Official Skill Sheets for Practical Skills
Ontario, Canada

Hazardous Materials/Weapons of Mass Destruction Technician
NFPA 472, Chapter 7, 2013 Edition

National Fire Protection Association Standard for Hazardous Materials/WMD Responder Professional Qualifications

Enquiries regarding skills evaluation and certification should be directed to:

Manager
Academic Standards and Evaluation Section
Ministry of Community Safety and Correctional Services
Office of the Fire Marshal and Emergency Management
25 Morton Shulman Avenue, 2nd Floor
Toronto, Ontario
M3M 0B1
OFMtestingandcertification@ontario.ca

IFSAC and Pro Board Accredited and OFMEM Approved: January 5, 2015, Rev. Draft: September 22, 2016

As the Hazardous Materials Technician course is predominantly a "hands-on" program, the testing of the skills learned during the course is as important as testing the knowledge components. The successful completion of every skill sheet in this booklet is necessary to fulfill the requirements of each Job Performance Requirement listed in NFPA 472 - 2013.

Successful completion of all the practical skills contained in this booklet is required for eligibility for any student to test Students must be prepared for any of the practical skills contained in this booklet to be on a specific certification test. Every skill on all practical skills test will contain the same components and steps as outlined in this booklet.

It is the responsibility of every Hazardous Materials/Weapons of Mass Destruction Technician Course Lead Instructor to ensure that each student has passed every skill. The Lead Instructor must verify that each skill sheet in this booklet has been signed and indicates that the student has successfully mastered the skill.

Each student's Skills Book contains a "Verification of Successful Completion of Practical Skills". **These completed and signed forms must be submitted to the Ontario Office of the Fire Marshal and Emergency Management *prior to the date of the Practical Skills Certification test.* Only those individuals whose forms have been received by the Ontario Office of the Fire Marshal and Emergency Management will be eligible to take the Practical Skills Certification test.**

VERIFICATION OF SUCCESSFUL COMPLETION OF PRACTICAL SKILLS COURSE

This form must be completed and signed by the Instructor with skills verification responsibilities. It must be submitted to the Ontario Office of the Fire Marshal and Emergency Management (OFMEM) prior to the date of the Practical Skills Certification test. Only those individuals whose forms have been received by the OFMEM will be eligible to take the Practical Skills Certification test. This form validates that the candidate has successfully completed all required skills as attached, and shall be made available to the OFMEM upon request. If seeking testing at a later date, candidates MUST retain this form as proof for eligibility to participate in future skills evaluation for attaining certification.

*To be completed by the **candidate**:*

Name: _____

Address: _____

City: _____ *Prov:* _____ *Postal Code:* _____

Department/Agency: _____

Hazardous Materials/Weapons of Mass Destruction Technician Course Location: _____

Hazardous Materials/Weapons of Mass Destruction Technician Course Dates: _____

To be completed by the ***Instructor as explained above:***

As Instructor for this course, I verify that the above candidate has successfully completed all of the practical skills required for the level of:

☐ Hazardous Materials/Weapons of Mass Destruction Technician

Print Name: _____

Signature: _____ *Date:* _____

VERIFICATION OF SUCCESSFUL COMPLETION OF PRACTICAL SKILLS EVALUATION

*To be completed by the **Lead Evaluator** present for **two (2)** of the practical skills evaluated below:*

STUDENT NAME:			
DEPARTMENT:			
COURSE DATES:		**LOCATION:**	
EVALUATION DATE:		**LOCATION:**	
LEAD EVALUATOR(S):			

	Pass/Fail
Identify and Monitor Hazardous Materials Using a Multi-Gas Meter NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6	
Evaluator signature: _____ *Date:* _____	
Identify and Monitor Hazardous Materials Using Colourimetric Tubes NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6	
Evaluator signature: _____ *Date:* _____	
Identify and Monitor Hazardous Materials Using a Passive Dosimeter NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6, 7.2.3.5	
Evaluator signature: _____ *Date:* _____	
Identify and Monitor Hazardous Materials Using pH Indicator Paper NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6, 7.2.3.5	
Evaluator signature: _____ *Date:* _____	

	Pass/Fail
Identify and Monitor Hazardous Materials Using Radiation Detection Equipment **NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6**	
Evaluator signature: _____ *Date:* _____	
Identify and Monitor Hazardous Materials Using Other Monitoring Equipment Supplied by the AHJ **NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6**	
Evaluator signature: _____ *Date:* _____	
Perform Technical Decontamination – Entry Operations **NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (1)**	
Evaluator signature: _____ *Date:* _____	
Perform Decontamination – Victims Ambulatory/Non-Ambulatory **NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (2)**	
Evaluator signature: _____ *Date:* _____	
Perform Mass Decontamination - Victims **NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3)**	
Evaluator signature: _____ *Date:* _____	
Don and Doff Chemical Protective Clothing **NFPA 472-2013, 7.1.2.2 (3)(B), 7.4.2 (3), 7.4.2 (4)**	
Evaluator signature: _____ *Date:* _____	
Perform Control Functions for a Pressure Vessel (150 lb.) **NFPA 472-2013, 7.4.3 (1), 7.4.3 (2)**	
Evaluator signature: _____ *Date:* _____	
Perform Control Functions for a Pressure Vessel (1 Ton) **NFPA 472-2013, 7.4.3(1), 7.4.3 (2)**	
Evaluator signature: _____ *Date:* _____	

	Pass/Fail
Perform Control Functions for a Pressure Vessel (Tank Car) **NFPA 472-2013, 7.4.3 (1), 7.4.3 (2)**	
Evaluator signature: _____ *Date:* _____	
Perform Control Functions for a 55-Gallon Drum **NFPA 472-2013, 7.1.2.2 (3)(C), 7.4.3 (3) (A-D)**	
Evaluator signature: _____ *Date:* _____	
Perform Control Functions through Over Packing a 55-Gallon Drum **NFPA 472-2013, 7.1.2.2 (3)(C), 7.4.3 (4) (A-C)**	
Evaluator signature: _____ *Date:* _____	
Perform Control Functions for a MC-306/DOT-406 **NFPA 472-2013, 7.1.2.2 (3)(A), 7.1.2.2 (3)(C), 7.4.3 (8)**	
Evaluator signature: _____ *Date:* _____	
Developing an Initial Action Plan and Completing Reports **NFPA 472-2013, 7.1.2.2 (2)(E), 7.1.2.2 (3)(A), 7.1.2.2 (5)(C), 7.6.3 (2)**	
Evaluator signature: _____ *Date:* _____	
Assisting in the Incident Debriefing **NFPA 472-2013, 7.1.2.2 (5)(A)**	
Evaluator signature: _____ *Date:* _____	
Assist in the Incident Critique **NFPA 472-2013, 7.1.2.2 (5)(B)**	
Evaluator signature: _____ *Date:* _____	

INDEX

Scenarios for Use with Skill Sheets 17, 18, 19

Scenario Incident # 1

It is 2:00 p.m. on Wednesday May 3 (Year) and you have been dispatched to a tank car derailment in the middle of town at Bubba's Wholesale. The sky is overcast, the temperature is 15ºC, and the winds are from the west at 10 to 15 km/hr. The forecast is calling for a 50% chance of showers. The terrain has gradual slop to the north. Dispatch is reporting that one of the tanks is leaking a chemical called "Hydrocyanic or Prussic Acid". You are the ranking officer and will assume command of the incident.

You summons Captain, Grisdale, the current Incident Commander, who provides you with the following.

- Three individuals were immediately transported to the closest hospital, due to exposure to the product and complaining of difficulty breathing.
- Crews have just recently isolated the people and traffic from the scene.
- The Hazardous Materials Team is en route and should arrive in about ten minutes.
- The chemical is leaking from the tank car on the roadway and flowing down into a storm drain culvert which flows towards a public housing area.
- The current safety officer is Capt. Benoit.

Resources Available

On Scene:

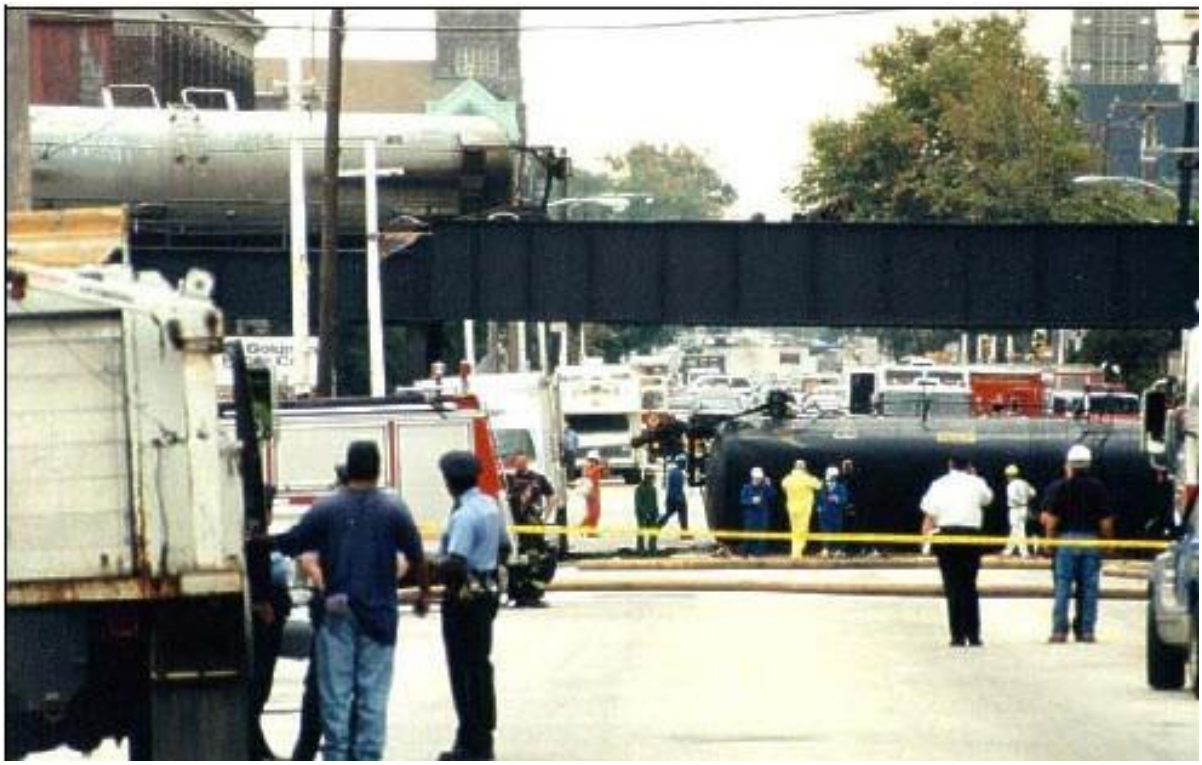
- Pump 2 with Capt. Grisdale and three fire fighters with 2 handlines
- Deployed Pump 6 with Capt. Benoit and three fire fighters
- Rescue 6 with Capt. Fabok and four fire fighters
- Two Advanced Life Support ambulances with a total of four paramedics
- Four police cars with four officers

