Fire Engineering	2006 June 2006 93-97	Minor PE	Overview article with focus on need for fire investigators to wear respiratory protection.
111	Donahue, ML		Fire Scene Investigation: A "Cause" for Concern?	Fire Engineering	2004 June 2004 1	Minor TE	General focus on fire investigators who face increasingly dangerous environments while conducting fire scene investigations, with an overview of available respiratory protective equipment.
044	Douglas, DB	Douglas, RB; Oakes, D; Scott, G	Pulmonary function of London firemen	British Journal of Industrial Medicine	1985 42 55-58	Minor P 13	A longitudinal study of 895 London fire fighters who had pulmonary function measured over a one year period, with a result that respiratory symptoms were more prevalent in fire fighters who were smokers than in fire fighters who were non-smokers.
213	Dreger, RW	Jones, RL; Peterson, SR	Effects of the self-contained breathing apparatus and fire protective clothing on maximal oxygen uptake	Ergonomics, Aug 15 2006	2006 49 (10) 911-920	Minor P 2	An investigation on 12 fire fighters demonstrates that PPE and SCBA have a negative impact on VO2max.

Table A-2 Page: 11

Figure A-2 Literature Review, Sorted by Relevance/Author; page 11 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
096	Durstenfeld, B		Detecting Unseen Threats in First Response	Fire & Safety Magazine	2007 Spring 66-67	Minor T	
185	Elliot, DL	Goldberg, L; Kuehl, KS; Moe, EL; Breger, RKR; Pickering, MA	The PHLAME (Promoting Healthy Lifestyles: Alternative Models' Effects) Firefighter Study: Outcomes Of Two Models Of Behavior Change	Journal of Occupational and Environmental Medicine, Feb 2007	2007 49 (2) 204-213	Minor P	An approach to promote healthy lifestyles as applied to fire fighters.
216	Eves, ND	Petersen, SR; Jones, RL	Submaximal exercise with self-contained breathing apparatus: The effects of hyperoxia and inspired gas density	Aviation Space and Environmental Medicine, Oct 2003	2003 74 (10) 1040-1047	Minor TP 3	Test on fire fighters using SCBAs demonstrate that helium-based gas mixtures, and to a lesser extent HOX, reduce the expiratory work associated with the SCBA during strenuous exercise.
118	Fortin, JL	Waroux, S; Arvis, AM; Giocanti, JP; Fuilla, C; Walsh, D; Ruttimann, M; Eckstein, M	Acute Cyanide Poisoning: A Paris Firefighter Recovers from Severe Smoke Inhalation	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstanings	159(8)	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
133	Fuerbringer, B		Toxic Atmospheres Created Through the Process of Combustion and the Associated Implications to Fire Fighters	EFO Paper, National Fire Academy, Emmitsburg, MD (Eau Claire WI FD)	1993 Nov 1993	Minor E	This paper was written to fulfill the requirements of the National Fire Academy's Executive Development Course. It provides a review of toxicants that typically expose fire fighters at structure fires.
115	Gagliano, M	Phillips, C; Jose, P; Bernocco, S	Air Management on the Fireground: The need, The Mandate, The Solution	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstanings	159(8) 9-12	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
098	Gann, RG	Averill, JD; Butler, KM; Jones, WW; Mulholland, GW; Neviasser, JL; Ohlemiller, TJ; Peacock RD; Reneke, PA; Hall, JR	International Study of the Sub-lethal Effects of Fire Smoke on Survivability and Health: Phase I	Fire Protection Research Foundation	2001	Minor E 7	Estimates the magnitude and impact of sub-lethal exposures to fire smoke on the US population.
099	Gann, RG	Averill, JD; Johnsson, EL; Nyden, MR; Peacock RD	International Study of the Sub-lethal Effects of Fire Smoke on Survivability and Health: Phase II	Fire Protection Research Foundation	2003	Minor E 7	Presents a methodology for and the results of a series of room-scale fire tests to produce data on the yields of toxic products in both pre-flashover and post-flashover fires.
226	Gann, RG		Estimating Data for Incapacitation of People by Fire Smoke	Fire Technology, Cot 28 2004	2004 40 (2) 201-207	Minor PE 2	Fire hazard and risk analyses establish the basis for providing conditions of safety for people, including those that are more sensitive to fire smoke than others.
189	Garver, JN	Jankovitz, KZ; Danks, JM; Fittz, AA; Smith, HS; Davis, SC	Physical Fitness of an Industrial Fire Department vs. a Municipal Fire Department	Journal of Strength and Conditioning Research, May 2005	2005 19 (2) 310-317	Minor P	Results of comparative physiological tests of a Industrial Fire Department and a nearby Municipal Fire Department showed that they have similar strength and conditioning characteristics.
209	Gavett, SH		Physical characteristics and health effects of aerosols from collapsed buildings	Journal of Aerosol Medicine-Deposition Clearance and Effects in the Lung, Spring 2006	2006 19 (1) 84-91	Minor P 1	A review of physical characteristics and health effects of major pollutants derived from the collapse of the WTC towers, to assist in risk assessment efforts related to the collapse of large buildings.
080	Giacomo, G		Joint Study Offers New Look at Smoke	California Fire Service Magazine	2007	Minor E	Summarizes the Smoke Characterization Report by FPRF

