FEB 6 '15 PM 3:29

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BUSINESS CENTER
144 Ferguson Road

MAIL
P.O. Box 6570
Auburn, CA 95604

EMAIL
pcheney@pcwa.net

(p) (530) 823-4958
(f) (530) 823-4989
(c) (530) 863-6560

PCWA
water • energy • stewardship

PETER CHENEY, ARM-P, CECD
Risk and Safety Manager

Placer County Water Agency

SAFETY AWARD PROGRAM NATION FORM

ACWA - JPIA

FEB 23 2015

OPS-MX

Agency: PCWA

Employee Nominated: Name: Confined Space Rescue Team: Ken Hodkin, Matt Taylor, Rich Gauthier, Dan Wills, Cody Coleman, Don Miller, and Sean Lomen

Job Classification: In order of above: Lead Treatment Plant Operator, Treatment Plant Operator III, Water Quality Mechanic, Water Quality Mechanic, Distribution Operator, Distribution Operator, and Facilities Maintenance Coordinator

Reason for Nomination: See Attached

Nominated by: Andrew Hamilton

Signature:

Date: 2/5/2015

General Manager:

Date: 2/19/15

Please attach supporting documents and/or digital photos and email to:

tlofing@acwajpia.com

ACWA/JPIA
P.O. Box 619082
Roseville, CA 95661-9082
FAX: (916) 774-7040

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Reason For This Nomination:

In the past, all of our confined space entries relied on either a local fire department or Cal Fire to act as rescue. Changes to laws governing confined space rescue have put many agencies in a bind. Confined space rescue can still be executed by fire departments, but only if those departments train in our facilities and on our equipment. Let's be honest, if we needed to call for an emergency, would help arrive fast enough? Faced with that question, six individuals, that work with either directly or indirectly, have taken on the challenge and responsibility to keep themselves and their fellow employees safe. *Ken Hodkin, Matt Taylor, Sean Lomen, Cody Coleman, Rich Gauthier, and Daniel Wills* have all stepped up to a great challenge. Ken, Matt, Sean, Cody, Rich, and Daniel all finished a week long training series in the Bay Area that gave them the privilege and responsibility to become PCWA's first confined space rescue team. Now that this initial training is finished, there are certain things that the guys have to do. Monthly practical's, annual refreshers, SCBA training and first aid, which are required to keep up-to-date on the certification, are just a few of those things. Expertise and self-reliance is the goal.

Jon Miller

The Water Quality Division prides itself on being a group that everyone within the Agency can rely on. With Administration's help and guidance we continue to move in that direction. Financing such an endeavor is not cheap and with the help of Finance and the Board, money was made available to move the team forward. Secondly, Administration saw the importance of this valuable training. Without Administration helping in the organization and implementation of these classes we would not be where we are today.

I want to thank the six people that have stepped up to the challenge of being on this team. When I started to look for people to do this, it didn't take long to see that these six people cared not only about themselves, but for the Agency as a whole. All six volunteered and I had to turn others down; which means good things for our future. I am proud to say that I work with them and I am proud to say that these guys work within the Water Quality department. It takes a special type of person and employee to put themselves "out there" the way these gentlemen did. Again, these six individuals are the "experts" in confined space and confined space rescue. Please take a moment to honor or thank them for their efforts with this award.

Andrew Hamilton

Water Treatment Plant Operations Supervisor

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Confined Space Rescue Command Checklist

Examples of forms that the Rescue Team developed with our Rescue consultant Mike Estep with Rescue Tech Health and Safety Services.

Phase I - Size-up

Primary Assessment

- ❑ Secure witness or competent person
- ❑ Identify immediate hazards
- ❑ Location number, condition of victims
- ❑ Secure entry permit

Secondary Assessment

- ❑ What type of space
- ❑ Products in space
- ❑ Hazards; atmospheric, mechanical, electric
- ❑ Diagram of space
- ❑ Structural stability of space
- ❑ Proper personnel and equipment on scene
- ❑ Additional resources necessary
- ❑ Atmospheric monitoring; ventilation, respiratory, retrieval system
- ❑ Rescue or recovery

Phase II - Pre-Entry Operations

Make general area safe

- ❑ Establish perimeter
- ❑ Evacuate if necessary
- ❑ Traffic/crowd control

Make Rescue Area safe

- ❑ Establish lobby control accountability
- ❑ Test atmosphere; oxygen, flammable, toxic
- ❑ Ventilate if necessary
- ❑ Secure hazards; lock-out, tag-out

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CONFINED SPACE RESCUE PERMIT

This permit shall be completed and remain at the rescue site for the duration of the rescue operation and kept on file for one year following the event. Asterisk denotes a mandatory component.