En route:

- Haz-Mat 1 with Capt. Martin and three fire fighters (10 minute ETA)
- Railroad emergency response team (1 hour ETA)

Available:

- Four pumpers, three aerial trucks, two water tenders (tankers), 14 fire fighter, two district chiefs
- Mobile command center
- Department of Natural Resources personnel
- Public Works Department personnel and equipment
- Mutual Aid Fire resources: five pumpers, five tankers, 25 fire fighters and officers



MATHESON
TRI•GAS

P1 or ;

MATERIAL SAFETY DATA SHEET

I. CHEMICAL PRODUCT A'ID COMPANY lDENTlFICATLON

MATII!:$O"' rtii-(;1\S, INC.
t51) Ale• Roiltl S.Jr... .lt2
6a.11J.itltr; Kide,t, .. JirM:y 0.,.,2tJ
1nr()rm•lion! I i&f}..41"'2SO!

F.••nC) C.i!l:lllt:•:
Cl lf!MTRJ:C J.S0042MIJOO
caur Orj..,,;,," Oorlille riot us.:
'1'0MI7.3HII7 (C,.Ile<l cn, A<c• •l'd)

SUBSTANCE: UYDROCEN CYANIDE, ANHYDROUS.STABILIZED

TRADE\:\1ESJSH'iO 'I'V IS:
MTG MSDS II; H VOROCYANIC ACID; PRUSSIC ACID. f'OR,\IONITRJ L£:CAIWON II YQJUDE r<ITRIDE, tiYDROCVA!'IC ACID, LIQUEFIED, HYDROGEN CYANIDE, RCRA r063, UN lOSI, CH l'; IATIIIt•fl:R1'F.CI W(, 2<1l011

CH F\11("AI. MULY: ifl()l'pllic:, ps

('R£,\110"DATF.: Jon I'' lq q
REVIS ION DATI:: O..: II 2008

2. COMI 'OSIIION.IN 0Joti;1AI U:-I ONINUK£UitNIS

CO\IPO:"it.'T: HYDROOEN CYANIO£. ANLYOROUS. STAlliUZ£0
CAS N'IIMDI!RI 1<1.9 8
PtRC!;'iTA.(;t; 10!>.0

HAZARDS IDCNTrFIC'ATIO'I

NFPA RATIXGS(SCALF. t-4): HEALTil FIRil.-1 RE.AcnVITY-2

llME RGtNCY OVERVIEW:
COI..OH: color
PIIYSICAL FORM: liquid
OtJOH: almondodor
MAJOR IlEALTIT IIAZAROS: p01entillly filial ifinhah:d 0< sw01II<>Wed.,.,.,J.>instory ''''' iniLat"'n. ey< iwi•r•ion
PHYSICAL ri.I\.7ARDS t Fh1mml'lbJt. llquid ond vapor. V1lpor may cause Ansh fin:. M..ay ymerizr. CcrnoincrJ n'l)' rupn1rc Olle:)Cplode \43)' rCle'I o.n ((IAUIICI '''rh IUf, hctl, tiytl1 orwMcr.

I'Or£i.'I1AL H&o\L.Til CFF&CTS:

MATHESON
TRI•GAS

Page 2 of 7

fNllALt\TTON:
SI-IORT TER.1 EXPOSIRE; tmlllliotl, h mtu.X..dt.. pant, inq;ulu Ju:.artbta.t, badlltlub hudm.:ss.
Wullb lllo olor.suffi><adoroluncOO «SlJO<t. pa.raty••'-<>ou•ul>ooo.l<On>a. llrath
t, ONC 'f llR ▾▾ EXi'OSU Re:•'OIIliti'1!1.di''''''ti•disorders.din111e
SKI00:\TAC'r:
S UOR'rllllR.\1 E:XJ'OSL'Rll:suffixotioa
LONG TER\ lt:X.rosURE: !13Jtl(' dft.ocil$ tep:.m.t!d i tloog ttmi •nlmhth, lt.Ttdtl
li▾'E COI\oA(..,
SH0K1 ti':K\1 £ll.f'OSLRH: JmmtiOfl,,ll il'bouion doo1h
l.ONG TER.\I EXr>0S RE:.....,.., dfoc11n:paned in sluln ern>expc'" <
II'IGESTION:
SIIOR'r'rER.\1 t:."<J'OSLRll: >u!Jo<adoa,.,_._1lt
LONG 'lt:R\I I!X..-OSUK.E:.-o wrO'Jfi Cion lt a -atlablt

4. FLR.Sl AID MEASURES

1l'11\ALATION: \\>ben sar ro enrer a•ea.•ed1001lle,•e•pos..ue. Use • •.,..mask or SlJDotw de""ct 10 perfonn atttfic:lal ttspfiotial lretCUC'b1alhn)1r.needed.Ott ma uetllaon utJtnedt:utly.

St0'\1 ()'):\TAM':wh kin v.•ith,;nap.lind v.01:6far 01 le:l5 minute.-.11ile rt.lnn\"inJ COI'Itnmlnn1o:f clothing and sh..oc'S.Gd..t.•d.k.al utcnliorll.. if l'lt'Cdt•ct TbotOlf!.b-l)'ck11lt and dry contamjnruo:f clotbi•-e ttnd : S bd'cue rtu);l!-

&Yll COM ACTlw ""with plcmy of..Mer tor.,lc-..st lonn..oe$. Then ll<'l llllroedialc medKal nn n ion,

L'GDTION:Cont.Kt lbcdll pui.soo cootrol ceotct or p.bys..icin im•nedatt'ly.Nnt:'ttnakt u WK'<Ittseiou.s

pmotO ''''''''''' 01dr•lll dUidl. Wltco voulunl!ll<1!1.W'3. kN'p heodlo <<LhAo lupt ro l•tP'f'Cut alplfuUil«<. If 1,..__is Ul0<l0<\Scious.mm bead oosick.Get DlCdicalotocnrioo inllll<dintdy

A.. TIOOTF.:ttmyl oitrit.:-. inhnl::ttian;sodinm mtriie, intra-venous;sodium thiosul f.ur., inrusion;oxyge-n.

1\0Til TO I'H'I'SICIA.:>:Coo!.dtl am t 1ubll< llllhiJIIJOit. 1 anlpO<Jit (0.2 mL) •••Y 5 ''''''1<.!1'1<1 O\).or mp\151001\.eoosldct PHLllo0 In•••- C'oor lUi)>lJrO

5 FLR r fiGJITIM.i MI:A5URF.S

nru:ANI) t:XI'LOSIO." I'IAUIWS:S.,.. U. ltalllt.t COIII811'1m may fUJI(IIIOor uplode,rf\1)0!4!11 tO lllttll•.V or'alrml.:l\d¢l''rc losi'''c Ci11sor '111)0f isiiJhttr dn 11W Vopofll ()r JPSC-S may la:nhc m 4k5!MI tjltirirm wuroeiOd flahbnd.

EXTL'IGUISUING ME.DIAt Ltt bum unlt:l•letllk <:ul▾ LOI:f'<d iiMtd!iattly.loti!'' Rt<.<. U!l< Jt,!;Oll<tt fOamor flood <lliil ... al.<fspray.

MATHESON
TRI•GAS
- '''•tr.l'tv1 ,.,.......