Table A-2 Page: 12

Figure A-2 Literature Review, Sorted by Relevance/Author; page 12 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
048	Guidotti, TL		Occupational mortality among firefighters: assessing the association	Journal of Occupational and Environmental Medicine	1995 37 (12) 1348-1356	Minor P 26	Correlates mortality risks for different causes among fire fighters.
166	Guidotti, TL	Clough, VM	Occupational Health Concerns of Firefighting	Annual Review of Public Health	1992 13 151-171	Minor P 19	A review of short-term physiological responses to exposed fire fighters.
049	Harrison, R	Materna, BL; Rothman, N	Respiratory health hazards and lung function in wildland firefighters	Occupational Medicine	1995 10(4) 857-870	Minor E 7	Detailed overview of the pulmonary hazards that wildland fire fighters are routinely exposed to.
050	Hartzell, GE	Packham, SC; Switzer, WG	Toxic products from fire	American Industrial Hygiene Journal	1983 44 248-255	Minor EP	Discusses toxicological effects of common fire products and methods for determining the toxic effects of burning a given material
105	Heineman, EF	Shy, CM; Checkoway, H	Injuries on the Fireground: Risk Factors for Traumatic Injuries Among Professional Fire Fighters	American Journal of Industrial Medicine	1989 15(3) 267-282	Minor P 12	Study on an urban fire department to evaluate the effect of SCBA and other risk factors on injuries involving smoke inhalation, burns and falls.
102	Herbert, JL		Structure Fire Overhaul: Respiratory Hazards and Personal Protective Equipment	Unpublished Paper for Graduate School at Arizona State University	2007	Minor PET	Overview of respiratory hazards to fire fighters involved with overhaul.
205	Herbert, R	Moline, J; Skloot, G; Metzger, K; Baron, S; Luft, B; Markowitz, S; Udasin, I; Harrison, D; Stein, D; Todd, A; Enright, P; Stellman, JM; Lnadrigan, PJ; Levin, SM	The World Trade Center disaster and the health of workers: Five-year assessment of a unique medical screening program	Environmental Health Perspectives, Dec 2006	2006 114 (2) 1853-1858	Minor P 1	Assessment of the approximate 40,000 WTC rescue workers five years after the event.
186	Holder, JD	Stallings, LA; Peeples, L; Burress, JW; Kales, SN	Firefighter Heart Presumption Retirements in Massachusetts: 1997-2004	Journal of Occupational and Environmental Medicine, Oct 2006	2006 48 (10) 1047-1053	Minor P 2	A retrospective study of Massachusetts fire fighters retiring with heart disability awards, based on 362 retired fire fighters compared to 310 active professional fire fighters during the period 1997 to 2004. The result call for improved cardiovascular prevention for fire fighters.
192	Holmer, I	Gavhed, D	Classification of Metabolic and Respiratory Demands in Fire Fighting Activity with Extreme Workloads	Applied Ergonomics, Jan 2007	2007 38 (1) 45-52	Minor P 3	Measurements of metabolic and respiratory responses in 15 male professional fire fighters under extreme workloads.
160	Hong, YC	Parks, HS; Ha, EH	Influence of Genetic Susceptibility on the Urinary Excretion of 8-hydroxydeoxyguanosine of Firefighters	Occupational and Environmental Medicine, Jun 2000	2000 57 (6) 370-375	Minor P 18	Carcinogen measurements of 53 fire fighters exposed to fire within 5 days of the study as compared to 25 who were not, indicates a possible genetic susceptibility to those fire fighters who were exposed.
051	Horsfield, K	Guyatt, AR; Cooper, FM; Buckman, M; Cumming, M	Lung function in west Sussex firemen: a four year study	British Journal of Industrial Medicine	1988 45 116-121	Minor P 6	The lung function of 96 fire fighters and 69 non-fire fighters in a control group were measured over a four year period, which show no evidence of chronic lung damage in the fire fighters.
052	Ide, CW		A longitudinal survey of the evolution of some cardiovascular risk factors during the careers of male firefighters retiring from Strathclyde Fire Brigade from 1985-1994	Scottish Medical Journal	2000	Minor P 8	Review of medical issues relating to cardiovascular concerns in fire fighters