Incident Number:	Incident Name:	Date/ Time:
*Incident Location:		
*Rescue Start Date and Time:	*Rescue End Date and Time:	
*Description/ Use of Confined Space:	*Facility Contact:	
*Special Potential Hazards:		

-ICS Assignments-	
*Entry Supervisor:	*Attendant:
*Authorized Entrant # 1:	*Back-up Entrant # 1:
Authorized Entrant # 2:	Back-up Entrant # 1:
Air Monitoring :	Safety Officer:
Air Supply:	Rigger:

Pre-Entry Checklist

- ☐ Operations Perimeter Set-up
- ☐ Atmospheric Monitoring
- ☐ Ventilation
- ☐ Eliminate Ignition Sources
- ☐ Confirm Lock-out / Tag-out
- ☐ Provide Lighting
- ☐ Respiratory Protection
- ☐ Protective Clothing
- ☐ Communications
- ☐ Pre-Entry Briefing

Communication Plan

- ☐ Visual/ Hand Signals
- ☐ Voice
- ☐ Radio (Intrinsically Safe)
- ☐ Rope Signals (O.A.T.H.)
- ☐ Hardwire

Ventilation Plan

- ☐ Natural
- ☐ Forced Exhaust
- ☐ Forced Supply
- ☐ Micro-Atmosphere
- ☐ Other:

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ENTRY LOG

Entrant	Entry Time	SCBA Pressure	SAR Pressure	Exit Time

Hazards and Exposure Limits

Gas	Physical Characteristics	Flammability LEL	Toxicity	[1]Symptoms
Carbon Monoxide CO	Colorless Odorless	12.5% 125,000 PPM	IDLH 1000 PPM	Headache, nausea, dizz., tachypnea
Carbon Dioxide CO2	Colorless Odorless	Non-Flammable	IDLH 50,000 PPM	Headache, dizz., restless, sweat, dyspnea
Methane CH4	Colorless Odorless	5%		
Hydrogen Sulfide H2S	Colorless Rotten-Egg Odor	**4%** 40,000 PPM	**IDLH** 300 PPM	Eye irritation, resp. irritation, headache
Sulfur Dioxide SO2	Colorless Suffocating Odor	Non-Flammable	IDLH 100 PPM	Eye, nose, throat irritation, cough, skin burns
Nitrogen Dioxide NO2	Yellow/Brown Pungent Odor	Non-Flammable	IDLH 50 PPM	Cough, frothy sputum, eye irritation

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Pre-Entry Briefing

Prior to entry a pre-entry briefing shall be performed with all key personnel, this includes, but is not limited to:

	Entrant		Attendant
	Back-Up Entrant		Entry Supervisor

The following information will be reviewed prior to entry.

	The hazards which may be encountered specific to this entry.
	The primary and back-up communications plan.
	A confirmation that the entrant has all equipment needed to perform a successful entry, and is trained on all of the equipment.
	A review of any potential self-rescue plans if possible.

Notes:

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Atmospheric Monitoring Results

Monitoring results to be taken at 4 foot increments

Date	Time	Increment in Space	Oxygen Level (%)	LEL (%)	H_2S (ppm)	CO (ppm)	Initial
		1 = 4ft					
		2 = 8ft					
		3 = 12ft					
		4 = 16ft					

Name: (Print): _____

Signature: _____

Date: _____

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Lanyard Inspection Criteria

Serial Number: _____

Inspection Date: _____

MFG Date: _____

	Yes	No
Is the manufacturer label detached or unreadable?	☐	☐

Webbing

Cuts	☐	☐
Frays	☐	☐
Abrasions/Burns	☐	☐
Chemical/UV degradation	☐	☐
Mildew/Mold	☐	☐
Knots in lanyard	☐	☐
Popped flag/undue stretching	☐	☐
Pulled/cut/missing stitching	☐	☐

Double Latch Hook

Double lock defective	☐	☐
Deformed	☐	☐
Corrosion/Rust	☐	☐
Chemical degradation	☐	☐

Snap Hook

Distortion (twists, bends)	☐	☐
Rust or corrosion	☐	☐
Excessive wear	☐	☐
Latch keeper damaged	☐	☐
Rough/sharp edges	☐	☐
Opens without releasing lock	☐	☐

If any of the above boxes are checked YES, immediately take harness out of service.