11'4J:e J of7

FLRE fJGUTlNG: Mm•e contl.ittCl' fiom f1r0ifrt caa b:don..- without rill. Wilhdr.sw in m :dik.ly ir. cn ornung sound ft-om t{cmi:ng sn!ety de\iceor ony diP:olonn.an oromb due 1o fire. Cool C-Dnii:IU1C'fli wnh 'll31tr ..,r11y .uttil \o\'dl•t\cr•he Are ij C.ll K''P unne C: fli pc:fJCit-8'o\''.Y iKt13te l\::l7M'I .urea an,l tby entry. tot l(lrt\, r-.1cal'Of' Ufltc IJOOk.tl'''.ftCUutlon ftldii.J8 C'''3C\Jft1KJn f IUS; 800 n--.et9{1/1!llll\-), t)o(IIX 81l('lftJ)t to e din•i dt fitf! ut1les tlh-of ntetia.l t:ou be ''l)f!JX''d fW!lL Flood wilh ftne water spray. Do ru)l !lt.Mt« spillmnterial wilh hi b<prewrr \Wr streams.. Cool coomlnen with '':uuo:r. .l\flply wm:s hom ra prnected locanon or &om n ufe-d11ranee. A''aid inhalali<Jilcl elAterital or c:ombU$t..,_, by-prcduc1s. Sm)'11pwtnd ami lu:ql ()UI of IHCM

Fl..ASIJ MINT: 0 F (ol8 Cl[CCl
L.OWER ri AM L \!11£ IJti'T: S o
IJP• R I'LAMM.\III.f: I.''IIT! 4(,0.
AllTOIGI\ITIO'II:10110 F (}SC)
FLA I'I.ABILITV CLASS (OSHA): lA

6 ,\('CIDI.NTAL lt[LEASE fl.lEASI RES

OCCtJJ',\TIOA L R£LI'J\Slh
Oa not lauch s.pillt''d ma1eriaJ Stop led ifpoosuht.e \\'ilbnu'l penonal rist A'toid heat, fl Knt''S.S;pnr\:1nod IYl•IIff,nu•Ct'S Q(•Jtnrloo Rcnil''n t '10• ''r•r0• •O•• RQc'ltiQf '' JXI• t. W•tl• ••111('1'' ' 'Wl'tY nonor ''-''' A':'t!K''t iJm.·(:tfyOn nl:dtri8J. Kl.ltll .:l.t)' p<Ople awl1y.bolatt hiUI:fd IU'tll &00 dtrtt)' entry &iffy Ut)Wtntf.a_'IMJ keep OIII o{Jo..t areas. V'!!milatt>closed srrnas before ernei''''. Evtltu::ation ndiw: l50 r. for m.nkn.il of 0111111'l. uuck.: IWO n u:no 11fl mllc). i.f> l.Oetll trt''''t''_'!!Cn.cy l'l nJnsConunine-e and SCIIIC' -=mer R¥ -UI'I!*(''(Hrlentkll\ Ill, rv 8¥ lii•IlAIC-.• 1lutn Qtal h)IQ(U S SAlt,\ S\' .:111)n l04}trr$l-r.•'' Ol.:(:(Il':f$ ru the U.S. rtnd it.rtpotQbh undr Ct:RCLA S,''CtiOtr IO.l. BOii(y tb4 NotiOIIIII RepoJUll Ctnlfl'11(800)'l.l-4-S802 (USA) a (2()2\426.2615 (USA).

7 IIANDUNG Al'lD STORAGE

S fOKACit:StDre and h:and.le in :tcOOfdaolce -. ith all C\ITG!t1l!.glll:u)ODS IlJld11udilrds.S;b:f«1 to JlOTI£l e n !PJIWJ.onJi' U.S OSHA 29 C'FR 1910 101 Prot.o:tftncu phydc.al dJULU!!,.C S-t oualc(lr ln n dc:ua.cJ buildint.SKI!0 v.<idt fllfllfi\OOie liQu.icJ.li A\OhlllCfll.tlruDSC)lfUll!ldoch&OUrca or tenmon SheiC llflI11 90 days. Ke'-l' areh:d from tncorllpoiJblto ,__.t,:,tuDGC. Notify Shtl<' Emcrg.cncy R\C:sponC<Ocmni!5sion forr Sl0fil8e IX'' u5e1n lliUoums!!fent«d..,or eq1111l tO the TPQ (U.S. CPA SARA Senicra l02). SARA SecnDf•)()l requiftio tk•Luet $t.oriog a n:.a_,eriul v.ith n '11''O.,panicil te to IIX.ilJ e••lU;!!.t-•X)' relp)lls.e pl.o nl'lins f U...S FPA oiO C''Flt l$S P 'l A)

. J.:XI'Ol>UR£ CONtROLS. IER.SONAL J>RO''l EC''IION

Ji,XPOSUR.t LIMITS:
Jl\'DROGI!N CYANlDE. ANIIYDROUS, S'rABIUZEOr
>IVI>R(){;P.I\ C.YANIOil:
10 ppm (I I mll''rnl) OSH TWA C•kln)

MATHESON TRI•GAS

Page 4 of 7

4 7 pp<n (on,.lnliOStiA S lbi..(Siunl(•ocoo:d by '8 l-lO'lJ$ 100<JO.19'131
4 7 ppoo(CJ-1ACCiiH mlms (skin)
4 7 ppm (5 '''•'n31 NIOSH r«:ommended STEI. ⟨in I

VL'."*TILATION1 Pro ick loc.al o.hilust ocprocess mclo..sarr ve:o1il:a.tian *sysicm*. Cnsure compll:a.occ wi1b nppftcablc: ClCp()$UTC lim.15

E f PRO'f £Cf iONt \Vca..rJiplMb resiant so:tfery gog-.•ilh a f. eab.icld. Pron:lcan cmc:rgcncy cye "'-iSh roootaJ•taodqukl.. dl: t1 SilO""-, ,, tht lfllllcdaate v.Ofl iuca

Cl..OI HING: Wttr11ppropri1ue: chemlcaJ re iitluclothing

GLOVE!S:Wur "l:ttrDPriatc chanicl ruiM.oJlt glove$

R£S PIRATOR;Tbr followi:ng rapirotton aru.l ma'U1Dllm \Uit.' concGtr.•bomiiKI dr..-."11 from NIOSH ruxL'or OSHA
.a7 ppnt
Any .spli«<air rnplnrtor.
SO pl)lll
Any S14fplkJ·tdttdpu1tiUt t.l)l.:riled ml1 COntlllUlJU_..fll¥'o\r rt'tuUt:.
Any .sdf..calltDiocd bre11thinappamulS v.itb n full c...:.::piccae
Aft)" SUC)p)l«J. Aif ttsl)lfiiiiOf '411.fl ft•ll (Qep.c(IC'
En nc)' of ploulll«< entry io1o unkuo.,..,u coo.cclliril:llooJ or lOLli Qandition• •
AD)' sdf<:c•waiocd br mhi•lil '1)l}limtus 1bal1 bas •full f"'-'cplcceat)d ii oii't ll)('tO:ttSUre-<krnmld 01r Dlhc:r pmi11\'l.l'fC!IilUI'C! nXJdto..
Any .spJ .nir respirator '4-il•n fuiJ f.r.ce.pi:«1h11is apci'IUCd ln a prcs: cnl.lnd orather pns:iti\. p:OMut m.:xlt u1 toutbm11tM:.'" W1tb •u au hilry "Jdf--(l(Jillitu'ttd brtathinJt .,pU.ratus optrllh:d ht PldMu('o-cle,DJimdor o1b.er po::siai.vornaa:re1hode,
••,,••,,••
Any an-J''ul l)ltw tUU-r.eeyttt>t rti(lmtl<Jr (ps mas.k) wilh a dtR• My\1!, ff\:Jnl-'IJI(Iunk'd or 00.ck..••M:Junt.:d C.lniuc:r prcnoiding pro1cxtion & -hut the compound orconcern *i\Dy* afll)rop.Jilt CS.Cit)C C)'l)¢, k:1f COl'IYttiCd bltatblilg*.IJJ)IIt'aii)S.

9. PIIYSICi\L 1\NVCI IEl\IICt\L PROPERTI[S

I IJVSKAI.. *STA*TJ;: l, .•lJ
COLOR; ('«Jiotlc:ss
OI>OR: lliJ\o0fldodet
MOL&CULAR Wlli GilT: 17 OJ
MOL.l CULAR FORMULAJ li..C N
HOl UN(;•01\T: 79 F (2<•C)
PREEZil\"GI'QINT:7 f (-1C)
\' AI'OR PR&SSlfR£.:<>..'On tllg @ *20 C*
VAI'QR DE:"SITV (ujr-1):O. 1
SPECI PIC GRA VlTV (,.ot<r-1):0.699@ 2Z C
' ' ATV..SOI,tJBIU"r":&olr.llblc

56 - Haz-Mat Technician Skills (07/13)

MATttESON
TRI•GAS

Pugt *S* ol'7

PU ' w-.okly ncidic
\fOLATILIT ':Noc ot nibble
OOOFt TH IU:SHOL.IJ•I>Jllll
£VAPOIUT10N IU'fl!l N<>e ,,;!Dille
COI:FFI CLENTOF WATER/O IL OISTRJBUTIOS; Not•uilobl<
:>OL n;,.. $OLUUH,rn•:
Sol•bl: .alcoboJ
Stiglllll) Solttblo: etber

10 SI AIll I ITY ANt? RI-AC"TIVI I Y

Rf.ACT(\'11" ':Mta)' react v.ith C"\'ohrtion ofbe.JI on contact v. rth w-alt"'.r.

('O DI'flO"'"S TO AVOroAvoid hem f1 -C1i.spnrks nrwi orhcr wu«:C$ of' ianiiion Mi-nimir.e t;()llm.;
"'·ith m:LI.ft'ial A'\'Oid inlutb.tion of m:tt«ial or ron beuoo by•proclucts. Keeopout or u. r.lUflPlad
stv..vrs

I.NCOtrATIOIL.ITI ES:CX!tnbmtiblc- nutcri:.Js. ba-'C"S-,anlinn.oUd.iziQgm.'ltft'illb. KidS

HAZARDOUS OEC:OHPQSITIONl
11e.mal dccontposidon products cya.tides

POI YMF,R11ATION: Polymori..,.willl """lurioo of h<llt, A'oi ooooooo>it.air,lisJowooer.
incDf111Jntibjc ml!tenal or!'IPire and trseabm'C! room oetnpennult!'.