Table A-2 Page: 13

Figure A-2 Literature Review, Sorted by Relevance/Author; page 13 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
144	ISO		ISO 13571, Life-threatening components of fire - Guidelines for the estimation of time available for escape using fire data	International Standard ISO 13571, First Edition	2007 2007-06	Minor E	Describes a methodology that provides a framework for use in estimating the time available for escape based on, among other factors, inhalation of asphyxiant gases and exposure to sensory/upper-respiratory irritants.
132	Jarboe, TL		An Examination of Toxicity Hazards Associated with the Burning of Materials Commonly Encountered by Firefighters	EFO Paper, National Fire Academy, Emmitsburg, MD (Montgomery County MD FD)	1995 Feb 1995	Minor E	This paper was written to fulfill the requirements of the National Fire Academy's Executive Development Course. It provides a review of toxicants that typically expose fire fighters at structure fires.
116	Jose, P	Bernocco, S; Gagliano, M; Phillips, C	Fire Overhaul, Rehab, and a Comprehensive Respiratory Protection Program	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstandings	159(8) 12-15	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
017	Kales, SN	Soteriades, ES; Christoudias, SG; Christiani, DC	Firefighters and on-duty deaths from coronary heart disease: a case control study	Environmental Health	2003 2 14	Minor P 11	Case control study on coronary heart disease in FFs, concludes regular exercise is good, especially for FFs
045	Kales, SN	Poltronopoulos, GN; Aldrich, JM; Leitao, EO; Christiani, DC	Correlates of Body Mass Index in Hazardous Materials Firefighters	Journal of Occupational and Environmental Medicine	1999 41 589-595	Minor P 14	Review of 340 HazMat fire fighters to clarify certain parameters to body mass index.
053	Kales, SN	Christiani, DC	Cardiovascular fitness in firefighters	Journal of Occupational and Environmental Medicine	2000 42 467-468	Minor P 7	Letter to the Editor that discusses medical respiratory exposure concerns with fire fighters
027	Karter, MJ		Patterns of Firefighter fireground injuries	NFPA	2007 1-26	Minor P 10	Statistics on FF injuries across the country
223	Kern, DG	Neill, MA; Wrenn, DS; Varone, JC	Investigation of a unique time-space cluster of sarcoidosis in firefighters	American Review of Respiratory Distress, Oct 1993	1993 4 (1) 974-980	Minor P 44	A review of 1,282 active and retired fire fighters and police officers in Providence RI to clarify cases of sarcoidosis, suggesting that firefighters may be at risk of T lymphocyte activation.
191	Lalic, H	Bukmir, L; Ferhatovic, M	Simulation of Working Conditions by Maximum Work Load on Firefighters	Collegium Antropologicum, Mar 2007	2007 31 (1) 153-158	Minor P	Various physical tests and physiological measurements of Croatian fire fighters to determine if manpower is adequate to the requirements in the field under the most severe conditions.
201	Lalic, H	Bukmir, L; Ferhatovic, M	Simulation of Working Conditions by Maximum Work Load on Firefighters	Collegium Antropologicum, Mar 2007	2007 31 (1) 153-158	Minor P	A study to find out whether the firefighter manpower is adequate to the requirements in the field under the most severe conditions.
018	Lemon, PW	Hermiston, RT	Physiological profile of professional fire fighters	Journal of Occupational Medicine	1977 19 337-340	Minor P 16	Study on FF health in the 1970s in Ontario, data is old enough that numbers have probably changed for the average North American
198	Lin, S	Jones, R; Reibman, J; Bowers, J; Fitzgerald, EF; Hwang, SA	Reported Respiratory Symptoms and Adverse Home Conditions After 9/11 Among Residents Living Near the World Trade Center	Journal of Asthma	2007 44 (4) 325-332	Minor P	Survey of residents near WTC investigates respiratory symptoms.
103	Magnetti, SM	Wyant, WD; Greenwood, J; Roder, NJ; Linton, JC; Ducatman, AM	Injuries to Volunteer Fire Fighters in West Virginia	Journal of Occupational and Environmental Medicine	1999 41(2) 104-110	Minor P 1	The distribution and characteristics of workplace injuries for West Virginia volunteer fire fighters are analyzed using 1992 workers compensation data.