_____

Signature of Inspector

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Rope Use Log

(THIS ROPE MEETS NFPA STANDARDS FOR LIFELINE USE)

Color:	**Type:**	**Length:**	**Diameter:**
Manufacturer:	**Model:**	**Lot#**	**Strength:**
Manufacturer Date (5 Year Life):		**In Service Date**	**Page #**

Show any cuts, abrasions, soft spots or frayed ends in the line to the competent person inspector before bagging it

Date	Incident # and Location or Training Location	How Used or Maintained	# of Uses	Type of Load	Observations	Print Name

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Full Body Harness Inspection Criteria

Make & Model: _____

Serial Number: _____

Inspection Date: _____

MFG Date: _____

	Yes	No
Is the manufacturer label detached or unreadable?	☐	☐

Webbing

Cuts/nicks/tears	☐	☐
Broken fibers/cracks	☐	☐
Fraying/abrasions	☐	☐
Damaged stitching	☐	☐
Chemical/UV degradation	☐	☐
Burns	☐	☐
Excessive hardness/brittle	☐	☐
Marked with permanent market	☐	☐

Stitching

Pulled stitches	☐	☐
Missing/damaged	☐	☐
Cut stitches	☐	☐
Hard or shiny spots (heat damage)	☐	☐

Hardware

Distortion (twists, bends)	☐	☐
Rust or corrosion	☐	☐
Broken/distorted grommets	☐	☐
Modification by user (i.e. Additional holes)	☐	☐
Tongue bent	☐	☐
Dee ring twists/bends	☐	☐

If any of the above boxes are checked YES, immediately take harness out of service.

_____

Signature of Inspector

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Fall Arrest Rescue Plan

Date: _____ **Job Description:** _____

Location: _____

_____

Contacts

Rescuer(s) _____

_____

Competent Person _____

Emergency Contact _____

Method of Contact:

☐ PA ☐ Verbal/Face to face

☐ Radio Channel: _____

☐ Phone Number: _____

☐ Other _____

Rescue Equipment

☐ Ladder ☐ Block & Tackle

☐ Rescue Pole ☐ First Aid Kit

☐ Rescue Rope ☐ Life Ring

☐ Spider ☐ Work Vest

☐ Scaffold ☐ (Cutting Device)

☐ Stokes Litter

☐ Alternative Lifting & Lowering Device

Location of Equipment:

☐ Job Site ☐ Gang Box

☐ Tool House ☐

Critical Rescue Factors

Anchor Point _____

_____

_____

Landing Area _____

_____

_____

_____

_____

_____

_____

Rescue Obstructions/Hazards

_____

_____

_____

_____

Check for Yes	Comment
☐ Have alternatives to using fall arrest equipment been considered?	
☐ Has rescue equipment been inspected and found in good shape?	
☐ Is equipment adequate for the rescue plan (weight ratings, length, connection type, etc.)?	
☐ Have communication devices been identified, located, & tested?	
☐ Are all rescuers familiar with the use of the rescue equipment?	
☐ If working over water, is there a boat available?	

Pre Work Tasks:

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

Response Procedure:

1) Notify Emergency Contact. _____

_____

2) Make medical assessment of person. _____

_____

3) _____

_____

4) _____

_____

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ON-SITE RESCUE PROCEDURES

The attached On-Site Rescue Plan and these Procedures are part of the written plan for the confined space and are based on the assessment of hazards in this space.

Prior to entry and/or work in the confined space:

1. The entry supervisor will ensure that the attached "on-site rescue plan" for the confined space has been completed and that all the rescue equipment identified in the plan is available to effect a rescue in the confined space.

2. The entry supervisor will ensure that an adequate number of appropriately trained persons (as documented in the attached "on-site rescue plan") are available for immediate implementation of these on-site rescue procedures that apply to the confined space.

3. The entry supervisor will review all emergency procedures, including procedures relating to emergencies outside the confined space with all entrants and other related personnel.

4. The attendant establishes communication with all workers, using the means described in the attached "on-site rescue plan".

On entry and while working in the confined space:

1. The attendant who is stationed outside and near the entrance to the confined space as described in the attached "on-site rescue plan" remains in constant communication with all workers inside the confined space.