I J TOXJC"OI CXiiC"AI J'lrORMt\nON

HYDROC£1\ C'VA'>lliE.AMI\'DROl 81',\BIUUD:
TOXICITY DATA: 150 ppn>'30 minute(•) inloubtio,.r.ot LC50; 3700 llJ.'"k orulotootae LD$0
LOCAL BFt"ECni:
lrri1nnc: inhnb1w
ACUTE TOXICITY LEVEL:
ltigllll'y Toic: itthnlalion.in£e$1l0n
TARGET ORGANS1 blood
MEDICAL COi'IDITIO.NS ACCRAVATED In' EXJ'OSUJU;: bk>0<l symm dlsonlm. btan OJ
'nrcJiO'nSQJIrdi mQcr\, nen-nus liYS1Cm !jisonkrs

12 ECOLOGICAl INFORMAnO'I

ECOTOXICITY VAT*t\;*
FISITOXIcrTV: *S* ug/1, 11 w«k(5) (PI··iolotli<:i l) Atl•mJC "'Ionon tS.lmo Slilt rl

MATHESON
TRI•GAS
..._ n.G•"""""'_,...,-

Pa6 of 7

IN\' ERTf.IIR<\1'£TOXICITV:21 01g/1 t1 bourt•l NOEC tRcpmdll«i"') Sco.d (Comnuno• p••o.d<>llnu""")

13 DISI"OSAL CONSIDERATIONS

Dispose in ztCC'**cnknce ;nthlJ 1pplahle** H"gUblions._ **Sut.jec110 dupo**sd**l** re,!lubliOIIS U.S CPA **40 C**Jj)t 262 *dw:s* **WI**C **Nui'llbn(•) Pfllrl**

14. TRANSPORT INFORMATION

1 \S. DOT .*f9* CFR 11'1.101:
PROP-F-R SU il'P.IXC. AM F.:1l)'dmgco C)'**lllilk**,.s.**lllbiliud**
10 -"UMBER: UNJOSI
H,\Z.MIIl CLASS OR OI VISIO: I
PAC"t..'JNG GROUP: I
LABELING R.EQUIR EMEYT'S: 6.1, J
Q ANT11'V I.I\111A'IIQ, :
PASSENGER t\IRCRArT OR RAILCAR; Foobidckn
CARGO /IJRCRA n ONLV: Fofidd<ll
LARIN!! I'OLUfTAliiT:IIYDROGQN C\' ANTDE, ANI!YDROUS, STADIUZ.ED

POISON

CAAUIAN ' mo\NSI"'R'l' ATIO-" Of llANGEROUS GOODS:
Sill P Pl NG NAME: Hydn>gcn <:yAnidc, Slnbilized
1iN '' UMOilll: lJNIOSI
CLASS:(> l;1
PACKING GROUP/CATt::GOR\' 1

IRrouATORY INJ- ORMATI0:-1

U.S. REGULATIONS:
CERCLA SECTIONS 1 0:biJOl HAZARDOUS SU BS'fA..'I:CllS (O CFR JOU):
HYOROGI!N {"YAIOE: I0 I BS RQ

SARA '1UIL Ill SECTIOl'JDl EXTIU\U:LY UA:t.A.RVOUli SI:Bl>TANCES(CFit JS•bP.Itl B)'
HYPROGI>N CYA.,'I:IJ)J:;: 100 L.DS Tl'Q

S.\RA TITLt; Ill SECTJO, J. .llX'TRL\It;LY LIAZ.'I.RUOUSSI:DSTANCESL•0 CFR JSYbf>Ul Cl:
IIYDROGEN CYAl\10€: 10 LOS RQ

S.,RA 'JLTl..& Ul SASllCnOS 31l1Jilll.AZAH.00US CAT0001{Ji;S (441 c-t R J?e.S.oiJINIO'IJ U aod C):

MATHESON
TRI•GAS

ask. . .The Gas Professionals"

ACUTE: Yrs
C'IIR()NIC No
FIR£. Yes
REACTIVE: y.,.
SUDDEN REIEASE: Y<>

SARA TITLE Ill StcT IOV JIJ (4U<:I R l72.fiS):
UYDROG lo:l\ C'l' Al'i Ill

OSIiA PROCESS SAFETV' (%'1 Cnl. 1910 119):
IWDR{)(TFJ\'\' CYANIII R: 1000 LRSTQ

SLTE REGtrr.AT!OI\}-;
Colifomio Prot><>!irion 41$: N01 1''''''d

Ct\NAOh\Rf.G ULA1 10NS:
WIIC\liS CLASSU'ICATIO\: ADOlF

Vi\TIO"A I. 1ll\\'t:l;TORY STA' ri iS:
U.S. :l!Vi'. ORV (l'SCA): li!tai oo i.m\'rllory. TSCA

Il(b) EXPORT:\'OTIJ'ICATIOi'i: Noc lislrd

Ci\1\AOA IV t::YfORV (O IJI\ DSL): Notdet<n11111ed.

16. OTHER INFORMATIOI\

"RTECSI!J" is 1 Unitrd S.lat<S tradrmlli Ol!.n<d and lic<DSrd uncl<r nuthoril)l orlbe U.S. GovCf11JlXOI. b) and thml1l!l> Syn'l)'X Softw•re, Inc Ponionst."(0J>)•ril!l>t 2001 . U S Go''''''''''' 1111 n!!llts '''''''Cld.

CCcpjril!Jrl 1 ·2009 Chotl1.'\DVJSOR.Ioc. All rii!l>lS r•s..'f'-..1.

.\IATlf£SON TRI GA.S. ISC. lAKES .SO EXPRESS OR IMPliED WARRA Vf iES, GI'A RANTF.P.S OR REPR :Sr'lfrATIONS Rr GAR Dl'iG Tilt; PRODUCT OR TilE LNt'ORMATION II I IUIL'\,-.,CLI DING Ull f NOT LI\ LITEll TO A\Y 1\IJ'LJEO WARIIAI\TY OF MERCilA!\'l'ABILITY OR FITNESS FOR USE. MATII£SO\ TRJ-<:ASJNC.S fiAU_ NOT BE J,,IBI.E FOR" '' ' PERSO\AL INJI!RV, PROPERTY OR OTRtR PAMo\Gf S OF ANY NATI!R[, WIIP.TIItR ((UIPF'ISATORY, CONSI QUEVI'IAL,[)(EIPL.IR V, OR OTIIER WISF, RESUI.TIN1. FROM AN\' I'UBUCATION.USI= OR Rt:l .h\NCI=Ul'ON TII I1 1NHJR MATION Ilt:R£JN_

HAZARDOUS MATERIALS/WMD TECHNICIAN

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections of NFPA 472-2013:

Hazardous Materials/Weapons of Mass Destruction Incidents Standard

7.2.1.3.5* Given three hazardous materials/WMD, one of which is a solid, one a liquid, and one a gas, and using equipment, test strips, and reagents, provided by the AHJ as applicable, the hazardous materials technician shall select from the following equipment and demonstrate the correct techniques to identify the hazards (corrosivity, flammability, oxidation potential, oxygen deficiency, radioactivity, toxicity, and pathogenicity):
(1) Carbon monoxide meter
(2) Colorimetric tubes
(3) Combustible gas indicator
(4) Oxygen meter
(5) Passive dosimeters
(6) pH indicators and/or pH meters
(7) Photoionization and flame ionization detectors
(8) Radiation detection instruments
(9) Reagents
(10) Test strips
(11) WMD detectors (chemical and biological)
(12) Other equipment provided by the AHJ

7.2.1.3.6 Given monitoring equipment, test strips, and reagents provided by the AHJ, the hazardous materials technician shall demonstrate the field maintenance and testing procedures for those items.

7.2.1.5 The hazardous materials technician shall demonstrate methods for collecting samples of the following:
(1) Gas
(2) Liquid
(3) Solid

7.2.3.5 Given a scenario involving radioactive materials, the hazardous materials technician, using available survey and monitoring equipment, shall determine if the integrity of any container has been breached.

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING A MULTI-GAS METER

STUDENT NAME: **SKILL SHEET # 1**

Skill Objective: With the following PPE (rubber gloves, eye and foot protection), three hazardous materials, one of which is a solid, one a liquid and one a gas, as well as various examples of monitoring equipment, test strips and reagents, provided by the AHJ, the student will select the appropriate monitoring equipment to test the samples and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards (corrosivity, flammability, oxidation potential, oxygen deficiency, radioactivity, toxicity, and pathogenicity). Of each of the given hazardous materials. ***This skill must be completed within 15 minutes.***

Items to be checked		***Pass/Fail***
If the candidate:		
	Multi-Gas Meter (Using a Multi-Gas Meter supplied by the AHJ perform the following)	
1.	Explains how many sensors are installed and what each sensor detects	
2.	Performs a "Fresh Air" calibration	
3.	Identifies alarm setting for O_2 (19.5-23%)	
4.	Identifies alarm setting for LEL (10%)	
5.	Identifies alarm setting for CO (25 ppm)	
6.	Identifies alarm setting for H_2S (10 ppm)	
7.	Identifies alarm setting for other sensors, if any	
8.	Demonstrates proper monitoring techniques	

NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6 (CONTINUED ON NEXT PAGE)

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING A MULTI-GAS METER

STUDENT NAME: **SKILL SHEET # 1**

Items to be checked		***Pass/Fail***
If the candidate:		
	Multi-Gas Meter (Using a Multi-Gas Meter supplied by the AHJ perform the following)	
9.	Uses the instrument to identify an unknown substance to be flammable and/or toxic	
10.	Reports readings and limitations of the monitor	
11.	Turns off the instrument	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING COLOURIMETRIC TUBES

STUDENT NAME: **SKILL SHEET # 2**

Skill Objective: With the following PPE (rubber gloves, eye and foot protection), a Hazardous material, and corresponding colorimetric tube, the student will test the sample and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards of the given hazardous material.