Table A-2 Page: 14

Figure A-2 Literature Review, Sorted by Relevance/Author; page 14 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
057	Manning, J	Griggs, T	Heart rates of firefighters using light and heavy breathing equipment: similar near maximal exertion in response to multiple work load condition	Journal of Occupational Medicine	1983 25 215-218	Minor P 26	Study measures the exertion levels that fire fighters attain when using (1) no SCBA, (2) light SCBA, and (3) heavy SCBA.
079	Martyny, J	Glazer, CS; Newman, LS	Respiratory Protection	New England Journal of Medicine	2002 347 824-830	Minor TPE	Reviews the current technology and practice for modern respirator protection
180	McDiarmid, MA	Agnew, J	Reproductive Hazards and Firefighters	Occupational Medicine - State of the Art Reviews, Oct-Dec 1995	1995 10 (4) 829-841	Minor P 1	An overview of reproductive hazards and occupational exposure for fire fighters.
193	McFadden, D	Kub, J; Fitzgerald, S	Occupational Health Hazards to First Responders from Clandestine Methamphetamine Labs	Journal of Addictions Nursing, Fall 2006	2006 17 (3) 169-173	Minor P	The possible toxic hazards of a clandestine methamphetamine labs to fire fighters and other emergency responders.
196	Mendelson, DS	Roggeveen, M; Levin, SM; Herbert, R; de la Hoz, RE	Air Trapping Detected on End-Expiratory High-Resolution Computed Tomography in Symptomatic World Trade Center Rescue and Recovery Workers	Journal of Occupational and Environmental Medicine, Aug 2007	2007 49 (8) 840-845	Minor PE	A physiological evaluation of 29 WTC workers with lower respiratory symptoms.
199	Miedinger, D	Chhajed, PN; Tamm, M; Stolz, D; Surber, C; Leuppi, D	Diagnostic Tests for Asthma in Firefighters	Chest, Jun 2007	2007 131 (6) 1760-1767	Minor P	A study of 101 fire fighters in Basil, Switzerland to better clarify diagnostic testing for asthma.
215	Mier, CM	Gibson, AL	Evaluation of a treadmill test for predicting the aerobic capacity of firefighters	Occupational Medicine - Oxford, Sep 2004	2004 54 (6) 373-378	Minor P 1	The evaluation of a treadmill test for predicting the aerobic capacity of firefighters.
058	Minty, BD	Royston, D; Jones, JG; Smith, DJ; Searing, CSM; Beeley, M	Changes in permeability of the alveolar-capillary barrier in firefighters	British Journal of Industrial Medicine	1985 42 631-637	Minor P 4	A review of lung function based on tests of airway function and carbon monoxide transfer factor performed on seven instructors at the Royal Navy Firefighting School.
059	Morgan, WP	Raven, PB	Prediction of distress for individuals wearing industrial respirators	American Industrial Hygiene Journal	1985 46 363-368	Minor P 13	An investigation of the ability to predict respiratory distress from heavy physical work while wearing an industrial respirator.
202	Morren, M	Dirkzwager, AJE; Kessels, FJM; Yzermans, CJ	The influence of a Disaster on the Health of Rescue Workers: a Longitudinal Study	Canadian Medical Association Journal, Apr 24 2007	2007 176 (9) 1279-1283	Minor P 1	A four year longitudinal study of 1403 rescue workers in the Netherlands following a fireworks depot explosion, showing that sick leave increased substantially in the subsequent 18 months based on a range of ailments.
106	Mosian, TC		Prolonged Asthma After Smoke Inhalation: A Report on Three Cases and a Review of Previous Reports.	Journal of Occupational Medicine	1991 33(4) 458-461	Minor P 17	A review of three cases of asthma that developed following inhalation of pyrolysis products.
188	Nagaya, T	Yoshida, H; Takahashi, H; Kawai, M	Policemen and Firefighters Have Increased Risk for Type -2 Diabetes Mellitus Probably Due to their Large Body Mass Index: A Follow-Up Study in Japanese Men	American Journal of Industrial Medicine, Jan 2006	2006 49 (1) 30-35	Minor P 1	A comparison of health related issues between 897 police and fire fighters in Japan as compared to a control group of 5,130 Japanese men, with a focus on Type-2 diabetes.