2. The attendant must be notified immediately if an entrant recognizes:

   - unusual action/ behavior
   - an unexpected hazard
   - an unsafe act or
   - detects a condition prohibited by the permit

3. Entrants must exit the confined space as quickly as possible, when:

   - an order to evacuate is given by the attendant or entry supervisor
   - an entrant recognizes a sign or symptom of over-exposure
   - an unacceptable condition arises or
   - An evacuation alarm is activated.

In the event of a confined space rescue:

1. The attendant does not enter the confined space but immediately summons a rescue response from the on-site rescue team, using the means of communication described in the attached "on-site rescue plan".

Additional Comments:

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ON-SITE RESCUE PLAN

Confined Space Name/Location: **Identification #:** **Date:**

Attendant: **Employer:**

Employer:_____ 2) _____

On-Site Rescue Personnel/Designation: 3) _____

1)_____ 4) _____

Methods of Communication: Attendant to Rescue Personnel:- O Phone O Audible Signal O Radio O Intercom

Attendant to workers: O Phone O Radio O Intercom O Audible SignalO Visual Hand Signal O Rope Signal

Methods of Rescue: O External (Retrieval) O Internal:_____O Congested: _____

O Hauling System Required:_____O Patient lowering system required/lowering area: _

O Anchor overhead: _____

_____ Anchorage: O Beam O

Stairwell O Support Strut O Support Column O Other: _ Pre-Rigging required? O Yes O No

Rescue Equipment Requirements (check a where applicable below and indicate quantity needed):

O Hauling Systems:____ O Carabineers:___ O Pulleys:_____ O Shock absorbers/lanyards: _____

O Anchor Straps:_____ O Webbing:_____ O Ascenders:_____ O Body Harnesses: _____

O Rigging Plates:_____ O Safety Lines:_____ O Main Lines:_____ O Wrist/Ankle Harnesses: _____

O Fire Extinguishers:_____

Rescue Equipment Inspections

Identified rescue equipment inspected by competent worker:_____Employer: _____

Record of inspection(s) attached O Yes

Medical Equipment Requirements (check a where applicable below and indicate quantity needed):

O First Aid Kit:_____ O Packaging Device:_____ O O

Additional PPE Requirements (Indicate what is needed):

O High Visibility Vests O Hearing Protection O Safety Boots O Hard Hats O Safety Glasses/Goggles O Gloves

O Face Shield O O

Description of Space (include location of attendant):

Diagram of Space (Use Back of Page if needed):

Completed by:_____O Entry Supervisor O Attendant O Other:_____ **Date:**

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Rescue Tech
Health and Safety Training
P.O. Box 484 Pollock Pines, Ca. 95726
530-417-6211/rescuetech@comcast.net

Confined Space Rescue

Course Description:

This course teaches students how to conduct a variety of rescues in permit-required confined spaces. Students will learn how to develop and update pre-plans, conduct rescues, inspect and maintain equipment, and coordinate with other emergency responders. This training will primarily consist of 95% hands-on field training and is 40-hours in length . Meets compliance requirements of 29 CFR 1910.146 and Cal Osha Title 8 Article 108 Section 5156-5157.

Course Outline Confined Space Rescue

Rope Rescue Equipment

Safety Ratios
Software
Hardware

Equipment

Software Inspection and Maintenance
Hardware Inspection and Maintenance
Rope Care and Maintenance
Webbing/Harnesses

Knots and Hitches

Figure Eight Family of Knots
Safety Knots
Other Knots
Hitches

What they learned.

Rescue Systems

Anchoring
Mainlines
Belays
Fall Arrest Forces
Mechanical Advantage Systems
Rappel Systems

Rescue Fundamentals

Types of Industrial Rescues
Rescue Team Structure
Regulations And Standards

Pre-planning

Sample Rescue Pre-plan
Why Pre-plan?
Pre-plan Content and Scope

Rescue Process

Scene Assessment (Size up)
Hazard Identification & Isolation
Entry Team Preparation
Making The Entry
Patient Evaluation And Care
Patient Retrieval

Prerequisites: Before attending this class, students need to have completed Permit-Required Confined Space Entry and Fall Protection training. In addition, it is preferable if students have had previous training in First Aid/CPR, respiratory protection, and hazardous materials.

Tuition: $ (Based on student numbers) | **Days:** 5 | **Times:** 0800 – 17:00 |

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