Items to be checked		***Pass/Fail***
If the candidate:		
	Colourimetric Tubes	
1.	Uses the selected tube, student performs a one minute "field test" on the pump (with an unbroken tube in pump to assure it is operating properly.)	
2.	Properly breaks the tips off of each end of the tube using either the ceramic edge on the bottom of the hand pump, scoring board, or tube score/breaker	
3.	Inserts the tube into the pump in the proper direction (arrow on the tube pointing toward the pump)	
4.	Holds the tip of the tube 1-2 inches away from the sample product	
5.	Properly grips and fully operates the pump and waits for the indicators to fully cycle	
6.	Does not draw any liquid into the tube	
7.	Operates the pump until pump indicates a sample has been drawn for the required number of pumps	

NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6 (CONTINUED ON NEXT PAGE)

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING COLOURIMETRIC TUBES

STUDENT NAME: **SKILL SHEET # 2**

Items to be checked		***Pass/Fail***
If the candidate:		
	Colourimetric Tubes	
8.	Removes the tube from the pump	
9.	Reports the measurement to the evaluator (There may be several minute waiting period for the tube to change completely)	
10.	After sampling, clears the pump by operating it at least three times in clean air without a tube	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6, 7.2.3.5

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING A PASSIVE DOSIMETER

STUDENT NAME: **SKILL SHEET # 3**

Skill Objective: Given PPE (rubber gloves, eye and foot protection), a radioactive hazardous material, and a passive dosimeter, the student will test the sample and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards of the given hazardous materials.

Items to be checked		***Pass/Fail***
If the candidate:		
	Passive Dosimeters	
1.	Selects appropriate meter from monitoring equipment	
2.	Verbalizes capabilities, limiting factors, and operation of equipment	
3.	Properly reads the dosimeter and verbalizes what the scale is reading, Sieverts 0-2/milliroentgens 0-200	
4.	Verbalizes what type of radiation energy this monitor reads	
5.	Determines and reports the measurement to the evaluator	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:***

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6, 7.2.3.5

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING pH INDICATOR PAPER

STUDENT NAME: **SKILL SHEET # 4**

Skill Objective: Given PPE (rubber gloves, eye and foot protection), a hazardous material, pH indicator paper, the student will test the sample and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards of the given hazardous materials.

Items to be checked		***Pass/Fail***
If the candidate:		
	pH Indicator Paper	
1.	Removes a 3-4 inch piece of pH paper from the roll	
2.	Verbalizes the capabilities, limiting factors, and operation of equipment	
3.	Checks for vapor production by placing pH strip above and below product	
4.	Dips half of the pH paper in to the liquid product and removes immediately to read the leading edge of the pH paper	
5.	Determines if the product is an acid or a base	
6.	Reports results to evaluator	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:***

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING RADIATION DETECTION INSTRUMENTS

STUDENT NAME: **SKILL SHEET # 5**

Skill Objective: Given PPE (rubber gloves, eye and foot protection), a radioactive hazardous material, and a radiation detection instrument, the student will test the sample and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards of the given hazardous materials.

Items to be checked		***Pass/Fail***
If the candidate:		
	Radiation Detection Instruments	
1.	Selects appropriate meter from the monitoring equipment	
2.	Verbalizes capabilities, limiting factors, and operation of equipment	
3.	Removes the unit from storage case and insures the survey meter and probe are a matched/calibrated set	
4.	Ensures the unit is "OFF"	
5.	Opens battery compartment and install correct size batteries if required	
6.	If required, with the instrument in the "OFF" position, connects the detector/probe cable to the input connector of the instrument	
7.	If required, connects the detector/probe cable to the detector/probe by firmly pushing the connectors together	
8.	Turns the unit on	
9.	Operates radiation detection instrument according to specifications	
10.	Reports the correct reading in Counts/Sievert/Rem per hour to the evaluator	

NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6, 7.2.3.5 (CONTINUED ON NEXT PAGE)

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING RADIATION DETECTION INSTRUMENTS

STUDENT NAME: **SKILL SHEET # 5**

Items to be checked		***Pass/Fail***
If the candidate:		
11.	Turns the instrument off and removes the batteries if required	
12.	Allows the instrument to sit for a minimum of one minute before cleaning	
13.	Carefully cleans all external surfaces using a damp cloth (water only)	
14.	Removes the detector/probe from its cable and the detector cable from instrument and stores both in the unit's container	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.2.1.5, 7.2.1.3.5, 7.2.1.3.6

IDENTIFY AND MONITOR HAZARDOUS MATERIALS USING OTHER MONITORING EQUIPMENT SUPPLIED BY AHJ

STUDENT NAME: **SKILL SHEET # 6**

Skill Objective: Given PPE (rubber gloves, eye and foot protection), a hazardous material, and other equipment provided by the AHJ, the student will test the sample and verbalize the capabilities and limiting factors of the equipment. Then the student will demonstrate the proper techniques to identify the hazards of the given hazardous materials.

Instructor Note: In addition to the equipment provided during the delivery of the Hazardous Materials Technician Course, each student must be evaluated on at least one monitoring/detection device from the local Authority Having Jurisdiction.

Items to be checked		***Pass/Fail***
If the candidate:		
	Other equipment provided by the AHJ	
1.	Selects appropriate meter	
2.	Verbalizes capabilities, limiting factors, and operation of equipment	
3.	Field tests meter	
4.	Tests sample	
5.	Determines and reports results	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:***

HAZARDOUS MATERIALS/WMD TECHNICIAN

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections of NFPA 472-2013:

Hazardous Materials/Weapons of Mass Destruction Incidents Standard

7.1.2.2 In addition to being competent at both the awareness and the operations levels, the hazardous materials technician shall be able to perform the following tasks:
(3)*Implement the planned response to favorably change the outcomes consistent with the standard operating procedures and site safety and control plan by completing the following tasks:
(d) Perform the decontamination functions identified in the incident action plan

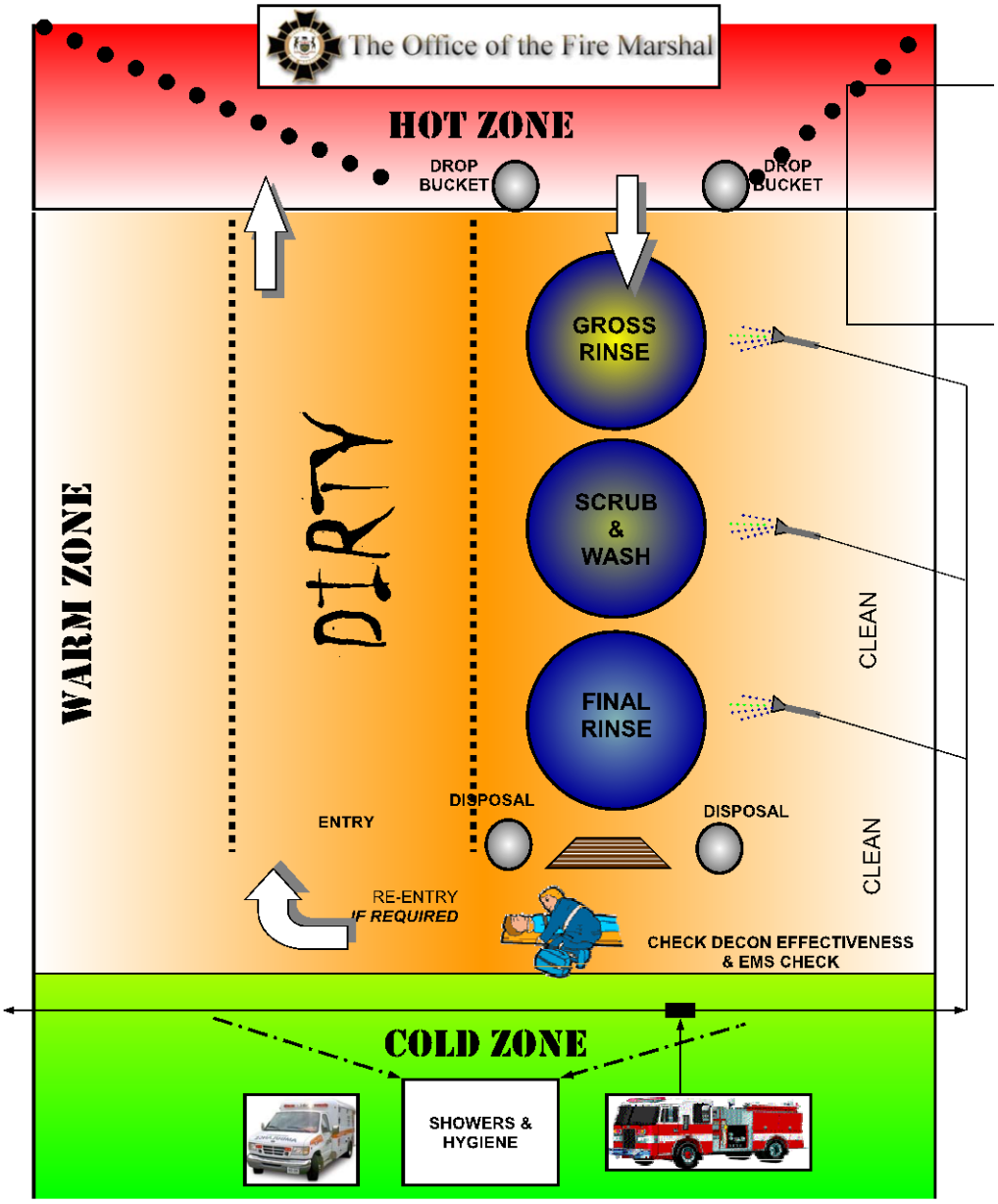
7.4.5* Performing Decontamination Operations Identified in the Incident Action Plan. The hazardous materials technician shall demonstrate the ability to set up and implement the following types of decontamination operations:
(1) Technical decontamination operations in support of entry operations
(2) Technical decontamination operations involving ambulatory and nonambulatory victims
(3) Mass decontamination operations involving ambulatory and nonambulatory victims

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (1)

PERFORM TECHNICAL DECONTAMINATION – ENTRY OPERATIONS

STUDENT NAME: **SKILL SHEET # 7**

Figure 1



TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (1)

PERFORM TECHNICAL DECONTAMINATION – ENTRY OPERATIONS

STUDENT NAME: **SKILL SHEET # 7**

Skill Objective: Given a scenario for the need to set up a decontamination corridor, Level B PPE, decontamination equipment, incident information and the team of 4, the students will set up each of the decontamination operations and perform decontamination operations as identified in the incident action plan. The student will have 30 minutes to complete all tasks for this decontamination operation.