Table A-2 Page: 15

Figure A-2 Literature Review, Sorted by Relevance/Author; page 15 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
060	Nelson, GL		Regulatory aspects of fire toxicology	Toxicology	1987 47 181-199	Minor E 2	Overview of the characteristics of smoke from structural fires.
228	New Jersey Dept. of Community Affairs, Division of Fire Safety		"Firefighter Receives Severe Respiratory Injuries While Operating at a Structure Fire, North Bergen NJ, Oct 24 2004" (website: http://www.state.nj.us/dca/dfs/nohudsoninjuryrpt.doc)	Firefighter Fatality and Serious Injury Report Series; New Jersey Division of Fire Safety; Feb 9, 2007	2007 1-28	Minor PET	Report of a firefighter seriously injured at a fire due to respiratory exposure.
230	Pace, TG	Battye, W, Battye, R.	Development of Emissions Inventory Methods for Wildland Fire; EPA Contract 68-D-98-046; Work Assignment 5-03	U.S. EPA; U.S. Environmental Protection Agency, Research Triangle Park, NC	2002 Feb 2002 1-91	Minor E	Development of a method for characterizing and taking an inventory of the atmosphere generated by wildland fires.
019	Peters, JM	Therault, GP; Fine, LJ; Wegman, DH	Chronic effect of fire fighting on pulmonary function	New England Journal of Medicine	1974 291 1320-1322	Minor P 18	Thirty year old spirometry data from study of Boston FF 1-year follow up
227	Public Employees Occupational Safety and Health Program (PEOSH)		Subchapter 10. Standards for Firefighters; PEOSH Firefighter Standards; (website: http://www.nj.gov/health/ech/peoshweb/ff_standards.pdf)	New Jersey Department of Health and Senior Services; Division of Epidemiology, Environmental and Occupational Health; Occupational Health Service	2007 1-10	Minor PTE	Provides model requirements in the state of New Jersey for organization, training and personal protective equipment for fire fighters
177	Raymond, LW	Guidotti, TL; Rosenman, KD	Diabetic Firefighters	Journal of Occupational and Environmental Medicine, Jun 2002	2002 44 (6) 492-494	Minor P	Overview of heart disease and mortality concerns involving diabetic fire fighters.
072	Reed, MD	Gigliotti, AP; McDonald, JD; Seagrave, JC; Seilkop, SK; Mauderly, JL	Health Effects of Subchronic Exposure to Environmental Levels of Diesel Exhaust	Inhalation Toxicology	2004 16 177-193	Minor P 16	Review of the physiological impact on humans of diesel exhaust.
063	Romet, TT	Frim, J	Physiological responses to fire fighting activities	European Journal of Applied Physiology	1987 56 633-638	Minor P 28	Measurement of heat strain to eight professional fire fighters.
218	Samo, DG	Bahk, JK; Gerkin, RD	Effect of firefighter masks on monocular and binocular peripheral vision	Journal of Occupational and Environmental Medicine, Apr 2003	2003 45 (4) 428-432	Minor T 1	A study of SCBA masks indicates that they have an average loss of 28 degrees of peripheral vision.
112	Schnepf, R		Reading Smoke is One Thing - Breathing It Is Completely Different	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstandings	159(8)	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
217	Selkirk, GA	McLellan, TM	Physical work limits for Toronto firefighters in warm environments	Journal of Occupational and Environmental Hygiene, Apr 2004	2004 1 (4) 199-212	Minor PT 3	Thirty-seven Toronto fire fighters are measured for various physiological affects while wearing SCBA under different environmental conditions.
065	Sidor, R	Peters, JM	Prevalence rates of chronic non-specific respiratory disease in fire fighters	American Review of Respiratory Diseases	1974 109 255-261	Minor P 7	A cross-sectional study of the prevalence of chronic nonspecific respiratory disease in 1,768 Boston fire fighters based on various respiratory tests.
066	Sidor, R	Peters, JM	Fire fighting and pulmonary function: An epidemiologic study	American Review of Respiratory Diseases	1974 109 249-254	Minor P 6	An epidemiologic study of 1,768 Boston fire fighters was done to determine their effects of exposure to combustion products.