Items to be checked		***Pass/Fail***
If the candidate:		
	Technical decontamination operations in support of entry operations	
1.	Establishes (according to Figure 1 on previous page):	
	a) Decontamination corridor location	
	b) Tool drop location	
	c) Gross decon rinse station	
	d) Scrub and wash decon station	
	e) Rinse decon station	
	f) PPE removal area	
	g) Respiratory protection removal area	
	h) Station for decon evaluation	
	i) Exit point	

NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (1) (CONTINUED ON NEXT PAGE)

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (1)

PERFORM TECHNICAL DECONTAMINATION – ENTRY OPERATIONS

STUDENT NAME: **SKILL SHEET # 7**

Items to be checked		***Pass/Fail***
If the candidate:		
	Technical decontamination operations in support of entry operations	
2.	Perform technical decontamination:	
	a) Monitors entry crew as enter decon corridor	
	b) Monitors entry crew through tool drop	
	c) Rinses entry crew in gross rinse decon station with special attention to hands and feet	
	d) Performs secondary decon with thorough scrub/washing station and rinse station	
	e) Monitors and assists entry crew with PPE removal and places PPE into bags or containers	
	f) Monitors and assists entry crew with respiratory protection removal	
	g) Assesses decon effectiveness through visual observations of personnel	
	h) Transfers entry crew to medical evaluation	
3.	Correctly performs all of the technical decon functions within 30 minutes	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

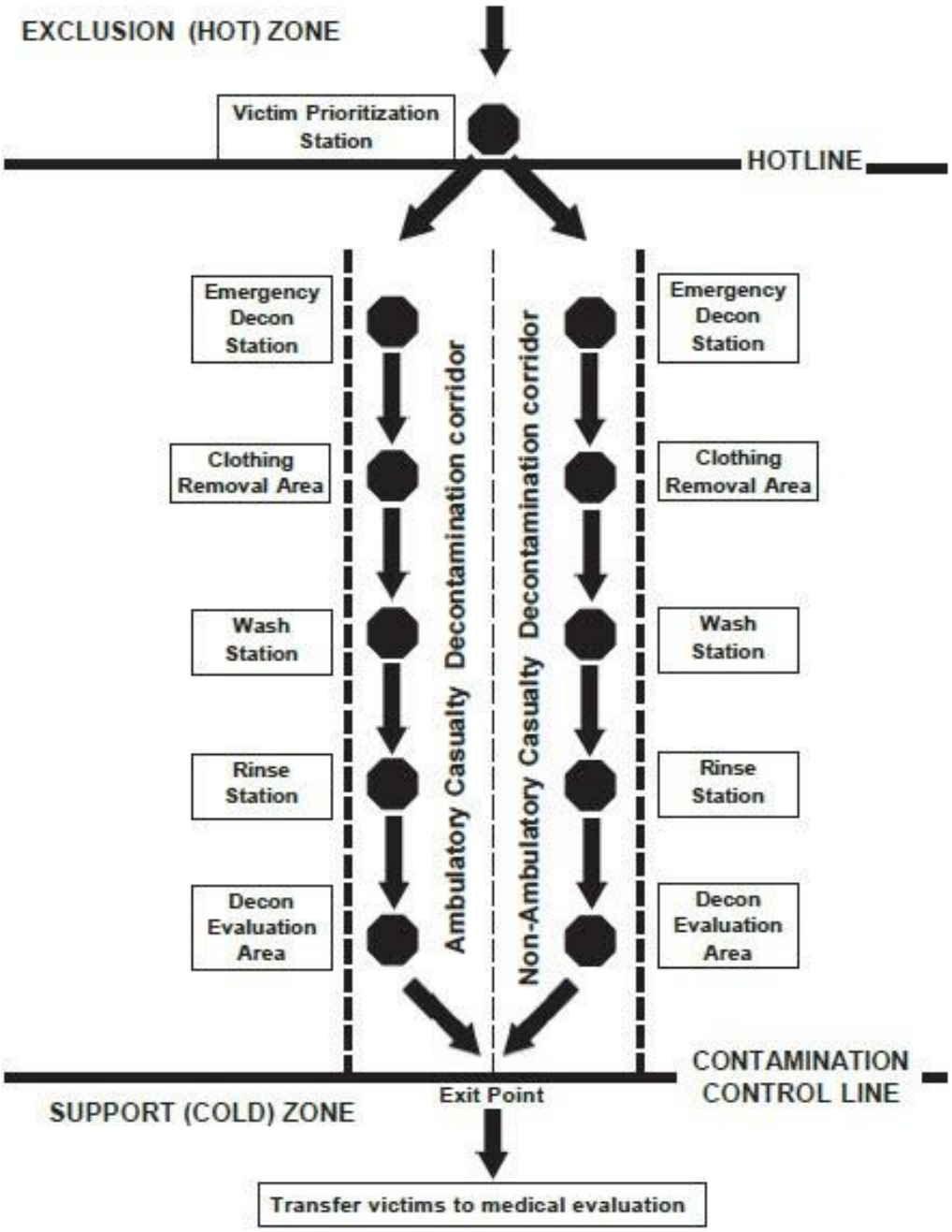
Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (2)

PERFORM DECONTAMINATION – VICTIMS AMBULATORY/NON-AMBULATORY

STUDENT NAME: **SKILL SHEET # 8**

Figure 2



TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (2)

PERFORM DECONTAMINATION – VICTIMS AMBULATORY/NON-AMBULATORY

STUDENT NAME: **SKILL SHEET # 8**

Skill Objective: Given a scenario for the need to set up a decontamination corridor, Level B PPE, decontamination equipment, incident information and the team of 4, the students will set up each of the decontamination operations and perform decontamination operations as identified in the incident action plan. The student will have 30 minutes to complete all tasks for this decontamination operation.

Items to be checked		***Pass/Fail***
If the candidate:		
	Technical decontamination operations involving ambulatory and non-ambulatory victims	
1.	Establishes (according to Figure 2 on previous page):	
	a) Decontamination corridor location	
	b) Victim prioritization station (triage)	
	c) Emergency decontamination station	
	d) Clothing and personal items removal area	
	e) Ambulatory victims wash and rinse stations	
	f) Non-ambulatory victims wash and rinse stations	
	g) Station for decon evaluation	
	h) Exit point	

NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (2) (CONTINUED ON NEXT PAGE)

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (2)

PERFORM DECONTAMINATION – VICTIMS AMBULATORY/NON-AMBULATORY

STUDENT NAME: **SKILL SHEET # 8**

Items to be checked		***Pass/Fail***
If the candidate:		
	Technical decontamination operations involving ambulatory and non-ambulatory victims	
2.	Perform technical decontamination:	
	a) Monitors victim's airway	
	b) Removes all clothing, jewelry, and shoes from victim	
	c) Rinses around the victim's face and head area	
	d) Ensures all fluids flow away from eyes and respiratory system	
	e) Rinses any wounds on victim	
	f) Systematically rinses victim from head to toe	
	g) Isolates any contaminated areas if whole patient is not contaminated	
	h) Assesses decon effectiveness through visual observations of personnel	
	i) Transfers victims to medical evaluation	
	j) Bags and tags all clothing and possessions	
3.	Correctly performs all of the technical decon functions within 30 minutes	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

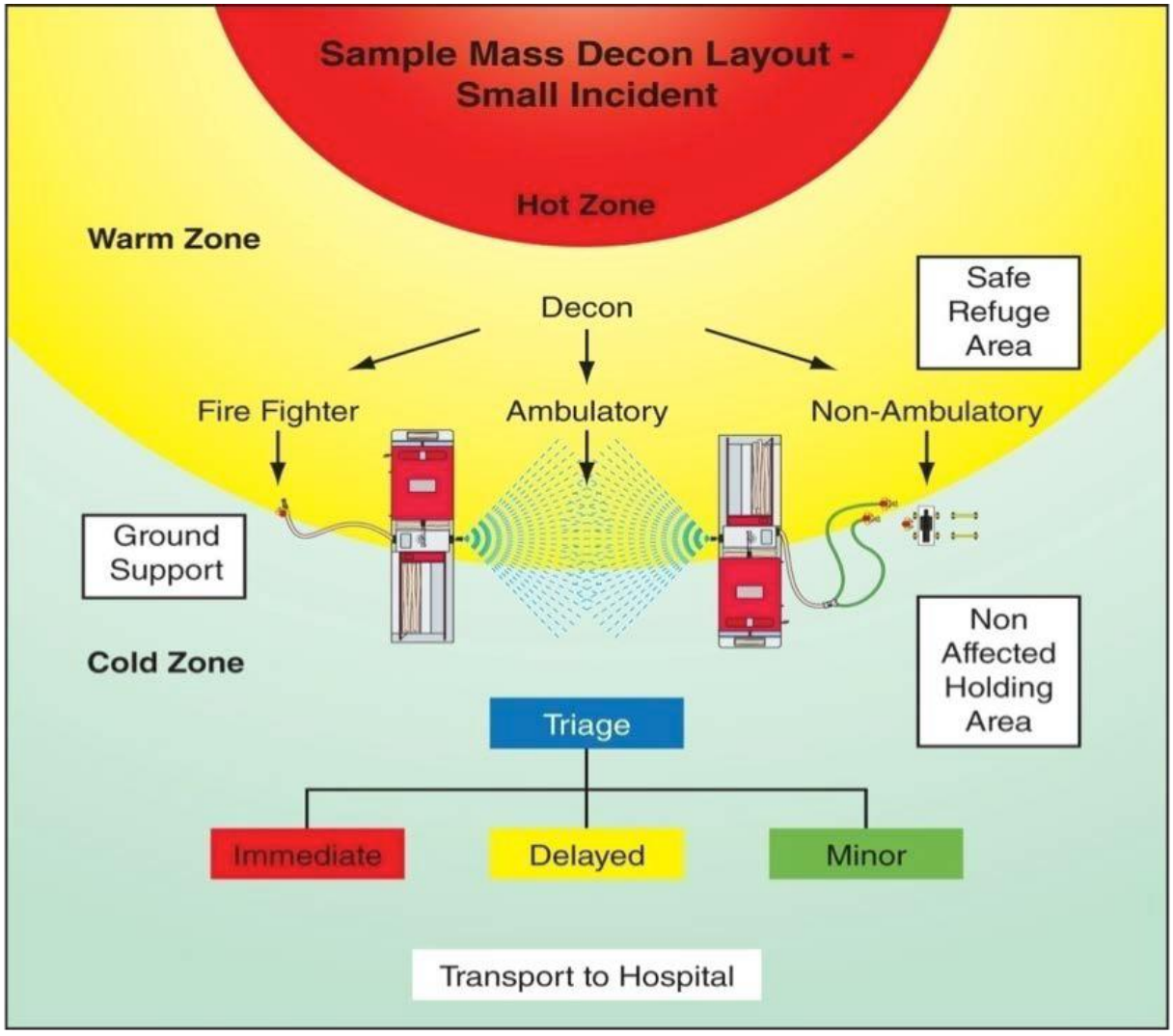
Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3)

PERFORM MASS DECONTAMINATION – VICTIMS

STUDENT NAME: **SKILL SHEET # 9**

Figure 3



TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3)

PERFORM MASS DECONTAMINATION – VICTIMS

STUDENT NAME: **SKILL SHEET # 9**

Skill Objective: Given a scenario for the need to set up a decontamination corridor, decontamination equipment, incident information and the team of 2, the students will set up each of the decontamination operations and perform decontamination operations as identified in the incident action plan. The student will have 15 minutes to complete all tasks for this decontamination operation.

Items to be checked		***Pass/Fail***
If the candidate:		
	Mass decontamination operations involving ambulatory and non-ambulatory victims	
1.	Establishes (according to Figure 3 on previous page):	
	a) Decontamination corridor location	
	b) Clothing and personal items removal area	
	c) Deploys water appliances with fog nozzles	
	d) States that high-volume, low-pressure streams are most effective	
	e) Station for decon evaluation	
	f) Exit point	

NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3) (CONTINUED ON NEXT PAGE)

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3)

PERFORM MASS DECONTAMINATION – VICTIMS

STUDENT NAME: **SKILL SHEET # 9**

Items to be checked		***Pass/Fail***
If the candidate:		
	Mass decontamination operations involving ambulatory and non-ambulatory victims	
2.	Performs mass decontamination:	
	a) Removes all clothing, jewelry, and shoes from victim	
	b) Monitors ambulatory victims as they move through corridor	
	c) Carries or assists other victims through corridor	
	d) Assesses decon effectiveness through visual observation	
	e) Transfers victims to medical evaluation	
3.	Correctly performs all of the decon functions within 15 minutes	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

HAZARDOUS MATERIALS/WMD TECHNICIAN

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections of NFPA 472-2013:

Hazardous Materials/Weapons of Mass Destruction Incidents Standard

7.1.2.2 In addition to being competent at both the awareness and the operations levels, the hazardous materials technician shall be able to perform the following tasks:
(3)*Implement the planned response to favorably change the outcomes consistent with the standard operating procedures and site safety and control plan by completing the following tasks:
(a) Perform the duties of an assigned hazardous materials branch or group position within the local incident management system (IMS)

7.1.2.2 In addition to being competent at both the awareness and the operations levels, the hazardous materials technician shall be able to perform the following tasks:
(3)*Implement the planned response to favorably change the outcomes consistent with the standard operating procedures and site safety and control plan by completing the following tasks:
(b) Don, work in, and doff personal protective clothing, including, but not limited to, both liquid splash– and vapor–protective clothing with correct respiratory protection

7.4.2 Using Protective Clothing and Respiratory Protection.
The hazardous materials technician shall demonstrate the ability to don, work in, and doff liquid splash–protective, vapor-protective, and chemical-protective clothing and any other specialized personal protective equipment provided by the AHJ, including respiratory protection, and shall complete the following tasks:
(3) Demonstrate the ability to don, work in, and doff self-contained breathing apparatus in addition to any other respiratory protection provided by the AHJ

7.4.2 Using Protective Clothing and Respiratory Protection.
The hazardous materials technician shall demonstrate the ability to don, work in, and doff liquid splash–protective, vapor-protective, and chemical-protective clothing and any other specialized personal protective equipment provided by the AHJ, including respiratory protection, and shall complete the following tasks:
(4) Demonstrate the ability to don, work in, and doff liquid splash–protective, vapor-protective, and chemical-protective clothing in addition to any other specialized protective equipment provided by the AHJ

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(B), 7.4.2 (3), 7.4.2 (4)

DON AND DOFF CHEMICAL PROTECTIVE CLOTHING

STUDENT NAME: **SKILL SHEET # 10**

Skill Objectives: Given Level A or B liquid splash-protective clothing and self-contained breathing apparatus, the team of 2, will demonstrate donning and doffing the protective clothing and respiratory protection. Completes donning Level A, Level B suit with assistance within 10 minutes.

Items to be checked		***Pass/Fail***
If the candidate:		
	Chemical Protective Clothing	
1.	Inspects chemical-protective liquid splash-protective clothing and respiratory protection prior to donning	
2.	Correctly dons protective clothing	
3.	Dons boots, uses tape to seal the gap at the boots and clothing if required	
4.	Dons respiratory protection	
5.	SCBA:	
	a) Checks the air cylinder to visualize the amount of air in the cylinder and opens the valve completely	
	b) Places the SCBA unit securely on his/her back	
	c) Adjusts both shoulder straps and waist strap	
	d) Dons facepiece and checks the facepiece seal and the exhalation valve	
6.	Donned gloves and instructs helper to use tape to seal the gap at the gloves and PPE clothing if required	
7.	Instructs helper to connect regulator to facepiece and goes on air	
8.	Completes donning with assistance within 10 minutes	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.4.3 (1), 7.4.3 (2)

PERFORM CONTROL FUNCTIONS FOR A PRESSURE VESSEL (150 LB.)

STUDENT NAME: **SKILL SHEET # 11**

Skill Objectives: Given PPE (leather gloves, eye and foot protection), a simulated leak in a 150 lb. pressure vessel and a Chlorine A Kit to control the leak, the team of 2 will be required to select appropriate equipment/materials then demonstrate appropriate methods to safely contain the leak. The team of 2 will be given 10 minutes to successfully contain a type of leak listed. AHJ to select one of the following leaks.

Items to be checked	***Pass/Fail***
If the candidate:	
1. Identifies source and type of leak	
2. **Fusible plug:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
3. **Fusible plug threads:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
4. **Side wall of cylinder:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
5. **Valve blow out:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
6. **Valve gland:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	

NFPA 472-2013, 7.4.3 (1), 7.4.3 (2) (CONTINUED ON NEXT PAGE)

TECHNICIAN – NFPA 472-2013, 7.4.3 (1), 7.4.3 (2)

PERFORM CONTROL FUNCTIONS FOR A PRESSURE VESSEL (150 LB.)

STUDENT NAME: **SKILL SHEET # 11**

Items to be checked		***Pass/Fail***
If the candidate:		
7.	**Valve inlet threads:**	
	a) Selects appropriate equipment/material(s) to contain leak	
	b) Successfully contains leak within 10 minutes	
8.	**Valve seat:**	
	a) Selects appropriate equipment/material(s) to contain leak	
	b) Successfully contains leak within 10 minutes	
9.	**Valve stem assembly blow out:**	
	a) Selects appropriate equipment/material(s) to contain leak	
	b) Successfully contains leak within 10 minutes	
10.	Safely handles equipment and product	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.4.3(1), 7.4.3 (2)

PERFORM CONTROL FUNCTIONS FOR A PRESSURE VESSEL (1 TON)

STUDENT NAME: **SKILL SHEET # 12**

Skills Objectives: Given PPE (leather gloves, eye and foot protection), a simulated leak in a 1 ton pressure vessel and a Chlorine B Kit to control the leak, the team of 2 will be required to select appropriate equipment/materials then demonstrate appropriate methods to safely contain the leak. The team of 2 will be given 10 minutes to successfully contain a type of leak listed. AHJ to select one of the following leaks.