Table A-2 Page: 16

Figure A-2 Literature Review, Sorted by Relevance/Author; page 16 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
123	Sidor, R	Peterson, NH; Burgess, WA	A Carbon Monoxide-Oxygen Sampler for Evaluation of Fire Fighter Exposures	American Industrial Hygiene Association Journal	1973 34(6) 264-274	Minor T	Addresses the development and analysis of a self-contained personal sampler for monitoring fire fighter exposure to carbon monoxide and oxygen in actual fires.
020	Soteriades, ES	Hauser, R; Kawachi, I; Liarokapis, D; Christiani, DC; Kales, SN	Obesity and cardiovascular disease risk factors in firefighters: a prospective cohort study	Obesity Research	2005 13 1756-1763	Minor P 4	FFs are overweight, getting fatter, and don't have, but need, regular health and exercise programs doesn't address respiratory issues
121	Soteriades, ES	Kales, SN; Liarokapis, D; Christoudias, SG; Tucker, SA; Christiani, DC	Lipid Profile of Firefighters Over Time: Opportunities for Prevention	Journal of Occupational and Environmental Medicine	2002 44(9) 840-846	Minor P 7	Review of medical conditions of fire fighters over time relating to heart disease.
069	Sothmann, M	Saupe, K; Jasenof, D; Blaney, J	Heart rate response of firefighters to actual emergencies	Journal of Occupational Medicine	1992 34(8) 797-800	Minor P 25	Ten male fire fighters are measured for heart rate and oxygen consumption during actual fire suppression emergencies.
070	Sothmann, M	Saupe, K; Raven, P; Pawelczyk, J; Davis, P; Dotson, C; Landy, F; Siliunas, M	Oxygen consumption during fire suppression: error of heart rate estimation	Ergonomics	1991 34 1469-1474	Minor P 11	Physiological test of 10 fire fighters to clarify the relationship of heart rate to oxygen consumption.
200	Tak, S	Bernard, BP; Driscoll, RJ; Dowell, CH	Floodwater Exposure and the Related Health Symptoms Among Firefighters in New Orleans, Louisiana 2005	American Journal of Industrial Medicine, May 2007	2007 50 (5) 377-382	Minor P	Health evaluation of New Orleans fire fighters following Hurricane Katrina.
073	Tesfaigzi, Y	Singh, SP; Foster, JE; Kubatko, J; Barr, EB; Fine, PM; McDonald, JD; Hahn, FF; Mauderly, JL	Health Effects of Subchronic Exposure to Low Levels of Wood Smoke in Rats	Toxicological Sciences	2002 65 115-125	Minor P 19	Review of the hazards of wood smoke and the possible physiological effect on humans based on tests with rats.
214	von Heimburg, ED	Rasmussen, AKR; Medbo, JI	Physiological responses of firefighters and performance predictors during a simulated rescue of hospital patients	Ergonomics, Feb 10 2006	2006 49 (2) 111-126	Minor P	Physiological measurement of fire fighters under working conditions during a simulated hospital evacuation
150	Wallace, M		First Breath	Fire Chief, Oct 1 2007	2007 52-58	Minor E	Overview of history of SCBA and other respiratory equipment.
114	Walsh, DW		Hydrogen Cyanide: In Fire Smoke	Fire Engineering Supplement: Smoke - Perceptions, Myths, and Misunderstanings	159(8) 4-8	Minor EP	Part of a special supplement in Fire Engineering on the dangers of Hydrogen Cyanide, sponsored by the Cyanide Poisoning Treatment Coalition.
074	Zelikoff, JT	Chen, LC; Cohen, MD; Schlesinger, RB	The Toxicology of Inhaled Woodsmoke	Journal of Toxicology and Environmental Health Part B: Critical Review	2002 5 269-282	Minor E 25	A review of various studies over three decades of human and animal studies to better define the toxicological impact of inhaled woodsmoke.
022	American Thoracic Society	Gardner, RM; Hankinson, JL; Clausen, JL; Crapo, RO, et al.	Standardization of spirometry--1987 update	American Review of Respiratory Diseases	1987 136 1285-1298	Referenc T 75	Details guidelines for performing spirometry tests
041	bin Abas, MR	Simoneit, BRT; Elias, V; Cabral, JA; Cardoso, JN	Composition of higher molecular weight organic matter in smoke aerosol from biomass combustion in Amazonia	Chemosphere	1995 30 995-1015	Referenc E 47	Addresses smoke content relating to wildland fires.

Table A-2 Page: 17

Figure A-2 Literature Review, Sorted by Relevance/Author; page 17 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
046	Fine, PM	Cass, GR; Simoneit, BRT	Chemical characterization of fine particle emissions from fireplace combustion of woods grown in the southern United States	Environmental Science and Technology	2002 36 1442-1451	Referend E 86	Review of gas characteristics of wildland smoke
082	InterAgency Board		2007 Standardized Equipment List	InterAgency Board	2006	Referend	Lists a variety of detection equipment with features
054	Kleeman, ML	Schauer, JJ; Cass, GR	Size and composition distribution of fine particulate matter emitted from wood burning, meat charbroiling, and cigarettes	Environmental Science and Technology	1999 33 3516-3523	Referend E 69	Testing data on particulate matter size and distribution
055	Lee, S	Bauman, K; Schauer, JJ; Sheesley, RJ; Naecher, LP; Meinardi, S; Blake, DR; Edgerton, ES; Russell, AG; Clements, M	Gaseous and Particulate Emissions from Prescribed Burning in Georgia	Environmental Science and Technology	2005 39 9049-9056	Referend E 5	Review of gas characteristics of wildland fires.
023	Lighty, JS	Veranth, JM; Sarofim, SF	Combustion aerosols: Factors governing their size and composition and implications to human health	Journal of Air & Waste Management Association	1995 50 1565-1618	Referend EP 118	Information on the formation, morphology, and health effects of airborne particulate materials specifically with regards to ambient concentrations
034	McDonald, JD	White, RK; Barr, EB; Zielinska, B; Chow, JC; Grosjean, E	Generation and characterization of hardwood smoke inhalation exposure atmospheres	Aerosol Science and Technology	2006 40 573-584	Referend E 1	Characterizes wood smoke composition, as well as methods of measurements
229	New Jersey Dept. of Community Affairs, Division of Fire Safety		Model Fire Department Respiratory Protection Program; (website: http://www.nj.gov/dca/dfs/booklet6.pdf)	Fire Service Reference Booklet 6; New Jersey Division of Fire Safety; Apr 1, 2003	2003 1-56	Referend PT	Useful model procedures for fire departments to use to establish or update their respiratory protection program.
024	NIOSH		NIOSH Respirator Decision Logic	DHHS (NIOSH) Publication No 87-108	2004	Referend T	Outlines general guidelines for selecting industrial respirators appropriately
025	NIOSH		NIOSH-Approved N95 Disposable Particulate Respirators	NIOSH webpage: www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1.html	2007	Referend T	Lists NIOSH approved N95 respirator manufacturers and models
062	Roberts, MA	O'Dea, J; Boyce, A; Mannix, ET	Fitness levels of firefighter recruits before and after a supervised exercise training program	Journal of Strength and Conditioning Research	2002 16 271-277	Referend P 12	Medical review of 115 rookie fire fighters before and after a supervised training program
064	Schwartz, J		Air pollution and daily mortality: A review and meta analysis	Environmental Research	1994	Referend E 499	Review of respiratory concerns with smog and air pollution.
088	Sun, Y	Ong, KY	Detection Technologies for Chemical Warfare Agents and Toxic Vapors	CRC Press	2005	Referend T 4	See table of contents for this publication; additional info and full text on file at NFPA Library.

Table A-2 Page: 18

Figure A-2 Literature Review, Sorted by Relevance/Author; page 18 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
131			Firefighter Autopsy Protocol	Federal Emergency Management Agency, USFA	1994	Support P	Outlines a protocol for the implementation of autopsies on fire fighters.
037	ACGIH Worldwide (American Conference of Governmental Industrial Hygienists)		2006 TLVs and BEIs Based on the Documentation of the Threshold Limit Values for Chemical substances and Physical Agents & Biological Exposure Indices		2006	Support E	Provides threshold limit values for gases that are often measured during overhaul, as compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
028	"Barnard, RJ"	Duncan, HW	Heart rate and ECG responses of fire fighters	Journal of Occupational Medicine	1975 17 247-250	Support P 49	Measures heart rate changes in FFs responding to alarms, speculates at associations with respiratory exposure, although data may be outdated
232	Chou, J		Hazardous Gas Monitors: A Practical Guide to Selection, Operation and Applications	McGraw-Hill Book Company, NY	2000	Support T	Provides useful field practice guidance and background information on hazardous gas monitors
107	del Piano, M	La Palombara, P; Nicosia, R; Sessa, R	Pathology in Firemen	G Ital Med Lav.	1983 5(5) 221-225	Support P	
083	Fatah, AA	Barrett, JA; Arcilesi, RD; Ewing, KJ; Lattin, CH; Moshier, TF	An Introduction to Biological Agent Detection Equipment for Emergency First Responders	Department of Justice	2001	Support T 4	See table of contents for this publication; additional info and full text on file at NFPA Library.
084	Hawley, C		Detection Hazardous Materials Air Monitoring & Devices	Thomson Delmar Learning	2007	Support T	See table of contents for this publication; additional info and full text on file at NFPA Library.
033	Kales, SN	Soteriades, ES; Christophi, CA; Christiani, DC	Emergency Duties and Deaths from Heart Disease among Firefighters in the United States	New England Journal of Medicine, Mar 22 2007	2007 356 (12) 1207-1215	Support P 11	Reveals higher risks associated with 'Fire Suppression' activities, raises the concern over base health of FFs being worse than average, examines how FFs spend time
032	Large, AA	Owens, GR; Hoffman, LA	The short-term effects of smoke exposure on the pulmonary function of firefighters	Chest: Official Publication of the American College of Chest Physicians	1990 97 806-809	Support P 13	Study of changes in spirometric measures of Pittsburgh FFs with respect to smoke exposure, with no clinically significant results
056	Leonard, SS	Wang, S; Shi, X; Jordan, BS; Castranova, V; Dubick, MA	Wood smoke particles generate free radicals and cause lipid peroxidation, DNA damage, NFKB activation, and TNF-a release in macrophages	Toxicology	2000 150 147-157	Support E 15	Review of gas characteristic of wood smoke.
077	Marx, JL		Oxygen-Free Radicals Linked to Many Diseases	NHLBI Symposium on Oxygen-Free Radicals; Research News	1987 30 Jan 529-531	Support P 174	Review of the physiological effect of oxygen free radicals
029	Musk, AW	Peters, JM; Bernstein, L; Rubin, C; Monroe, CB	Lung function in firefighters: a six year follow up in the Boston fire department	American Journal of Industrial Medicine	1982 3 3-9	Support P 5	Six-year follow up with spirometry data for Boston FFs concluding no lasting effects on FFs
030	Musk, AW	Smith, TJ; Peters, JM; McLaughlin, E	Pulmonary function in firefighters: acute changes in ventilatory capacity and their correlates	British Journal of Industrial Medicine	1979 36 29-34	Support P 9	Measurements of pulmonary function changes, speculates at potential sources of large declines in function

Table A-2 Page: 19

Figure A-2 Literature Review, Sorted by Relevance/Author; page 19 of 20

Doc#	Author	Secondary Authors	Title	Publication	Year/ Volume/ Pages	Relevance/ Category/ # Citations	Notes
035	Musk, AW	Peters, JM; Wegman, DW	Lung function in firefighters. I: a three year follow-up of active subjects	American Journal of Public Health	1977 67 626-629	Support P 9	Reports changes in FF lung function in Boston from 1970-1974
061	NIOSH		NIOSH Current Intelligence Bulletin 55: Carcinogenicity of Acetaldehyde and Malonaldehyde and Mutagenicity of Related Low-Molecular-Weight Aldehydes	DHHS (NIOSH) Publication No 91-112	1991	Support E 1	NIOSH Intelligence Bulletin on possible long term health effects of certain hazardous substances.
089	NIOSH		The Industrial Environment - its Evaluation & Control	US Government Printing Office	1973	Support E	See table of contents for this publication; additional info and full text on file at NFPA Library.
140	NIOSH		NIOSH Pocket Guide to Chemical Hazards	DHHS (NIOSH) Publication No. 2005-149, US Government Printing Office	2005	Support E	Provides threshold limit values for gases that are often measured during overhaul, as compiled by the National Institute for Occupational Safety and Health (NIOSH).
233	Plog, BA	Quinlan, PJ	Fundamentals of Industrial Hygiene	National Safety Council	2002 5th edition	Support EPT	Handbook with comprehensive and extensive information for use by industrial hygienists.
036	Smith, DL	Manning, TS; Petruzzello SJ	Effect of strenuous live-fire drills on cardiovascular and psychological responses of recruit firefighters	Ergonomics	2001 44 244-254	Support P 26	Physiological measurements of FF response in training exercises
031	Tepper, A	Comstock, GW; Levine, M	A longitudinal study of pulmonary function in fire fighters	American Journal of Industrial Medicine	1991 20 307-316	Support P 11	Follow-up of spirometry measurements in Baltimore FFs, covered by other paper on cohort studies
087	York, KJ	Grey, GL	Hazardous Materials/Waste Handling for the Emergency Responder	Fire Engineering	1989	Support E	See table of contents for this publication; additional info and full text on file at NFPA Library.

Table A-2 Page: 20

Figure A-2 Literature Review, Sorted by Relevance/Author; page 20 of 20