Items to be checked	***Pass/Fail***
If the candidate:	
1. Identify source and type of leak	
2. **Fusible plug:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
3. **Fusible plug thread:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
4. **Side wall of cylinder:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
5. **Valve blow out:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	

NFPA 472-2013, 7.1.2.2 (3)(D), 7.4.5 (3) (CONTINUED ON NEXT PAGE)

TECHNICIAN – NFPA 472-2013, 7.4.3(1), 7.4.3 (2)

PERFORM CONTROL FUNCTIONS FOR A PRESSURE VESSEL (1 TON)

STUDENT NAME: **SKILL SHEET # 12**

Items to be checked	***Pass/Fail***
If the candidate:	
6. **Valve gland:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
7. **Valve inlet threads:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
8. **Valve seat:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
9. **Valve stem assembly blow out:**	
a) Selects appropriate equipment/material(s) to contain leak	
b) Successfully contains leak within 10 minutes	
10. Safely handles equipment and product	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.4.3 (1), 7.4.3 (2)

PERFORM CONTROL FUNCTIONS FOR A PRESSURE VESSEL (TANK CAR)

STUDENT NAME: **SKILL SHEET # 13**

Skill Objective: Given PPE (leather gloves, eye and foot protection), a simulated leak in a cargo tank car dome cover training simulator and a Chlorine C Kit to control the leak, the team of 2 will be required to select appropriate equipment/materials then demonstrate appropriate methods to safely contain the leak. The team of 2 will be given 10 minutes to successfully contain a type of leak listed. AHJ to select one of the following leaks.

Items to be checked	***Pass/Fail***
If the candidate:	
1. Identifies source and type of leak	
2. **Open valve leak:**	
a) Selects appropriate equipment to contain leak	
b) Successfully contains leak within 10 minutes	
3. **Missing plug leak:**	
a) Selects appropriate equipment to contain leak	
b) Successfully contains leak within 10 minutes	
4. **Loose plug leak:**	
a) Selects appropriate equipment to contain leak	
b) Successfully contains leak within 10 minutes	
5. Safely handles equipment and product	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:***

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(C), 7.4.3 (3) (A-D)

PERFORM CONTROL FUNCTIONS FOR A 55-GALLON DRUM

STUDENT NAME: **SKILL SHEET # 14**

Skill Objective: Given PPE (leather gloves, eye and foot protection), rubber plugs, wrenches, hardware kit, band-aid and bandages, plug and dike patching paste and a simulated leak of known material in a 55-gallon drum, working as a member of a team of 2, the student will be required to select appropriate equipment/materials then demonstrate the ability to safely contain a bung leak, chime leak, forklift puncture, and a nail puncture. The student will be given 10 minutes to successfully contain a type of leak listed. AHJ to select one of the following leaks.

Items to be checked		***Pass/Fail***
If the candidate:		
1.	Identifies source and type of leak	
2.	Selects equipment/material(s) to contain leak	
3.	**Bung leak (drum lying on side)**	
	a) Successfully contains leak	
	b) Moves drum to upright position after controlling leak within 10 minutes	
4.	**Chime leak (drum lying on side with leak at bottom)**	
	a) Position drum with leak in vapor space	
	b) Successfully contains leak within 10 minutes	
5.	**Forklift puncture (drum in upright position)**	
	a) Successfully contains leak within 10 minutes	
6.	**Nail puncture (drum in upright position)**	
	a) Successfully contains leak within 10 minutes	
7.	Works as a member of the team	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(C), 7.4.3 (4) (A-C)

PERFORM CONTROL FUNCTIONS THROUGH OVER PACKING A 55-GALLON DRUM

STUDENT NAME: **SKILL SHEET # 15**

Skill Objective: Given PPE (leather gloves, eye and foot protection), an overpack drum, a simulated leak of known material in a 55-gallon drum, working as a member of a team of 2, the student will demonstrate the ability to safely contain this leak utilizing an overpack drum. The student will be given 10 minutes to successfully contain a type of leak listed. AHJ to select one of the following leaks.

Items to be checked	***Pass/Fail***
If the candidate:	
1. Identifies source and type of leak	
2. Prepares overpack drum	
3. Moves 55-gallon drum so leak is on top	
4. Places overpack drum into position	
5. **Rolling slide-In Method**	
c) Places leaking drum into overpack drum using rolling slide-in method	
d) Secures lid on overpack drum within 10 minutes	
6. **Slide-In Method**	
c) Places leaking drum into overpack drum using slide-in method	
d) Secures lid on overpack drum within 10 minutes	
7. **Slip-Over Method**	
b) Places leaking drum into overpack drum using slip-over method	
b) Secures lid on overpack drum within 10 minutes	
8. Works as a member of the team	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (3)(A), 7.1.2.2 (3)(C), 7.4.3 (8)

PERFORM CONTROL FUNCTIONS FOR A MC-306/DOT-406

STUDENT NAME: **SKILL SHEET # 16**

Skill Objective: Given PPE (leather gloves, eye and foot protection), a MC-306/DOT-406 cargo tank simulator with water (simulating a product) spilling out of the dome cover, a dome cover clamp and grounding equipment, each team of 2 will be required to correctly install the dome cover clamp on the dome and stop the loss of product. Each team will be given 10 minutes to complete this skill.

Items to be checked		***Pass/Fail***
If the candidate:		
1.	Describes appropriate level of PPE to be worn for this type of hazard	
2.	Approaches cargo tank or simulator in a safe manner	
	a) Verbalizes that a request for a blanket of foam on product	
	b) Verbalizes that the incident is approached from uphill, upwind	
3.	Successfully follows grounding order	
	a) Attaches ground clamp and cable to suitable location on cargo tank	
	b) Retreats from cargo tank in a safe manner	
	c) Drives ground rod into earth to appropriate depth with proper tool	
	c) Attaches grounding cable to ground rod	
4.	Successfully installs dome clamp	
5.	Checks to see if leak is controlled, repositions clamp if necessary	
6.	Completes the task within 10 minutes	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

HAZARDOUS MATERIALS/WEAPONS OF MASS DESTRUCTION TECHNICIAN (NFPA 472-2013) ***PRACTICAL SKILLS***

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (2)(E), 7.1.2.2 (3)(A), 7.1.2.2 (5)(C), 7.6.3 (2)

DEVELOPING AN INITIAL ACTION PLAN AND COMPLETING REPORTS

STUDENT NAME: **SKILL SHEET # 17**

Skill Objective: Given the scenario of a hazardous materials incident at the front of the booklet, the student will complete the appropriate reports to develop an Initial Action Plan.

Items to be checked		***Pass/Fail***
If the candidate:		
1.	Evaluates initial size-up information and available resources	
2.	Develops an Initial Action Plan and completes the proper ICS forms	
3.	Details deployment of resources to control emergency on scene diagram	
4.	Utilizes resources in a reasonable, safe and prudent manner	
5.	Maintains supervision and accountability for personnel	
6.	Follows safety policies and procedures	
7.	Implements and operates within the Incident Management System	
8.	Uses resources effectively to mitigate incident	
9.	Completes report forms	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

HAZARDOUS MATERIALS/WMD TECHNICIAN

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections of NFPA 472-2013:

Hazardous Materials/Weapons of Mass Destruction Incidents Standard

7.1.2.2 In addition to being competent at both the awareness and the operations levels, the hazardous materials technician shall be able to perform the following tasks:
(5) Terminate the incident by completing the following tasks:
(a) Assist in the incident debriefing

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (5)(A)

ASSIST IN THE INCIDENT DEBRIEFING

STUDENT NAME: **SKILL SHEET # 18**

Skill Objective: Given the scenario of a hazardous materials incident at the front of the booklet, the student will complete the Incident Debriefing outline provided.

Items to be checked		***Pass/Fail***
If the candidate:		
1.	Identifies the substance(s) involved in the incident	
2.	Identifies the signs and symptoms of exposure to the involved substance(s)	
3.	Describes the guidance to personnel if signs and/or symptoms occur	
4.	Reviews any equipment and apparatus exposure which may have occurred	
5.	Describes decontamination procedures for any equipment and apparatus	
6.	Describes any problems requiring immediate attention	
7.	Thoroughly completes the "Incident Debriefing" form	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (5)(A)

ASSIST IN THE INCIDENT DEBRIEFING

STUDENT NAME: **SKILL SHEET # 18**

INCIDENT DEBRIEFING

Incident Date:	**Incident Time:**
Incident Location:	
Substance(s) Involved:	

Health Information
Signs and symptoms of exposure:
If signs and/or symptoms occur, guidance to personnel:

Equipment and apparatus exposure review:
Decontamination procedures:

Problems requiring immediate attention:

HAZARDOUS MATERIALS/WMD TECHNICIAN

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections of NFPA 472-2013:

Hazardous Materials/Weapons of Mass Destruction Incidents Standard

7.1.2.2 In addition to being competent at both the awareness and the operations levels, the hazardous materials technician shall be able to perform the following tasks:
(5) Terminate the incident by completing the following tasks:
(b) Assist in the incident critique

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (5)(B)

ASSIST IN THE INCIDENT CRITIQUE

STUDENT NAME: **SKILL SHEET # 19**

Skill Objective: Given the scenario of a hazardous materials incident at the front of the booklet, the student will complete the Incident Critique form provided.

Items to be checked	***Pass/Fail***
If the candidate:	
1. Describes the situation found	
2. Identifies the strategic goals for the incident	
3. Identifies if the strategic goals for the incident were accomplished	
4. Identifies the tactical objectives for the incident	
5. Describes an assessment of resources for the incident	
6. Describes any unique aspects of the response	
7. Identifies what operations could have been improved	
8. Thoroughly completes the "Incident Critique" form	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade: ☐ ***Pass*** ☐ ***Fail***

Evaluator's Signature: _____ ***Date:*** _____

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (5)(B)

ASSIST IN THE INCIDENT CRITIQUE

STUDENT NAME: **SKILL SHEET # 19**

INCIDENT CRITIQUE	
Incident Date:	**Incident Time:**
Incident Location:	
Substance(s) Involved:	
Situation Found:	
Strategic Goals:	
Strategic Goals Accomplished:	
Tactical Objectives:	

TECHNICIAN – NFPA 472-2013, 7.1.2.2 (5)(B)

ASSIST IN THE INCIDENT CRITIQUE

STUDENT NAME: **SKILL SHEET # 19**

INCIDENT CRITIQUE

Assessment of Resources:

Unique Aspects of the Response:

What Operations Could Have been Improved: