CPWR TECHNICAL REPORT

Design of a Portable Safety Database for Construction

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CPWR | THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

CPWR is a 501(c)(3) nonprofit research and training institution created by the Building and Construction Trades Department, AFL-CIO, and serves as the research arm of the BCTD.

CPWR provides safety and health research and information for the construction trades and industry. For more information, visit www.cpwr.com.

ABSTRACT

The goal of this study was to bring together labor unions and employers in the New York City construction industry to design a portable health and safety database that can be used to keep track of personal protective equipment tests, results of medical surveillance, and safety and health training certifications. A portable database is a database that is "carried" with a worker from job to job, in the same way that their cards or paperwork would be. By making the database internet-accessible by any participating employer, contractors can rely on training and personal protection that was provided by an approved organization (such as an apprenticeship training program). They can speed the hiring process, avoid duplication of effort, and compare hearing tests from one job to the next.

We held a series of meetings with some of the major construction union and contractor organizations to compile information on what databases were currently in use and what they saw as the major advantages and obstacles of compiling a shared database. We also compiled information on some of the shared construction and health and safety databases in other parts of the country.

Although we did not manage to get buy-in from trade unions and contractors city-wide, we were successful in identifying a key union, Laborers International Union of North America Local 78, and their corresponding contractors' association, who are interested and committed to developing a shared database in 2012. We worked with Local 78, which represents 4,000 laborers who handle lead, asbestos, and other hazardous materials; and the Environmental Contractors Association, which represents 49 environmental remediation companies in the New York area, to create an initial design. Several relevant enforcement agencies agreed to cooperate on the project in the future. We believe this database could be a demonstration project for others in the construction industry.

We developed a model of how the database would be accessed from a smart phone or other electronic device. Contractor, member and administrator screens can be observed by clicking on the following link and clicking on any links that are colored brown: http://safetycred.c-arts.com/.

Table of Contents

1. KEY FINDINGS

The top 5 key findings in order of importance are:

- Parameters of a portable health and safety database that can be accessed from a smart phone or other electronic device were designed by a hazardous materials removal union and their contractors' association.
- With input from the union and contractors' association, a model of the database was produced for member, contractor, and administrator screens (see Figure 1, 2 and 3, or go to http://safetycred.c-arts.com/ and follow the brown links).
- Obstacles and incentives for creating a larger database that would include data from other unions and contractors were identified.
- Some of the important databases currently in use in New York City were identified and described.
- Some portable, shared, health and safety databases in use or in the planning stages for the construction industry outside of New York City were identified and described.

FIGURE 1   Model of portable health and safety database - Member Screens

SafetyCred *for Members*

Name: Edison Severino
Login info:
    Login ID: edisonseverino1245
    Password: secretsecret

Explanation of what the system does and how to use it

Suggestion that they bookmark the login URL (www.safetycred.org/member) and store their login information in their smartphone.

Member Interface Screen 1
www.safetycred.org/members

SafetyCred *for Members*

   Login ID: _____
   Password: _____
    __ Remember me

     Login ID format: johndoe9876
     Can't access your account?

              Submit

About SafetyCred.org for Members
Request an account

Member Interface Screen 2

SafetyCred *for Members*

About SafetyCred for Members

SafetyCred is a website for Laborers Local 78 members. It allows you, your union, and your employers to check the status of your safety and health credentials and other information including trainings, licenses, respirators, and hearing tests. Documents needed by your employers can be sent by computer or smart phone.

              Request an account

SafetyCred *for Members*

Request An Account

Note: Accounts are presently available to members of Laborers Local 78. If you are not a member of Local 78, we cannot issue you an account.

Last Name: _____
First Name: _____
Member ID#:_____
Home Phone: _____
Mobile Phone: _____
E-mail: _____
Comments:
_____
_____
_____

submit

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

* MAIN *

Notifications
    Credentials that expire soon
    Messages
    Available Jobs

View My Credentials

Send Credentials to a Contractor

Report My Work Availability

Update Account Info & Preferences
Contact webmaster

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

View My Credentials

    PictureID [View PDF]
    Respirators
    Noise
    HazMat
    Asbestos Licenses
    Trainings

Credentials - complete set:
    download   e-mail   print

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

View My Credentials: Respirators

Respirator Medical Evaluation
    Date: 11/11/93
    Cleared: Yes
    Limitations/Conditions: None
    [view PDF]

Respirator Trainings

    Expires: 11/11/10
    Passed: Yes
    Employer: 3 D's Construction
    Trng Org: Mason Tenders Fund
    [view PDF]

Respirator Fit Test
    Expires: 11/11/93
    Make: MSA
    Model: 6000
    Size: Medium
    [view PDF]

Respirators credential set:
    download   e-mail   print

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

View My Credentials: Noise

Audiometric Test
    Date, last: 01/24/11
    Next - due date: 01/24/12
    Most recent report [view PDF]
    Previous report [view PDF]

Noise Trainings

    Job Class: Laborer
    Topic: Hearing Conservation
    Trng Org: University of Potsdam
    [view PDF]

Noise credential set:
    download   e-mail   print

back

SafetyCred *for Members*

<u>logout</u>

logged in as: edisonseverino1245

View My Credentials: HazMat

Last Medical Exam
    Date: 04/20/11
    Cleared: Yes
    Limitations/conditions: none
    [<u>view PDF</u>]

HazMat Trainings

    Topic: 40 Hr Hazwoper
    Date: 02/13/05
    Trng Org: Mason Tenders
    [<u>view PDF</u>]

    Topic: 8 Hr Hazwoper refresher
    Expires: 03/06/11
    Trng Org: Mason Tenders
    [<u>view PDF</u>]

HazMat credential set:
    <u>download</u>   <u>e-mail</u>   <u>print</u>

<u>back</u>

SafetyCred *for Members*

<u>logout</u>

logged in as: edisonseverino1245

View My Credentials: Asbestos Licenses

New York City Asbestos Handler
    License: 43567   Exp: 03/29/11
    [<u>view PDF</u>]

New York State Asbestos Handler
    License: 33356   Exp: 03/29/11
    [<u>view PDF</u>]

New York City Asbestos Supervisor
    License: 43567   Exp: 04/01/12
    [<u>view PDF</u>]

Asbestos Licenses credential set:
    <u>download</u>   <u>e-mail</u>   <u>print</u>

<u>back</u>

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

View My Credentials: Trainings

Topic: 40 Hr Hazwoper
Date: 02/13/05   [view PDF]
Trng Org: Mason Tenders

Topic: 8 Hr Hazwoper refresher
Expires: 03/06/11   [view PDF]
Trng Org: Mason Tenders

Topic: OSHA 10 hour
Date: 11/20/09   [view PDF]
Trng Org: Mason Tenders

Topic: OSHA 10 hour refresher
Expires: 12/06/13   [view PDF]
Trng Org: Mason Tenders

Topic: Scaffold User
Expires: 12/05/12   [view PDF]
Trng Org: DLB Trinits

Topic: Suspended Scaffold
Expires: 03/09/12   [view PDF]
Trng Org: DLB Trinits

Topic: Lead
Date: 11/20/09   [view PDF]
Trng Org: Mason Tenders

Topic: MTA Track Safety
Expires: 05/22/12   [view PDF]
Org: MTA

Topic: TWIC
Date: 11/20/09   [view PDF]
Trng Org: Mason Tenders

Trainings credential set:
download   e-mail   print

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Send Credentials to a Contractor

Note: For contractor representatives with registered SafetyCred accounts only.

Select recipient:

↓ Select by company name

↓ Select by representative name

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Sending Credentials to:
   Organization: XYZ Constructors, Inc
   Rep: Carlos Chavez

Send all credentials

Select categories to send:
   √ Picture ID
   √ Respirators
   __ Noise
   √ HazMat
   √ Asbestos Licenses
   __ Trainings
         Send selected categories

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Credentials expiring soon

In the next 4 months, the following credentials will be expiring:

Topic: 8 Hr Hazwoper refresher
Expires: 12/06/11   [view PDF]

Topic: Suspended Scaffold
Expires: 01/09/12   [view PDF]

Topic: MTA Track Safety
Expires: 01/22/12   [view PDF]

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Messages

From	Date Sent	
SafetyCred Admin	10-27-11	view
XYZ Co - Brian B. Blain	10-28-11	view

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Available Jobs

Based on your credentials, you are qualified for the following job listings:

Company & Location	Dates	
XYZ Company
123 Oak Street, NYC	12-01-11
12-10-11	view
detail
QRS Company
987 2nd Ave, Hoboken	12-01-11
12-10-11	view
detail
EFG Company
56 Main St, NYC	12-01-11
12-10-11	view
detail

back

SafetyCred *for Members*

logout

logged in as: edisonseverino1245

Report my work availability

Beginning Date: ____/____/____
Ending Date: ____/____/____
Comments: _____
_____
_____
_____
_____

Submit

back

FIGURE 2   Model of portable health and safety database- Contractor Screens

SafetyCred *for Contractors*

Login info:
   Login ID: citizenjq@xyzconst.com
   Password: secret78

Explanation of what the system does and how to use it

Suggestion that they bookmark the login URL (www.safetycred.org/contractor) and store their login information in their smartphone.

Contractor Interface Screen 1
www.safetycred.org/contractors

SafetyCred *for Contractors*

Account ID: _____
Password: _____
   __ Remember me

   Can't access your account?

                        Submit

About SafetyCred for Contractors
Request an account

Contractor Interface Screen 2

SafetyCred *for Contractors*

About SafetyCred for Contractors

SafetyCred is a website that allows contractor employers to check the health and safety credentials and other information (including trainings, licenses, respirators, and hearing tests) on potential employees that are members of Laborers Local 78. Documentation you need for your records can be downloaded or e-mailed from this database that is maintained by Local 78 administrators.

                    Request an Account

                                    back

SafetyCred *for Contractors*

Request an Account

Last Name: _____
First Name: _____
Company Name: _____
Office Phone: _____
Mobile Phone: _____
E-mail: _____
Comments:
_____
_____
_____

submit

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

* MAIN *

Notifications
   Credentials sent to you
   Messages

Request Member Credentials

Submit Job Listings

Update Account Info & Preferences
Contact webmaster

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Credentials sent to you

Worker Name	Sent by	Date	
Aaron Able	union	10/07	view
Bob Barton	union	10/08	view
Chip Chun	worker	10/08	view

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View credentials

   Picture ID [view PDF]
   Respirators
   Noise
   HazMat
   Asbestos Licenses
   Trainings

Credentials - complete set:
   download   e-mail   print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View Credentials: Respirators

Respirator Medical Evaluation
    Date: 11/11/93
    Cleared: Yes
    Limitations/Conditions: None
    [view PDF]

Respirator Training
    Expires: 11/11/10
    Passed: Yes
    Employer: 3 D's Construction
    Org: Mason Tenders Training
        Fund
    [view PDF]

Respirator Fit Test
    Expires: 11/11/93
    Make: MSA
    Model: 6000
    Size: Medium
    [view PDF]

Credentials - respirator set:
    download   e-mail   print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View Credentials: Noise

Audiometric Test
    Date, last: 01/24/11
    Next - due date: 01/24/12
    Most recent report [view PDF]
    Previous report [view PDF]

Trainings

    Job Class: Laborer
    Topic: Hearing Conservation
    Org: University of Potsdam
    [view PDF]

Credentials - hearing set:
    download   e-mail   print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View Credentials: HazMat

Last Medical Exam
   Date: 04/20/11
   Cleared: Yes
   Limitations/conditions: none
   [view PDF]

Trainings

   Topic: 40 Hr Hazwoper
   Date: 02/13/05
   Org: CPWR - Center for
         Construction Research &
         Training
   [view PDF]

   Topic: 8 Hr Hazwoper refresher
   Expires: 03/06/11
   Org: University of Potsdam
   [view PDF]

Credentials - HazMat set:
   download   e-mail   print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View Credentials: Asbestos Licenses

New York City Asbestos Handler
   License: 43567   Exp: 03/29/11
   [view PDF]

New York State Asbestos Handler
   License: 33356   Exp: 03/29/11
   [view PDF]

New York City Asbestos Supervisor
   License: 43567   Exp: 04/01/12
   [view PDF]

Credentials - asbestos licenses set:
   download   e-mail   print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Worker: **Aaron Able**
View Credentials: Trainings

   Topic: OSHA 10 hour
   Date: 11/20/09   [view PDF]
   Org: National Labor College

   Topic: OSHA 10 hour refresher
   Expires: 12/06/13   [view PDF]
   Org: Laborers Dist Cnc H&S Fund

   Topic: Scaffold User
   Expires: 12/05/12   [view PDF]
   Org: University of Potsdam

   Topic: Suspended Scaffold
   Expires: 03/09/12   [view PDF]
   Org: National Labor College

   Topic: Lead
   Date: 11/20/09   [view PDF]
   Org: National Labor College

   Topic: MTA Track Safety
   Expires: 05/22/12   [view PDF]
   Org: University of Potsdam

   Topic: TWIC
   Date: 11/20/09   [view PDF]
   Org: National Labor College

   Topic: SWAC
   Expires: 07/22/13   [view PDF]
   Org: University of Potsdam

Credentials - training set:
    download   e-mail print

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Request Member Credentials

Search for Member By Name

Last Name: _____
First Name or Initial: _____

submit

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Request Member Credentials

Select from search results:

   Smith, Bo (DOB: 04/15/1964)
   Smith, Brad B. (DOB: 07/19/1974)
   Smith, Brenda (DOB: 11/11/1991)
   Smith, Bud (DOB: 12/02/1986)
   Smith III, Barton (DOB: 07/31/1975)
   Smith Jr., Barry (DOB: 01/22/1980)

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Request Member Credentials

Selected Member: Smith, Brenda
       DOB: 11/11/1991
       ??add other identifying info here??

Send request for credentials to member?

yes   no (cancel)

back

SafetyCred *for Contractors*

logout

logged in as: citizenjq@xyzconst.com

Submit Job Listing

Enter:

   Beginning Date: ___/___/___
   Ending Date: ___/___/___
   Project Name: _____
   Location: _____
   Number of workers needed:____

continue

back

FIGURE 3   Model of portable health and safety database- Administrator Screens

SafetyCred *Administrative*

Account ID: _____
Password: _____
__ Remember me

submit

SafetyCred *Administrative*

logout

You are logged in as: admin1@safetycred.org

*** MAIN ***

NOTIFICATIONS--

Member-related	**Contractor-related**	**Other**
Messages	Messages	Daily DB Reconciliation Report
Account requests	Account requests	Non-account-holder messages
Job availabilities	Job Listings	

DATABASE ACCESS---

Member records: search, update/modify, print & send credentials
Contractor Rep records: search, update/modify & print
Database activity logs: search & print

ACCOUNT MANAGEMENT---

Member accounts: add/delete/modify accounts & login recovery
Contractor accounts: add a new account, delete/modify accounts & login recovery

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Member Messages

Date & Time	MemberName	Category	Comments
10-31-11, 11:31a	Able, Aaron A.	Error in record	I have a NJ Lead certification that is not showing up in my record. Can you add it?
			respond to message delete message
10-31-11, 11:31a	Brown, Barbara	Site Error	When I click on the PDF link to look at my respirator fit report, nothing happens.
			respond to message delete message
10-31-11, 11:31a	Chavez, Carlos	Other	My NJ Lead certification is about to expire -- are there any upcoming trainings available?
			respond to message delete message

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Member Account Requests

Last Name: Able   First Name: Aaron   MI: A   Member ID#: aaronable1234
   Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: aaable@hotmail.com
   Comments: none

member# match in DB = YES, add account   delete request

Last Name: Bamberg   First Name: Bruce   MI: B   Member ID#: brucebamberg87654
   Home Ph: 123-456-7891   Mobile Ph: 234-567-8902   E-mail: bbbamberg@hotmail.com
   Comments: Juanita Johnson at JJJ Construction needs my Asbestos licenses, please create my
             account ASAP!

member# match in DB = NO   delete request

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Member Job Availabilities

Name: Able, Aaron A.   Member ID#: aaronable1234
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: aaable@hotmail.com
Beginning Date: 12/05/11   Ending Date: 01/14/12   Time of Notice: 10/21/11 9:53a
Comments: none
View Credentials:
     View All ,   View Categories: Pic-ID   Respirators   Noise   HazMat   Asbestos Lic   Trainings
                                                                                                                                    delete notice

Name: Chavez, Carlos   Member ID#: carloschavez9876
Home Ph: 123-456-7891   Mobile Ph: 234-567-8902   E-mail: cchavez98@hotmail.com
Beginning Date: 12/05/11   Ending Date: 01/14/12   Time of Notice: 10/21/11 9:53a
Comments: limited transportation, need something near Hoboken central biz district
View Credentials
     View All ,   View Categories: Pic-ID   Respirators   Noise   HazMat   Asbestos Lic   Trainings
                                                                                                                                     delete notice

back

SafetyCred *Administrative*

logout

You are logged in as: admin1@safetycred.org

Contractor Messages

Date & Time	RepName	Company	Category

10-31-11, 11:31a   Citizen, John Q.   XYZ Construction   Site error
My company is listed as "XYZ Construction", but I work for "QRS Construction". I'm not sure how this happened, but could you update this for me?

respond to message   delete message

10-31-11, 01:31p   Johnson, Juanita   JJJ Construction   Error in record
My company is listed as "JJJ Construction", but I work for "DEF Construction". I'm not sure how this happened, but could you update this for me?

respond to message   delete message

10-31-11, 02:31p   Moretti, Mario   MMM Demolition   Other
Don Duckworth assures me he is a member of Local 78 and has a SafetyCred account, but I can't find him in the database. I need his credentials so he can start work. Can you help?

respond to message   delete message

back

SafetyCred *Administrative*

logout

You are logged in as: admin1@safetycred.org

Contractor Account Requests

Last Name: Costa   First Name: Carmela   MI: C   Company name: CCC Constructor, Inc.
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: CCC14@hotmail.com
Comments: I'd like a SafetyCred account please.

add account   delete request

Last Name: Hinajosa   First Name: Hector   MI: H   Company name: HHH Company, Inc.
Home Ph: 123-456-7891   Mobile Ph: 234-567-8902   E-mail: hhhinajosa4@hotmail.com
Comments: none

add account   delete request

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Contractor Job Listings

RepName: <u>Citizen, John Q.</u>   Co.: XYZ Construction   Begins: 12-14-11   Ends: 02-03-12
Project: City Museum renovation   Location: 123 Oak St, NYC   # workers needed: 5
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: citizenjq@hotmail.com
Listing Date: 10/21/11 9:53a
Work Experience:
Other: none
Credentials required:
   <u>√</u> Respirator   <u>√</u> HazMat   <u>√</u> Asbestos Licenses
   Trainings: <u>√</u> OSHA 10 Hour

RepName: <u>Moretti, Mario</u>   Co.: MMM Demolition   Begins: 01-14-12   Ends: 03-18-12
Project: HJI Distribution Warehouse   Location: 456 Main St, Hoboken NJ   # workers needed: 7
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: aaable@hotmail.com
Listing Date: 10/21/11 10:53a
Comments: workers needed for graveyard shift (11:00p - 7:00a)
Credentials required:
   <u>√</u> Respirator   <u>√</u> Hearing   <u>√</u> HazMat   <u>√</u> Asbestos Licenses
   Trainings: <u>√</u> OSHA 10 Hour   <u>√</u> Scaffold User   <u>√</u> Suspended Scaffolding
                <u>√</u> Lead   <u>√</u> MTA Track Safety   <u>√</u> TWIC
                <u>√</u> SWAC

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Daily DB Reconciliation Report

DB overnight reconciliation errors:

   none

Members new to the SafetyCred database:

   Parker, Paula   Member# paulaparker4567

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Non-account-holder messages

Last Name: Williamson   First Name: Wayne
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: ww789@hotmail.com
I'm from Ironworker Local 21 -- any chance we could get a demo of how SafetyCred works -- sounds like something we could use!

Last Name: Silverstein   First Name: Sylvia
Home Ph: 123-456-7890   Mobile Ph: 234-567-8901   E-mail: sylviesylvie@hotmail.com

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Worker records: search, update/modify, print & send credentials

Browse by name   Browse by member#

search by name: search by member#:
   last : _____ first:_____   member#:_____
      submit   submit

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Worker record: Severino, Edison   Member#: edisonseverino1234

SafetyCred Account
Status: Active edit   pswd: marmot78 edit   login recovery
email: edsev7@hotmail.com
Last Login: 10/14/11 9:28a   view recent activity

Respirators Credentials

Respirator Medical Evaluation
  Date: 11/11/93   Cleared: Yes
  Limitations/Conditions: None
[view PDF]

Respirator Training
  Expires: 11/11/10   Passed: Yes
  Employer: 3 D's Construction
  Trng Org: Mason Tenders
  [view PDF]

Respirator Fit Test
  Expires: 11/11/93   Make: MSA
  Model: 6000   Size: Medium
  [view PDF]

edit   e-mail   print   send to contractor

HazMat Credentials

Last Medical Exam
  Date: 04/20/11   Cleared: Yes
  Limitations/conditions: none
  [view PDF]

Trainings
  Topic: 40 Hr Hazwoper   Date: 02/13/05
  Trng Org: Mason Tenders
  [view PDF]

  Topic: 8 Hr Hazwoper refresher
  Expires: 03/06/11
  Trng Org: Mason Tenders
  [view PDF]

edit   e-mail   print   send to contractor

Hearing Credentials

Audiometric Test
  Date, last: 01/24/11
  Next - due date: 01/24/12
  Most recent report [view PDF]
  Previous report [view PDF]

Trainings

  Job Class: Laborer
  Topic: Hearing Conservation
  Trng Org: University of Potsdam
[view PDF]

edit   e-mail   print   send to contractor

Asbestos Licenses Credentials

New York City Asbestos Handler
  License: 43567   Exp: 03/29/11
  [view PDF]

New York State Asbestos Handler
  License: 33356   Exp: 03/29/11
  [view PDF]

New York City Asbestos Supervisor
  License: 43567   Exp: 04/01/12
  [view PDF]

edit   e-mail   print   send to contractor

Training Credentials

Topic: OSHA 10 hour   Topic: Lead
Date: 11/20/09   [view PDF]   Date: 11/20/09   [view PDF]
Trng Org: Mason Tenders   Trng Org: Mason Tenders

Topic: OSHA 10 hour refresher   Topic: MTA Track Safety
Expires: 12/06/13   [view PDF]   Expires: 05/22/12   [view PDF]
Trng Org: Laborers Dist Cnc H&S Fund   Trng Org: University of Potsdam

Topic: Scaffold User   Topic: TWIC
Expires: 12/05/12   [view PDF]   Date: 11/20/09   [view PDF]
Trng Org: Mason Tenders   Trng Org: Mason Tenders

Topic: Suspended Scaffold   Topic: SWAC
Expires: 03/09/12   [view PDF]   Expires: 07/22/13   [view PDF]
Trng Org: Mason Tenders   Trng Org: Mason Tenders

edit   e-mail   print   send to contractor

Complete Credential Package
e-mail   print   send to contractor

Contact Info

E-mail: edsev7@hotmail.com   edit
Mobile Ph: 123-456-7890   edit
Home Ph: 123-789-1234   edit

Other Info
...fill in when we know what fields we are getting from DC database...

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Contractor records: search, update/modify

Search by contractor representative name---

Browse rep names   search by name:
                                          last : _____   first:_____
                                                    submit

Search by contractor company name---

Browse company names   search by contractor company name:
                                          company name : _____
                                                    submit

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

View Contractor Representative record: Doe, John C.

Account ID: jcdoe@hotmail.com
Last Name: Doe   First Name: John   MI: C.
Company Name: XYZ Construction, Inc.
Address 1: 123 Oak Street, Suite 442
Address 2:
City: Hoboken   State: NJ   Zip: 54321
Office Ph: 123-456-7890   Mobile Ph: 234-56-78901   e-mail: jcdoe@hotmail.com

SafetyCred Account
  Status: Active edit   pswd: marmot78 edit   login recovery
  Last Login: 10/14/11 9:28a   view recent activity

 Notes:

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Database activity logs

Date/Time	User	Activity
10/31/11 08:14a	M Able, Aaron	logout
10/31/11 08:13a	M Able, Aaron	sent Hearing credentials to Citizen, John Q.
10/31/11 08:10a	M Able, Aaron	posted job availability
10/31/11 08:14a	M Able, Aaron	login
10/29/11 03:48p	C Moretti, Mario	logout
10/29/11 03:41p	C Moretti, Mario	submitted job listing
10/29/11 03:37p	C Moretti, Mario	sent credential request to Able, Aaron
10/29/11 03:35p	C Moretti, Mario	login
10/27/11 09:14a	A admin1	logout
10/27/11 09:13a	A admin1	sent Chavez, Carlos HazMat credentials to Moretti, Mario
10/27/11 09:12a	A admin1	accessed worker record Chavez, Carlos
10/27/11 09:10a	A admin1	viewed job availability posting
10/27/11 09:14a	A admin1	login

back

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Member Account Management

Note: SafetyCred Member accounts can only be created for members that have a record in this database. If the member record cannot be found, you will need to contact the District Council database technical support staff.

To create a SafetyCred account for a member:
   [Step 1] search and access the member's record
   [Step 2] enter and/or verify the member's e-mail address
   [Step 3] create a password for the member
   [Step 4] change the account status from "not created" to "active"
   [Step 5] tell the member to expect an e-mail with login instructions

To remove a member's SafetyCred account:
   [Step 1] search and access the member's record
   [Step 2] change the account status from "active" to "inactive"

To respond to a member's login recovery request:
   [Step 1] search and access the member's record
   [Step 2] click on the "login recovery" link

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Contractor Representative Account Management - Creating an Account

Last Name: _____   First Name: _____   MI: __
Company Name: _____
Address 1: _____
Address 2: _____
City: _____   State: ___   Zip: _____
Office Ph: ___-___-____ x___   Mobile Ph: ___-___-____   e-mail: _____
Password: _____

Notes:
_____
_____
_____
_____

[create account]

SafetyCred *Administrative*

You are logged in as: admin1@safetycred.org

Contractor Representative Account Management - Removing and Modifying Accounts, Login Recovery

To remove a Contractor Representative's SafetyCred account:
   [Step 1] search and access the contractor representative's record
   [Step 2] change the account status from "active" to "inactive"

To modify a Contractor Representative's SafetyCred account:
   [Step 1] search and access the contractor representative's record
   [Step 2] make the appropriate changes

To respond to a Contractor Representative's login recovery request:
   [Step 1] search and access the contractor representative's record
   [Step 2] click on the "login recovery" link

2. OBJECTIVES

The goal of our study was to bring together labor unions and employers in the New York City construction industry to design a portable health and safety database that can be used to keep track of personal protective equipment tests, results of medical surveillance, and safety and health training certifications. We planned to build a model to serve as a template for a fully functional database. A portable database is a database that is "carried" with a worker from job to job, in the same way that their cards or paperwork would be. It can be accessed by any participating employer, so that each contractor can rely on training and personal protection that was provided by an approved organization (such as an apprenticeship training program) thus avoiding duplication of effort and allowing comparison of employee hearing tests from one job to the next.

NIOSH has recognized the importance of creating portable systems for hearing conservation and respiratory protection programs. The following NORA goals are addressed by our study:

- *For silica exposures, "develop, evaluate, and promote "portable" (that is, transferable from one employer to another) options for respirator fit testing to include key information such as fit-certified respirator models, respirator training records, respirator medical evaluations, and silica related medical testing that can be maintained for workers as part of a health surveillance program across multiple employers".*

- *For noise exposures, "develop, evaluate, and promote "portable" (that is, transferable from one employer to another) audiometric testing options that can be maintained for workers as part of a hearing conservation program across multiple employers".*

- *For welding exposures, "develop, evaluate, and promote 'portable' (that is, transferable from one employer to another) options for respirator fit testing to include key information such as fit-certified respirator models, respirator training records, respirator medical evaluations, and welding fume related medical testing that can be maintained for workers as part of a health surveillance program across multiple employers. Develop and disseminate guidance on suitable welding medical surveillance approaches".*

The objectives to achieve the design of a portable database included:

- Compile a list and description of the databases already in use in New York City area by our participants, as well as the advantages and obstacles they identify in creating a shared portable health and safety database.
- Compile information on some of the portable databases currently in use in construction and how they address the barriers and incentives listed above.
- Obtain buy-in from the district leaders of the unions that have thus far shown interest.
- Obtain buy-in and sponsorship from union and employer trade associations.
- Expand the content of the database to include training required by local regulations.
- Determine what will be in the database and how it should be operated and funded.

3. METHOD

Prior to starting the study, we had identified some construction unions who were supportive of our project. Once the study was started, we held a series of meetings with the regional Occupational Safety and Health Administration (OSHA) Labor Liaison to get a broader overview of health and safety in the construction industry, focusing specifically on unionized labor and their employers. Through these meetings, and from our own past experience, we identified the unions, contractors, project managers, and labor and industry associations in New York City who were among the most pro-active in health and safety. We then scheduled several meetings with representatives of those organizations to gather more information regarding existing databases and to continue consensus building. During these meetings, some of the more important databases in New York City, and how these were used by the unions and contractors, were described. In these meetings union and contractor representatives also identified the benefits and disadvantages that a shared, portable health and safety database would have for their respective organizations. These are listed in our report, as much as possible, in their own words. We determined, through these meetings, which organizations were interested in pursuing the idea of a shared database. At the same time we consulted with relevant enforcement agencies by phone or email regarding their potential acceptance of the database for compliance purposes.

In order to identify current portable health and safety databases in construction nationwide we contacted health and safety experts active in the field. We used list-serves, personal contacts, Center for Construction Research and Training (CPWR) contacts, and professional associations. Then we tracked down the leads we received. We searched the internet for literature on portable databases in construction. One guidance document, "A 'How-To' Guide on Smart Card Technology", produced by the Ottawa Construction Sector Council was identified (available at http://www.csc-ca.org/en/products/how-guide-smart-card-technology). Although this technology has been surpassed by the internet, the report provides good rationale for portable databases.

Based on our series of meetings, we identified one union and its contractor association who were interested in going forward with development of a portable, shared database. Another series of meetings was held with this group to flesh out the database design based on their specific needs. We produced a written description which was reviewed by the union's IT department. A request for proposals was developed to get vendors to submit their ideas of how the database would be constructed and maintained, and how much it would cost. Finally, we selected a vendor who developed a model for how the data would be accessed on a smart phone or other electronic device.

4. OVERVIEW OF HEALTH AND SAFETY IN NYC CONSTRUCTION INDUSTRY

According to the New York State Department of Labor current employment statistics there were approximately 108,000 construction jobs in New York City in 2011. This is down from approximately 121,000 in 2009 when we started this project. According to The Murphy Institute's State of the Unions 2011 report, data from 2003 to 2011 show that approximately 27 per cent of the construction industry in the New York City metro area is unionized. This includes commercial, public, and residential construction. The Building and Construction Trades Council (BCTC) of Greater New York represents the construction unions, which, in turn, represent approximately 100,000 union construction workers who are currently working or looking for work in the New York metro area. They estimate that the union density in construction is larger than cited above, particularly in commercial building and public construction. The majority of the large private projects in New York City are still being performed by union labor, although there has been some erosion in union jobs in the small and mid-size projects. The BCTC cites statistics from New York City that 90 percent of the dollar value of the City's public work projects are performed by union contractors.

The Building Trades Employer Association (BTEA) represents 28 trade associations which, in turn, represent about 1,700 contractors that have collective bargaining agreements with labor unions. There are no equivalent large associations for non-union local contractors in New York City.

Over the years both the BCTC and BTEA have each had their own active health and safety committee. At the time that we started this project, the committees were just being revived and by the time the study was completed, these committees were meeting on a monthly basis. The BCTC and BTEA committees used to meet together when there were joint issues to discuss. Since they were revived, however, they have not yet met together.

This is a period in which labor relations in the region are focused on more immediate concerns than this type of project. The country is undergoing a period of economic hardship. Unions and union contractors are affected by the economic downturn and are struggling to maintain their share of the workforce and market. They are wary of spending time and money on projects unless they can see this bettering their economic position.

OSHA Region II has a history of working closely with both the major unions and their contractors. This stems largely from their working together on the World Trade Center clean-up. They employ a Labor Liaison who has good relationships with the key health and safety players among the contractors and unions.

The New York City Department of Buildings implemented several training requirements in 2010, including a requirement that most workers receive the OSHA ten-hour training class. The city is also aggressively enforcing scaffolding training, because of a series of fatalities. Lack of documentation of OSHA 10 and scaffolding training can result in serious penalties and lost work time.

The New York City Department of Environmental Protection enforces asbestos licensing requirements, including fit-testing and medical clearance of employees. Other agencies also enforce safety related training requirements. For example, the New York City Fire Department requires fire watch and hot work training.

5. DATABASES IN USE IN NEW YORK CITY

We obtained information on the databases of the major unions during face-to-face meetings and by phone and email.

Mason Tenders

Database is managed by: Mason Tenders Training Fund

Type of organization: Joint L-M Training Fund

Number of member covered: 15,000

Does it include only the union training or training from outside organizations? Only union training. The Fund performs the great majority of the fit tests on record, and requires proof of medical clearance prior to any fit test taking place

Does it include respirator fit testing data: Yes

Does it include medical clearance for respirators: Fit-testing records are only entered if the person has been medically cleared. Hard copies of medical clearance certificates are available.

How frequently is medical clearance conducted? Yearly

Does it include audiograms? No

Are there plans to make this database internet accessible? They plan to make some database information available to members via the Internet. Members will be able to view and download their individual transcripts via password protected access.

Training certifications include: Allied Trades Restricted Handler, Anthrax Remediation, Asbestos Awareness, Asbestos Handler, Asbestos Supervisor, Automated External Defibrillator Essentials (AED), Back Injury Prevention, Introductory Blueprint Reading, Advanced Blueprint Reading, Certificates of Fitness (S-92, G-60, F-60), Concrete Practices

and Procedures, Confined Space Entry, Construction Math, CPR, Craft Orientation, Energy Auditor, Fall Protection Awareness, Fireproofing, First Aid, Flagger Safety, Foreman Preparedness, Hand and Power Tools Applications, Hazard Communication, Hazardous Waste Worker, Hazardous Waste Operations, Lead OSHA Awareness, Lead EPA Supervisor, Lead EPA Worker, Lead RRP (Lead Renovator), Oxy-Acetylene Cutting and Burning, Line & Grade, Mason Tending Procedures, Mast Climbing Scaffolds, Material Hoist Attendant, Material Recognition, Microbial Remediation, Mold Remediation, OSHA 10, Pipe Laying, Plaster Tending, Polychlorinated Biphenyls (PCBs), Powder-Actuated Tool Certification, Punch List, Respect in the Workplace (formerly Sexual Harassment), Respiratory Protection Awareness, 32 Hr. Scaffold Worker Safety, (Supported Scaffolds), Scaffold User (Supported Scaffolds), Suspended Scaffold Worker Safety, Shop Steward, Silica Awareness, Weatherization Technician/Installer, Weatherization Supervisor.

New York City District Council of Carpenters Labor Technical College

Database is managed by: New York City District Council of Carpenters Benefit Fund

Type of organization: Union training program

Number of members covered: 17,000 active members

Does it include only the union training or training from outside organizations as well? Both union training and training from other organizations is included.

Does it include respirator fit testing data? No

Does it include medical clearance for respirators? No

How frequently is medical clearance conducted? Not done by union

Does it include audiograms? No

Are there plans to make this database internet accessible? Only individual members and the benefit fund can currently access the system via the internet. After every training class, the school sends the registration forms to the benefits department and it is put into the member's portfolio by the benefits office.

Training certifications include:

OSHA 10, OSHA 30, 16 hr Confined Space, First Aid, CPR, AED, 40 hr Hazardous Waste Worker and 8 hr Refresher, Asbestos, Lead Renovator, Blood Borne Pathogens, Ergonomics, 4 hr Scaffold User, 32 hr Rigging, Flagman, 32 hr Scaffold Erector, Powder Actuated Tool, Fire Guard, Fire Watch, TWIC, SWAC,LIRR Track Safety Training, MTA Track Safety Training, and 8 hr Crane . There are 70 different certificates for various skills that can be granted either on the basis of training or experience. Examples are crane signalman and concrete form work.

International Brotherhood of Electrical Workers

Database is managed by: Joint Industrial Board

Type of organization: Joint L-M Board of the Electric Industry

Number of members covered: 15,000

Does it include only the union training or training from outside organizations as well? Not available.

Does it include respirator fit testing data? Yes

Does it include medical clearance for respirators? Yes

How frequently is medical clearance conducted? Not available

Does it include audiograms? No

Are there plans to make this database internet accessible? Not available

Training certifications include: scaffolding, fall protection, Lock out/Tag out, material handling, lead and asbestos abatement, confined space, excavation, respiratory protection, ladder and stairway safety, personal protective equipment, MSDS and jobsite chemical exposure issues, road and work zone safety, emergency medical response and evacuation procedures, forklift driving, defensive driving and boson's chair/bucket truck safety procedures

Union (name withheld)

Database is managed by: joint labor-management program

Type of organization (union or joint labor-management): joint labor-management program

Number of members covered: 2,000

Does it include only the union training or training from outside organizations as well? Includes outside training such as fall protection, power actuated tools

Does it include respirator fit testing data? For apprentices and journeymen

Does it include medical clearance for respirators? No

How frequently is medical clearance conducted? Not applicable.

Does database include audiograms? No

Are there plans to make this database internet accessible? No

Training certifications in database include:

Disaster Response, OSHA 10/30, Tower Crane Safety, Scaffolding (suspended and supported), First aid and CPR, Lead Hazard, Multiple welding certifications (New York City, New York State, Stainless Steel), New York City Fire Department Fire Watch Certificate of Fitness, Rigging, Signaling, Power Actuated Tools (Hilti)

Operating Engineers

Database is managed by: Operating Engineers Local 15, 15A, 15B, 15C, and 15D Training Center

Type of organization: Union training program

Number of members covered: 4,000

Does it include only the union training or training from outside organizations as well? Union training only

Does it include respirator fit testing data? No

Does it include medical clearance for respirators? No

How frequently is medical clearance conducted? Employer is responsible.

Does it include audiograms? No

Training certifications include: OSHA 10 hour, 40 hour Hazmat Handling, Tower Crane Safety, Welding certifications, NYC Fire Department Certificate of Fitness, Rigging and Signal Training, Equipment Maintenance and Safety

6. PORTABLE DATABASES IN USE IN CONSTRUCTION NATIONWIDE

We did not conduct a comprehensive survey of national portable databases. As explained under the Methods section, we sent out requests for information from people, listserves and organizations that we thought might be aware of such databases. The following portable databases in the construction and related industries were identified.

MOST (Boilermakers and Boilermaker Employers)

The Mobilization, Optimization, Stabilization, and Training (MOST) Fund was established in June 1989 as a joint labor trust fund by the National Association of Construction Boilermaker Employers (NACBE) and the Boilermakers union to provide Boilermaker manpower in areas of need, to maintain a highly skilled work force, to maintain current skills, and to train new skills and technology, and to instruct and teach safe work habits, not only for Boilermakers, but for

all who are involved on a project. The MOST database contains records on 130,000 individuals, including other crafts besides boilermakers. It can be searched by unions, contractors, owners and members for dates of last pulmonary function tests, safety training, drug tests and respirator fit tests, model and size. It has been accessible via the internet for the last 4 years. For remote sites members' status can be checked via the phone. If hooked to a computer a photo ID can be accessed via a bar code. Hard copies can be printed and faxed to interested parties. For more information on MOST programs, visit their website at www.mostprograms.com. They are located in Kansas City, Kansas.

Philadelphia Area Labor Management Committee (PALM) PASSPORT Database

The Philadelphia Area Labor Management Committee (PALM) manages a database that contains:
- Process Safety Management training (an OSHA requirement, similar to OSHA 10, but for the chemical industry), (date passed, training organization, i.e. union or contractor who conducted the training)
- drug testing (only the date cleared)
- background check for refinery workers (only the date cleared).

The database is funded by regional owners in the petrochemical industry (Sunoco, Exelon, Conoco Phillips, etc.) and operated out of PALM. It is accessible automatically by owners by calling the database manager, or by punching in a code on the phone when she is not in. When the manager is not in, the owners get an automated reply by phone on whether the member is in the database and whether they are "active" or "not eligible". There is one full-time manager. Unions and workers do not have an access code, but can call her for information. The manager estimates that the system is accessed daily by multiple users.

They developed this database about 17 years ago, thru a joint labor-management effort in order to recognize drug test results taken within a one-year period. This was to cut down on repetitive testing and to ensure a completely true random test process. Recently they have expanded the drug-testing program to the construction industry.

The Process Safety Management Curriculum was developed around the same time with owners, contractors, and unions meeting regularly with OSHA representatives to institute a comprehensive training curriculum that would provide off-the-clock training of workers. Union and contractors submit lists of people who have completed certification There are approximately 50,000 employees in the database.

Background information was required after 9/11. Contractors are required to conduct a background test on all employees going to work in the area refineries. The PASSPORT database holds this information.

Build It Smart- 3M Respirator Medical Clearance

Build It Smart is the joint labor-management organization of the unionized construction trades and their contractors in Washington State. In 2003 Build It Smart received a grant from CPWR to create a portable database for respirator medical clearance. They worked with 3M (Minnesota Mining and Manufacturing), which already has an on-line medical evaluation questionnaire (MEQ). A questionnaire was designed specifically for the construction industry. If any questions are answered "yes", then medical personnel contact the worker by fax or email and the worker is given a toll-free number to call for a confidential one on one between the worker and the medical provider. If the worker has answered "yes", there are three possible responses from the 3M medical provider: certified, restricted or referred. If someone is referred, the database states, "Unable to use a respirator at this time. Further information from the employee's physician is required." Approvals are for a specific work profile and type of respirator. Contractors and workers can find out on-line whether any worker has been medically cleared to wear a respirator or not, and for what work profiles they are approved. The database is managed by 3M.

Build It Smart- Hearing Conservation

In 1999 Build It Smart (see above) received a 5 year grant from CPWR to create a Hearing Conservation program for the construction industry that would serve as a national model. A significant component of this project was the creation, implementation and administration of a data base that would serve all participating workers and employers. The database was created 9 years ago and is accessed by phone, fax or email. It is not internet accessible.

Included in the database is the date of the worker's latest training, and the results and date of the last audiometric test.

The project included training (teaching workers and employers how hearing loss occurs and how to prevent hearing loss) and audiometric testing (in order to define workers' current level of hearing and track subsequent changes).

The Laborers and the Cement Masons have hearing test booths in their respective training centers (located in Kingston and Seattle) and they each have certified people to administer the tests. Test results and training information for the two aforementioned trades are sent to Zenith Administrators who manage the data base. They also get data on individual members from various independent audiologists certified to conduct training and testing.

The lessons learned in this project were: 1) It is difficult to engage young people who have good hearing abilities to prevent hearing loss. They get it, but they don't think it's going to happen to them. 2) In Washington State the Workers' Compensation laws dictate that the

claim liability goes to the employer with the last injurious exposure which translated that employers did not want workers to have hearing tests.

Alaska Department of Labor

Since 1998, the Alaska Department of Labor has maintained a database of workers who are certified to work with paints under certain hazardous conditions, including spray painting. Unique to Alaska, this certification is required by law and each painter must carry a card that shows they are certified. It is accessible on-line by contractors through the State. They were able to use this database to compare the practices and knowledge of painters who have had training in Alaska to workers in other states who did not have training.

Clarity Database

Clarity Testing Services (www.claritytesting.com), is a company that offers a variety of occupational safety and testing services, including drug and alcohol testing, background checks, and physical exams. A fleet of 6 mobile testing units and 3 satellite testing offices serves New York City and the greater New York metro area. Their secure internet database includes their test results, including respirator clearance (yes/no), respirator fit-testing (date, company, size), lead/ZPP levels, audiograms, and OSHA reportable significant threshold shifts, and hepatitis vaccination dates.

The database was formed over ten years ago to assist several unions, trade associations, municipal and city agencies and others including the Structural Steel Contractors in the Greater NY area and the Bridge Painters Local 806 of DC 9. It contains records of approximately 25,000 employees, including several thousand Teamsters. Clarity specializes in Labor-Management workplaces and collaborative safety and compliance program, with minimal workday interruption and have been doing this since 1996. Data is accessible to their clients, including employers and unions who pay for their services and unions who have been granted access codes.

Laborers International Union of North America (LIUNA) Pipeline database

The Laborer's International Union of North America's Training Fund manages the Pipeline database, which has health and safety training information that is relevant to pipeline construction health and safety in a form that is internet accessible. It was created about 12 years ago as a joint labor-management effort. It can be accessed by contractors and local unions by use of a membership number or social security number. It is not accessible to union members. The data is only entered once by the training fund and it goes into both the Laborers' internal national database and the Pipeline database. The fund administrator reports that it is infrequently used due to technical difficulty accessing the database and the ease of calling up and getting the same information. Currently, it is being used by 3

contractors. It does not any information on respirators or noise. The union's safety representatives do the fit testing on site because of the different types of respirators given out.

Construction Advancement Foundation (CAF) training database

According to their website, the Construction Advancement Foundation of northwest Indiana is a regional construction industry trade association comprised of over 500 construction companies. They partner with labor unions to provide workforce development.

CAF sponsors many safety training classes throughout the year. Topics include OSHA 500, OSHA 10 Hour, Confined Space, Trenching and Excavation, and many more. Construction workers, managers and supervisors are informed of the latest safe operating procedures. Their database is accessible to construction companies who subscribe to their training via the internet.

United Brotherhood of Carpenters' (UBC) TRAIN program- The TRAIN program, as described on their website, was created by the Carpenters International Training Fund, developers of UBC training, and the union's Information Technology Department. It is an internet connected database that maintains a record of every UBC member's training history. Contractors can quickly and accurately verify which of their crew members are qualified in skills needed for specific jobsites. UBC members benefit because their efforts at keeping pace with certifications, qualifications, safety training, tools, installation strategies, and other construction industry advancements can be recognized by their employers through more opportunities to work.

TRAIN allows better tracking of in-demand skills, providing a guide for scheduling of courses at area training centers and development of new curriculum. This in turn makes for more productive carpenters and gives signatory contractors a competitive advantage.

Ironworkers IMPACT database

The IMPACT program includes an on-line database that can be accessed by members and owners to verify an ironworker is prequalified to work. It is administered by third party under the direction of IMPACT, a labor-management partnership. Its focus is on drug testing.

DISA, Inc.

DISA Inc. is a company that provides employee screening services, specializing in drug and alcohol testing, but also including occupational health and background checks. Their main clients are the Department of Transportation and companies in the petrochemical industry. Their database, called DISAWorks is accessible to owners and contractors throughout the United States and abroad. It includes data from about 6,000 clinics with which DISA contracts

to provide services. Occupational health data includes physicals, audiograms, pulmonary function tests, respirator fit testing, clearance and training, heavy metals testing, and provides automatic renewal notices. They have some construction clients in this database, but they are interested in expanding in this sector, and feel the current system can serve the industry well with minor modifications.

The thrust of DISAs services is in keeping workers safe and employers in compliance.

Other

We were referred to some databases that were related to this project, but turned out not to contain the type of information we were looking for.

- There is a database for hearing conservation data in Michigan constructed by Sonomax. However it only contains noise exposure data; it does not contain audiograms. It is not internet accessible.
- The New Jersey laborers (LIUNA) health fund in New Jersey conducts hearing screening every other year. These are not complete audiograms, but, rather, are used to refer members to audiologists for more complete testing. The health fund keeps records of screening test results in their own database. The individuals are not identified due to privacy concerns. The data is used to look for trends.
- The painters in Boston (IUBPAT District Council 35) have a database of training records that can be accessed by contractors by calling the database manager or someone else in the office. It is not available by internet.
- The Alaska Works Partnership is a partnership between the construction trades and contractors. They maintain their own database of pre-apprenticeship training. This data is not accessible by the internet.

7. PORTABLE CONSTRUCTION DATABASES BEING DEVELOPED

In the course of our work we learned that some of the international labor unions are in the process of developing internet accessible databases of training information that they hope to make available to contractors in the future. This will include health and safety information. These include the following:

LIUNA International Training Fund- They are working on a national web-accessible database that they hope to complete by 2012. It will include comprehensive training and regulatory related data, including respirator data. The future plan is to have reports available to the locals that they can share with contractors.

Alaska Works Partnership

The Alaska Works Partnership is a joint organization of construction unions and jointly-administered apprenticeship committees (JATCs). Joint-administration is by equal members of labor and management on the board. Each JATC represents numerous contractors. More than 800 contractors contribute to JATC trust funds and employ apprentices and journey level workers. The partnership has a data base of several thousand individuals that have received training and industry certifications through pre-employment training and can track individuals' progress over time in terms of employment, location of employment and annual earnings. The AWP data base is internal and mostly used for providing reports to agencies, the Board, unions and JATCs. AWP is developing a public database of individuals that have received training in energy efficiency and the certificates earned, for use by employers and the public labor exchange system. The plan is for this to be internet accessible by 2013.

Build It Smart – Green Construction

Build It Smart (see Section 6, above) received a federal grant from the U.S. Department of Labor in 2010 to provide green and sustainable skill training to journey workers and apprentices in the construction trades. The training is provided by 15 apprenticeship programs and 1 pre-apprenticeship program. Training records are kept on a database managed by Build It Smart. It is expected to go online in 2012 and be accessible to contractors, and union hiring halls through the internet. It will cover approximately 4,000 workers. They hope other training can be added to it in the future.

8. **ACHIEVING BUY-IN: BENEFITS AND OBSTACLES FOR UNIONS AND CONTRACTORS**

   UNIONS

We started this project by meeting with the training and health and safety directors of some of the largest construction unions to obtain commitment to work on designing the database. We had already obtained letters of support from some of them and were hoping to find "champions" who would broaden our supporters to include elected officers, business managers of the locals and district councils, and the contractors and project managers that they served. We had mostly face-to-face meetings with the following organizations; two of the discussions were held on the phone.

- Mason Tenders Training Fund (covers Local 78 and 79 of the Laborers)
- New York State Laborers Health and Safety Fund
- Laborers Locals 78 and 79
- Greater New York Laborers'-Employers' Cooperation and Education Trust
- Operating Engineers Local 15, 15A, 15B, 15C, and 15D Training Center
- Operating Engineers Local 14 Training Center

- Ironworkers Locals 40 and 361 Joint Apprenticeship Program
- New York City District Council of Carpenters Labor Technical College
- Joint Industry Board of the Electrical Industry (covers Local 3)

Appendix 1 includes some of the selling points we used in hand-outs for these meetings.

Although all of the above unions already had electronic databases, the following advantages were cited by the training fund representatives for making the information available to contractors:

Benefits for unions and training funds:

- It would save time that they now spend tracking down and sending information for members who do not have their paperwork on them. It would "lighten their load." It would "take problems off their plates."
- It would increase health and safety controls by ensuring that their members have proper training
- The database could include a picture ID to prevent fraud.
- This would eliminate confusion over some of the cards that the contractors do not accept (some of the cards issued by training organizations do not list the trainer, or are unfamiliar to the contractors)
- The database could be available for others in the union, such as business agents.
- Lost OSHA 10 cards can take weeks to replace.

The following reasons were cited by them for keeping the status quo, roughly in order of frequency:

Obstacles for unions and training funds:

- Most of the funds stated that their current database works well for them as it is. One of them stated that they liked being called by employers because that way they got feedback on their apprentices.
- Cost was an obstacle; some had invested a lot of resources already developing the databases that they had. That combined with the floundering economy discouraged active participation at this time
- There was concern that not all unions would buy in and that databases and identification numbers from multiple unions would have to be compatible.
- One fund director brought up concerns of computer literacy and language literacy (multiple languages spoken by the members)
- Contractors at very small jobs might not have computers.
- There was a concern about undocumented workers trading cards, and how the database would affect that.
- There was concern about what would happen if the internet was not working.
- Unions did not want to have to enter data twice (once into their database, and then into

---

> - the shared database.
> - One local sends a temporary OSHA 10 card to employers, so they do not need the database to meet New York City building code requirements.
> - There was concern whether the database would affect who is liable if a member develops an illness.
> - Respirator use is often voluntary (ie they did see the benefit of respirator portability).
> - There was concern that contractors would use the database against the members.

Most of the training and health and safety directors were supportive of sharing their data, although they also felt that the current system worked for them. Several agreed to "champion" the project, which included getting support from their union leadership and attending meetings to design the database. We successfully identified 6 champions (mostly health and safety directors) from 3 of the major New York City construction unions. A labor-management trust was commonly referenced as the best vehicle to use to implement such an effort. The training directors recommended we go to the BCTC to get support for using such a joint mechanism to manage the database.

We met with the assistants to the directors of the BCTC and BTEA. The BCTC suggested that we get buy-in from the Business Managers for the District Councils, the enforcement agencies and the contractors. They would not take any action to promote the project until we had the union leaders behind us. They were helpful in steering us to the appropriate leaders.

We had numerous false starts and delays due to the length of time between meetings of some of our "champions" and their union leaders or the BCTC. We feel that some of the delay was due to the downturn in construction and the current rocky relationship between contractors and labor in New York City. This was not a particularly good time to initiate new joint projects. We hit our most serious obstacle trying to get meetings with the Business Managers and getting them to promote this to the BCTC. However, had we more time, we may have been able to broaden our effort at promoting this to more local and district union leadership. Also, during this time, the Environmental Contractors Association (ECA), who were very interested in our project, dropped out of the BTEA.

> **Obstacles for the District Council Business Managers:**
>
> - The main obstacle was cost and resources. This is a particularly bad time for organized labor throughout the country and it is being felt in New York City. Costs are a big concern.
> - Things are working well the way they are.
> - The privacy of the members and sharing their data with other unions or contractors is a concern.

The Business Manager from the Laborers Local 78 and their contractors' association, the ECA, were both very enthusiastic about the project and wanted to go ahead with the project. This sector of the construction industry is particularly in need of a portable database because of the extent to which they use personal protective equipment and the extensive health and safety

training requirements of their members. They are in the business of removing hazardous materials such as asbestos, lead, mold and polychlorinated biphenyls (PCBs).

Because Local 78 members handle hazardous materials, the portability of respirator information is important to them. They believe that this project particularly fits their needs. Members of Local 78 have to carry lots of certifications and licenses without which they cannot work. Workers must have some of these cards e.g. asbestos licenses, on them at all times or they are not allowed to work. Both parties involved were very future- and technology oriented. They had already been trying to find a way to share their safety data. Therefore a decision was made to build a database to suit their specific needs with the goal to use that as a demonstration for a larger database that would include other NYC construction locals. The only major concern is how to fund the project.

CONTRACTORS

The BTEA set up a meeting with a few of the construction managers safety directors. ECA also brought contractors to some of the meetings with the Laborers. We met with the health and safety directors of the following contractors:

- Bovis Lend Lease
- Turner
- Structure Tone
- Gotham

We met with the presidents of the following environmental contractors:

- Degmor, Inc.
- PAL Environmental Services

The contractors were very enthusiastic about the database. They have no permanent databases of their own for health and safety information. Because the lack of the certificates can mean shutting down a construction job, with pay and time delays, unions and contractors in New York City were particularly focused on how the database could assist with documentation of these certifications.

Contractors saw no negatives for themselves, and they saw this database as solving numerous problems for them. Their biggest concern was whether the enforcement agencies would accept electronic records instead of the physical licenses and cards. The biggest challenge, they said, would be meeting every ones needs and training the users (contractors, workers, unions) how to use the new database. The following benefits were described:

Benefits for contractors:

- They can check respirator model and size needs in advance.
- They can avoid delays due to need for respirator clearance and fit-testing. Currently they have to bring a van in to do medical clearances and fit-tests if these records are not in place. This can take up to a week.
- Knowing the workers' training cuts down on time for health and safety orientation.
- The database would help them be in compliance with the law. For example, they can prevent job shutdowns by the Department of Buildings for not having a scaffolding card on hand . OSHA cards, if lost, take weeks to receive. OSHA 10 cards are required by the New York City Department of Buildings and the contractor can be cited if they do not have these documents available to the inspector.
- It benefits them to have all the records centrally located. It saves them time, money and paper needed to track down certifications. Currently they have to recreate the records for each project, even if the same worker is involved.
- Unlike a secure database, physical licenses can be tampered with. It eliminates the need to verify the training provider, which is sometimes not on the cards.
- Vendors (trainers) could be "approved" by the managers of the database, thereby assuring good quality.
- A tickler system can alert workers of the need to renew their certifications.
- Workers need documentation to be put to work and paid
- This will give the union contractors an advantage over the non-union contractors.
- Perhaps the project can be expanded to on-line training.
- It protects the contractors from liability if they have good records.

ENFORCEMENT AGENCIES

We had a phone conference with the Departments of Buildings, who regularly inspect for the OSHA 10, scaffolding and other training credentials. They were extremely supportive of the project. One concern they had was whether this would create an uneven playing field between union and non-union contractors; but because any employer could pursue such a database, they felt it was not an issue.

We had a phone conference with the Department of Environmental Protection, who enforces asbestos licensing and the use of properly fitting respirators by reviewing licenses and paperwork. They thought that a portable database would be an excellent idea for the asbestos abatement industry.

OSHA was consulted before the project began. Their Labor Liaison was invaluable at setting up meetings and providing contact information. Their industrial hygienist reviewed our grant proposal for its technical content and answered questions as they arose during the process. One concern they had was whether medical clearance for respirators was transferrable from one job to another. They agreed that this concern can be addressed by specifying a worst case scenario for the clearance so that for most laborers they will be approved for the worst temperatures and heaviest workload, unless limitations are specified in the database. The

database can also serve to alert employers of the need to check whether the worker's medical status has changed since their last clearance.

We began discussion with the enforcement agencies regarding their acceptance of a database generated pdf in lieu of an original copy of the card or certificate. The agencies were open to the idea and were willing to be involved if and when we secured funding for the project.

9. DESIGN OF THE DATABASE FOR LOCAL 78 AND ECA

The content and parameters of the database were identified during three meetings with the ECA and Local 78. Present at most of the meetings were at least one or more contractors and one or more administrative or IT staff of Local 78. Finally some of the more difficult decisions, such as how to allow contractor access without compromising privacy, were fleshed out during the creation of the model. The content and design is shown in the model in Figure 1.

Important design and operating features include:

Data- The database would include all active members' training and expiration dates, photos of licenses and certificates, respirator medical clearance, fit testing, hazwoper medical evaluation, annual audiograms, and a photo of the worker. The database may be expanded to include non-safety related items that are currently carried in paper or card form, such as W-4 and I-9 paperwork.

Management-Database will be managed by the local union. It will be housed in the cloud.

Access- The data can be accessed via smart phone or computer directly by a member or the union. Contractors can access the data on a smart phone by scanning the member's bar code, by sending an electronic message to the union or worker, or by having the member enter their password on the employer's computer or phone. Only the union can enter the data.

Other functions of the database-There will be a reminder on the screen when a member's training, license, or medical test needs to be renewed. There will be a photo of the member in the database for identification.

The design is described in more detail in Appendix 2.

10. NEXT STEPS AND REMAINING BARRIERS TO THE PORTABLE DATABASE

We are hoping to assist Local 78 and ECA to build a working database based on the model (Figure 1) that can be used as a demonstration for other construction unions in New York City. The remaining barrier to development of a demonstration database is funding. Because we have support from only one local union and an association of environmental contractors, the

cost to these organizations is much higher than if we had gotten buy-in from more organizations and could spread the cost. On the other hand, since all of the data is from one organization so far, the cost is less than if we had to import data from various databases and protect the privacy of the various organizations. We are hoping that once we have a workable database for the Laborers Local 78 and ECA we can use this to attract more organizations to buy into a larger database.

To determine the cost of the database we solicited funding proposals from six IT vendors that were identified over the course of the project through personal contacts. We requested that the vendors send us a scheme of how they would develop the database and pricing information. We informed them that we may not have funding immediately but that we would use their proposals to solicit funds in the future. The proposals were to be based on the information given to them in Appendix 2. Two vendors responded with the proposals shown in Appendices 3 and 4. After modifying our design we got a revised proposal from one of the vendors that put the project cost at around $40,000.00.

We have identified the following possible sources of funding: Laborers New York State Health and Safety Fund, New York City Laborers-Employers Cooperation and Education Trust (LECET), participating contractors, and CPWR small study grant. The Laborers Local will seek funding from the union and their joint funds. The ECA will look into foundation grants.

We will also seek opportunities to share the information we have gathered and to promote the idea of portable health and safety databases. We will put our report on the internet, send it to construction unions, and give presentations about it at forums where construction industry representatives attend.

Once this database is built we hope to promote it to the other construction unions and enforcement agencies. We plan to do this by doing demonstrations at meetings of the business managers and safety directors, hopefully through the BCTC and BTEA.

11. CONCLUSIONS AND RECOMMENDATIONS

Currently the major construction unions in New York City provide almost 100 per cent of their members' health and safety training, and, where needed on a regular basis, some provide respirator medical clearance and fit-testing. They have built electronic databases which are sufficient for them to maintain and access records. Some of the larger databases are described in this report.

Major contractors do not maintain comprehensive databases. They rely on members to carry paperwork. In the absence of the paperwork, they call the unions for documentation, or call in companies to conduct respirator clearance and testing, causing job delays and unnecessary

expense. The contractors were much more enthusiastic than the unions about a shared database because they do not have direct access to the data and they are held responsible if they do not have it. The unions were not ready to invest more resources in a system that they recently spent money on and that works fairly well for them. These differences were reinforced by the current economic downturn and the resulting strains on labor and their contractors that exist in New York City currently.

One major union that relies heavily on respirators, and their contractors' association, were very interested in the project. This is the industry sector that performs hazardous materials removal such as asbestos, lead, mold and polychlorinated biphenyls (PCBs). As part of this project, these parties designed a portable health and safety database and created a model of the database, including screens for smart phones or other electronic devices. They plan to pursue implementation of this in the near future and intend it as a demonstration for other construction unions in New York City. Key enforcement agencies have expressed willingness to work with them in the future.

In the course of this study we learned of and described several portable health and safety databases in the construction industry that have been constructed or are in the process of being constructed. A few international unions are working on making their training and respirator data accessible to locals and ultimately to their contractors. We recommend more communication among the different unions and between the various branches in the unions (national, districts, locals, training, and health and safety) as they go forward in the hopes that they can coordinate their efforts, avoid duplication, and, perhaps, increase the ease of access for contractors.

APPENDIX 1 HAND-OUT FOR SELLING THE PORTABLE DATABASE

The portable database would supplement the existing method of workers carrying papers and cards from one construction job site to the next. If necessary, cards or certifications could be scanned into the database. Types of certifications could include OSHA 10 training, scaffolding training, respirator fit-testing and medical clearance, audiograms, etc. The database would be managed by a joint labor-management (L-M) entity or a third party.

Several advantages of the database include:

- **Saves money**: Employers do not have to **duplicate** programs. Do not have to spend money to **repeat training or tests** that have already been performed. Employers can avoid fines and stop-work orders. Not having cards/licenses/certifications **cost the employees** jobs and contractors time, fines, and work/schedule disruptions, shutdowns (money).

- Workers can be **hired and paid without delays** to retrieve paperwork. Employees will not miss pay due to missing cards. Projects can start on time with a full complement of trained workers.

- **Saves time** -Can easily verify info- Unions can spend less time resending or reprinting training records. Employers do not have to **spend time chasing down paperwork** for work that is already been completed. Files can be easily uploaded to employer's records, saving them time needed to search through or duplicate existing paperwork for multiple projects. Employers can also use the website to notify union of job openings for employees with particular credentials.

- Can be used as **incentive to owners to hire the participating organizations**, as it will assure timely access to certifications, avoid fines and work delays, and provide assurance that workers have received competent training.

- Assures **good quality;** a joint L-M committee **can control** what training to accept, such as union apprenticeship programs.

- **OSHA 10 cards often take weeks** to receive if they are lost. The database could be a substitute that cannot get lost. Unions cannot generate these cards themselves. The replacement cards cost money.

- Database **could include picture ID to prevent fraud.**

- This could become an **industry standard** because it will make access to records easy for inspectors, contractors, etc. The Department of Buildings has expressed interest in the project.

- This could become a national model, as well. **The internet is here-why not use it and lead the way?**

- Many of the existing databases are not secure, since they use Microsoft Access or Excel. We would use a proprietary database such as Oracle or Sequel Server which are MUCH **more secure.**

- This database could be designed to accommodate other functions that could be added in the future.

  o Besides training and respirator fit testing it **could include respirator medical clearance, lead test results, hearing conservation results.** There would be no medical information other than what is already REQUIRED to be given to the employer (ie for a hearing conservation program employers need audiology results to compare annually).

  o If we wanted it to, database could **alert members to need to renew** certifications.

  o Or could be used to **track the hiring of members**. Uses would be determined by the Joint Committee that runs it.

  o Or it could be used by John Doe to show not only training he got through his union, but any other **outside training** he got (if the committee accepts this training)

- Database **could be used to do analyses** across multiple unions, if parties agreed to share data for certain studies, or for bargaining purposes (such as percent of union employees with advanced training).

- At any time John Doe could make a print-out of all his training on one page (or bring his cards), in case he is going somewhere that has **no computer access.**

- The employer, instead of photographing the cards for their records, can instead download John Doe's "computer card" (ie just the info which appears on his screen, which is just the info that would be on his card) into a file for that project, **making the records "paperless", and green.**

APPENDIX 2 DESCRIPTION OF HEALTH AND SAFETY DATABASE FOR LOCAL 78

General Description and Function

The PHSD (Portable Health and Safety database) would have approximately 80,000 records for about 4,000 members of Laborers Local 78. Each construction worker would have a record of their health and safety training certificates (name and expiration date), their respirator data (medical approval, make, model and size of respirator) and their hearing conservation data (hearing test results and training).

Who will house and maintain the database?

Laborers Local 78 would own and maintain the database. They have a server, the necessary software and storage space. They can enter the data. However, if the vendor wants to host the database they need to give us a separate price for that. We are open to renting space in the cloud to store data.

Access: How will data be accessed and by whom?

Data should be accessible via the internet to union members, contractors, union staff, and training fund. Data should be <u>readable</u> on a computer monitor, iphone, blackberry or other electronic devices. Union members can only see their own records. Union staff could see their entire database. There must be protection so that contractors cannot download the files for another purpose (for example, it could be set up so they could only access a limited number of records at a time). Only union could enter data.

What type of data?

Sample list of data is attached. Some is text and some is images. We may want to scan some certification cards, some licenses and a photo ID into the database. We expect about 5 pieces of scanned data per person.

How much data?

We currently have about 80,000 records (20 records per 4,000 members) but anticipate expanding this to about 240,000 records (60 records per member).

From where do we get the data?

There are 2 sources of data. First, the District Council maintains a large searchable proprietary database with much of the information we need (training records and when they expire for each member, and respirator records). We will have access either to this database or to downloads of portions of the database.

Second, the local has an FTP site that contains a group of folders with data. These are not searchable. Nor are they uniform. They contain images of licenses and a photo ID. Each license has a unique number and expiration date. The files would have to be open and read to determine if the licenses are up-to-date and then entered into the new database.

What would the database functions be, besides just holding data?

The computer should remind the worker when their certifications are about to expire.

We would also like to be able to print out a sticker that would indicate when the next expiration date is for any of several priority licenses or training certificates. The stickers are a back-up. They are only needed because some contractors may not initially have access to electronic devices (imagine jobs at night where demolition is going on) We hope they will all eventually get smart phones or similar devices and the stickers will no longer be necessary. We expect the stickers to be printed quarterly and contain the expiration dates of the most critical licenses and certifications. It would be pasted to the back of the workers' ID cards. This would be used in the rare instances that the contractor does not have a computer-like device.

What type of data will be in the database?

Member identification number

Training: Name, sponsor, and expiration date of training certifications for

OSHA Hazardous Materials Technician
OSHA Hazardous Materials Specialist
OSHA First Responder Awareness
OSHA 10 hour
NYC Scaffolding Builder
NYC Scaffolding 2 point suspension
NYC Pipe scaffold
NYC Asbestos Handlers license
NYS Asbestos Handlers license
NJ Asbestos license
NJ Lead license
NYC Lead licenses
OTHER

Hazardous Materials Medical Surveillance *1910.120 (f) (8) Recordkeeping*
o Employee's ID
o Physicians written opinion, recommended limitations, and results of examinations and tests
o Employee medical complaints related to exposure to hazardous substances

Respirators *1910.134* Medical Clearance
- date
- yes or no, and any limitations regarding respirator use
- need for follow up, if any
- type and weight of respirator
- duration and frequency of respirator use
- expected physical work effort
- additional protective gear to be worn
- temperature and humidity extremes that may be encountered

Respirator *1910.134* Fit testing (every year)
- Make
- Model
- Size
- Date

Respirator Training (1910.134)-yearly

Hearing Conservation *(1910.95)*
- Training on hearing conservation (sponsor, date)- every year
- Job classification
- Audiometric test record (baseline and every year)
- Hearing threshold in decibels at 500, 1000, 2000, 3000, 4000, 6,000, and 8,000 Hertz frequencies for right and left ears (baseline and yearly)
- Threshold shifts for frequencies 2000, 3000 and 4000 in each ear (decibels minus baseline)
- Whether standard threshold shift has occurred
- Date of audiogram
- Threshold shift
- Examiner's name
- Date of last acoustic or exhaustive calibration of audiometer
- Background sound pressure level in audiometric test room
- Employee's most recent noise exposure assessment

Proposal: Development and Maintenance of a Portable Health & Safety Database (PHSD)

Submitted to: Alice Freund, Mount Sinai School of Medicine

Submitted by: Jeffrey S. Nelson, Conceptual Arts, Inc.

October 7, 2011

Part 1: Creating the Database

Description of Proposed System

Fundamentally, the purpose of this project is to develop a system that simplifies the process of transmitting work-related credentials for members of Local 78 of the Laborers to any of the various contractors that employ their membership. Contractors use these credentials to verify that potential employees are qualified for the type of work to be done, and to meet OSHA requirements.

To describe our proposed system, we will utilize a series of screen mock-ups. As defined in the RFP, four user classes were identified: Workers (Union Members), Contractors, Union Administrative Staff, and Training Fund Staff. For this reason, there will be four distinct user interfaces. It will be important to keep in mind which user class the screen is designed for as these screens are discussed -- pay attention to the heading at the top of each screen.

There should be some manner of control over which contractors have access to particular records. For this reason, in the system we are proposing, there are four events that can trigger the transmission of worker credentials to the contractor -- each requiring the action of the worker or union staff before the credentials are made available to the contractor.

    [1] Workers will be supplied a card that contains a code unique to that worker. Using a worker-supplied code, a contractor can login to the system and have immediate access to the worker's credentials.

    [2] Contractor staff will be supplied a card that contains an account number unique to that staff member. Using a contractor-supplied account number, a worker can login to the system, and transmit his/her credentials to the contractor. When the contractor next logs in to the system, there will be a notification of the availability of the worker's credentials.

    [3] A contractor can login and search the database for a worker by name. If found, the contractor can send a credential request to that worker. When the worker next logs in to the system, there will be a notification of the contractor's request. The worker will be able to "accept" or "deny" the request with a simple "click". If approved, when the contractor next logs in to the system, there will be a notification of the availability of the worker's credentials.

[4] Local 78 Administrative Staff, once logged in, can send any worker's credentials to any contractor.

The proposed system would also keep a log of all credential requests and credential transmissions so that Administrative Staff can monitor site usage. In cases of abuse, Administrative Staff can remove abuser accounts.

The Worker Interface

Note: the screen mock-ups we are presenting for the worker interface are sized for a mobile device, but the site will be accessible from any standard computer interface as well.

As mentioned above, workers will be supplied with a card that contains their login information, and a code that they can give to contractors with whom they would like to share their credentials.

Card handout for Worker
PHSD *for Workers* Name: Aaron A. Able Account ID: W12345 Your login URL: www.PHSD.org/worker URL for Contractors: www.PHSD.org/contractor Immediate Credentials Access Code for Contractors: CAC9463

Once the worker logs in (Screen 1), he/she lands on the main page (Screen 2).

Note the "notifications" area. If there are any pending credential requests for the worker, a link will be present. Likewise, if there are any near-term license or credential expirations (say within 90 days), a link will be present. And if there are any system messages that need to be picked up, a link will be present.

This main screen (Screen 2) also includes links for sending credentials to a contractor, sending a job request to Local 78 letting staff know of his/her availability, a link for reviewing the worker's credentials, a link for updating account information and preferences and a link for contacting PHSD administration.

Worker Interface Screen 1

PHSD *for Workers*
 	
    Account ID: _____
    Password: _____
        __ Remember me
 	
                             Submit
 	
About PHSD for Workers
Request an account

Worker Interface Screen 2

PHSD *for Workers*
                            logout
 	
You are logged in as: Aaron A. Able
Memberr#: W12345
 	
Notifications
    Pending credentials requests
    Near-Term Expirations
    Messages
 	
Send Credentials to a Contractor
 	
Request Job
 	
Review my credentials
 	
Update Account Info & Preferences
Contact PHSD Administration

Screen 3 shows how the worker and respond to credential requests.

Screen 4 shows how a worker can review his/her credentials.

Workers can initiate the transmission of credentials to contractors using screen 5. To do this they could either enter a contractor-supplied account number, or search for a contractor representative by name.

PHSD *for Workers*

logout

You are logged in as: Aaron A. Able
Member#: W98765

Pending Credentials Requests

Name &
Company   SentBy Date

John Citizen   union   10/07   accept
   AAA Contractors   deny

Tad Taylor   contr   10/07   accept
   BBB Contractors   deny

Wade Williams   contr   10/08   accept
   CCC Contractors   deny

PHSD *for Workers*

logout

You are logged in as: Aaron A. Able
Member#: W98765

Your Credential Summary

Hearing:
Hearing summary info here. Hearing summary info here. Hearing summary info here

Hearing Detail
Respirator Fit:
Respirator fit summary info here. Respirator fit summary info here.

Respirator Fit Detail
HazMat Surveillance:
HazMat surveillance summary info here. HazMat surveillance summary info here.

HazMat Surveillance Detail
Trainings:
Trainings summary info here. Trainings summary info here. Trainings summary info here.

Trainings Detail

Download Summary
E-mail Summary
Download Detail All
E-mail Detail All

PHSD *for Workers*

logout

You are logged in as: Aaron A. Able
Member#: W98765

Submit Credentials Request Form

For contractors with PHSD accounts, enter the contractor-supplied account number code here: _____

Submit

If you do not have the contractor-supplied code, you can search for a contractor by name and submit a request for the worker to send you the credentials

Search for contractor by name

The Contractor Interface

Note: the screen mock-ups we are presenting for the contractor interface are sized for a mobile device, but the site will be accessible from any standard computer interface as well.

As mentioned above, contractor staff will be supplied with a card that contains their login information, and an account number that they can give to workers for transmitting credentials.

Card handout for Contractor

PHSD *for Contractors*

Name: John Q. Citizen
Organization: AAA Contractors, Inc.
Account ID: C98765
Your login URL: www.PHSD.org/contractor

URL for Workers: www.PHSD.org/contractor
Code for Workers to send you credentials: C98765

Once the contractor logs in (Screen 1), he/she lands on the main page (Screen 2).

Note the "notifications" area. If there are any pending credential submissions from the worker, a link will be present. Likewise, if there are any system messages that need to be picked up, a link will be present.

This main screen (Screen 2) also includes links for requesting credentials from a worker, sending a job listing to Local 78 letting staff know of available jobs, a link for updating account information and preferences and a link for contacting PHSD administration.

Contractor Interface Screen 1

PHSD *for Contractors*

Account ID: _____
Password: _____
__ Remember me

Submit

About PHSD for Contractors
Request an account

Contractor Interface Screen 2

PHSD *for Contractors*

logout
You are logged in as: John S. Doe
Account #: C98765

Notifications
　　Credentials sent to you
　　Messages

Request Credentials

Send Job Listing

Update Account Info & Preferences
Contact PHSD Administration

Screen 3 is used to pick up credentials sent from workers. Clicking on the "view" link takes you to a summary view of the worker's credentials (Screen 4).

Contractors can get worker credentials using Screen 5. If the contractor has the worker-supplied code, he/she enter it and get immediate access to the credentials. Otherwise, the contractor can search for a worker by name and send a request to that worker to send his/her credentials.

Once the credentials are sent to the contractor, he/she will be able to download or e-mail the credentials.

Contractor Interface Screen 3

PHSD *for Contractors*

logout

You are logged in as: John S. Doe
Account #: C98765

Credentials Sent to You

Worker Name	Sent by	Date	
Aaron Able	worker	10/07	view
Bob Barton	union	10/08	view
Chip Chun	worker	10/08	view

Contractor Interface Screen 5

PHSD *for Contractors*

logout

You are logged in as: John S. Doe
Account #: C98765

Worker Credentials Request Form

For immediate access, enter the worker-supplied credential access code here: _____

Submit

If you do not have the worker-supplied credential access code, you can search for a worker by name and submit a request for the worker to send you the credentials

Search for worker by name

Contractor Interface Screen 4

PHSD *for Contractors*

logout

You are logged in as: John S. Doe
Account #: C98765

Credential Summary
Worker: **Aaron Able**

Hearing:
Hearing summary info here. Hearing summary info here. Hearing summary info here
Hearing Detail
Respirator Fit:
Respirator fit summary info here. Respirator fit summary info here.
Respirator Fit Detail
HazMat Surveillance:
HazMat surveillance summary info here. HazMat surveillance summary info here.
HazMat Surveillance Detail
Trainings:
Trainings summary info here. Trainings summary info here. Trainings summary info here.
Trainings Detail

Download Summary
E-mail Summary
Download Detail All
E-mail Detail All

The Union Administrative Interface

Once the administrator logs in (Screen 1), he/she lands on the main page (Screen 2).

PHSD *Administrative*

Account ID: _____
Password: _____
__ Remember me

Submit

PHSD *Administrative*

logout

You are logged in as: admin1@phsd.org

NOTIFICATIONS--

Worker-related   **Contractor-related**   **Other**
   Messages   Messages   Daily DB Reconciliation Report
   Account requests   Account requests   Webmaster messages
   Job requests   Job Listings   Training Fund messages

DATABASE ACCESS--
   Worker records: search, update/modifiy, print & send credentials
   Contractor records: search, update/modifiy & print
   Database activity logs: search & print

ACCOUNT MANAGEMENT--
   Worker accounts: add, delete, modify
   Contractor accounts: add, delete, modify
   Training fund accounts: add, delete, modify

Note the "Notifications" area. Each of the links in this area will only appear if there are corresponding notifications for the administrator.

The "Database Access" area includes links for accessing worker records, contractor records, and database activity logs. When accessing worker records, the administrator will be able to [a] edit any part of the worker record, [b] send the worker's credentials to any contractor, [c] print out a hardcopy of the credentials, and [d] print out a sticker for the worker's card.

The system we are proposing will include a log of all activities, including credential transmission requests and credential transmissions. This is where the administrator can look for user abuse.

Note also the "Account Management" area -- this is where the administrator can manage (add, delete, modify) the accounts for the three other user-classes (workers, contractors and training fund staff).

The Training Fund Staff Interface

Once the training fund staff logs in (Screen 1), he/she lands on the main page (Screen 2).

PHSD *Training Fund Input*

Account ID: _____
Password: _____
__ Remember me

Submit

PHSD *Training Fund Input*

logout

You are logged in as: trnfund1@phsd.org

NOTIFICATIONS--
  Messages

MODIFY DATABASE ---
  Search worker records by name
  Search worker records by Member#

Note the "Notifications" area -- a message link will appear here if a message has been sent.

This functionality of this interface is limited to updating worker credentials, thus there are few links. Staff can search for a worker by name or number. Once retrieved, the staff can update the credentials.

Development of database & web interface

Note 1: In the "Answers to Vendor Questions", there appears to be some conflicting information.

> 6. Will we be able to update records/data in the District Council database or will the access be "read only"
>
> > *Direct access to District Council database is not permitted. The data could be exported into a file or an intermediary server (ro).*

> 10. Four user classes were identified: Union Members, Contractors, Union Staff, and Training Fund. A broader description of the functionality that the PHSD will provide for each user class would be helpful. In particular, there is no description of the functionality that the PHSD will provide for the Training Fund.
>
> > *Training Fund- With rare exception the jointly (union and contractors) funded training funds are the organization who provides the certifications and respirator fit testing. They provide most of the training and certifications. They need access to the database to INPUT the data and to check on members' certifications as questions arise (questions from members, union, and contractors). Currently they input into the District Council's database. We do NOT want them to have to input this information twice. They do not issue licenses. These are issued by government agencies. These licenses will be scanned into the database. Part of the FTP file is pictures of licenses.*

Our understanding is that our software system is not allowed to modify the District Council's database. If we are to build an interface that allows Training Fund staff to input data, then how is will that data get into the District Council's database without either [a] the Training fund entering the data twice, or [b] our software system modifying the District Council's database?

Note 2: Our proposal calls for hosting the system on a virtual private server professionally managed by a third-party web hosting company. The cost is modest, and will easily be offset by the added expense of coordinating our activities with the Local 78 IT support staff. Our budget includes this cost.

Note 3: The development of the database and web interface are very inter-related in terms of the procedure for building this system, so we combined the procedure and timeline for both of these items in this proposal.

Timeline & Procedure

Week 0	CA staff to meet with District Council's IT support personnel and acquire its database schema. If possible sample data acquisition would be helpful. The project goals and project proposal will be reviewed. Discuss the database filtering process and possible methods of exporting data from the District Council's database. Discuss security and process concerns. CA staff to meet with project supervisors to review the project procedures and decide on website URL. CA staff to acquire a web-hosting account and the agreed-upon URL. CA staff to meet with members of all four user classes, review the project goals and project proposal. Using screen mock-ups from the proposal, CA staff will gather user feedback for screen designs
Week 1	CA staff will refine interface designs based on user feedback and develop a new generation of screen mock-ups.
Week 2	CA staff will meet with project supervisors to review the refined screen mock-ups, and gather feedback. CA staff to meet with members of all four user classes, review the refined screen mock-ups, and gather user feedback.
Week 3	CA staff will refine interface designs based on feedback and develop a new generation of screen mock-ups. CA staff will meet with project supervisors to review and the finalize the screen designs. CA will begin to develop the PHSD database schema
Week 4	CA staff to meet with District Council's IT support personnel to finalize process of exporting data from the District Council's database on a daily basis. CA staff will begin constructing the backend-database. CA staff will begin building the interface screens for the four user classes.
Week 8	CA staff will complete building the back-end database and begin constructing the data entry interface screens that will support the migration of data from the Local 78 FTP database into the new PHSD database. CA Staff will complete the interface screens for the four user classes.
Week 10	CA staff will complete building the data entry interface screens that will support the migration of data from the Local 78 FTP database into the new PHSD database.
Week 11	CA staff will work with Local 78 staff and project supervisors to review the data entry interface screens. Feedback will be gathered. CA staff will make final changes to the data entry interface screens.
Week 12	CA staff will work with Local 78 staff and project supervisors to test the data entry interface screens.
Week 13	CA staff will release the data entry interface screens for beginning the data entry process.
Week 14	CA Staff will marry the PHSD database back-end to the four end-user interfaces that were

	completed in week 8.
Week 15	CA staff will work with project supervisors and users from the four user classes to test the four end-user interfaces.
Week 16	The PHSD database will be deployable pending the completion of the data entry process. Just prior to deployment, CA staff will conduct a training session for project supervisors, District Council and Local 78 IT support staff, Local 78 administrative staff, and Training Fund data entry staff.

Cost: $31,600

Data Entry

Note: CA is flexible with regard to data entry. CA staff skills are better used for other tasks and CA will likely subcontract much of this work out once we have built a data entry tool to support this activity (see section above). If we are selected to partner with Mt. Sinai and we are able to more closely inspect the data that we will be working with, it should be possible to provide a "tighter" estimate of the data entry task. As it stands, the estimates provided below are crude. We've included our analysis for your review.

Timeline, Procedure & Cost

In the previous section, CA has indicated that in Week 13, CA will have built, tested and deployed a tool that could be used by whatever personnel are engaged for the purposes of entering the data from the Local 78 FTP database into the new PHSD database.

In estimating the cost, we are using the data contained in the RFP: currently 4000 members, currently 20 pieces of data per employee. To review the 5 scanned documents and rename them per a consistent naming system, and enter the 20 data points per employee, and later verify the data entry, we are estimating 1 hour per employee. That's 4000 manhours -- at $12/hour that's **$48,000**. Farming this out to a group of contract workers, this could be done in a couple of months beyond week 13 -- **roughly five months from the start of the project**.

Part 2: Maintaining the Database

Procedure & Timeline

Once the PHSD is released/deployed, CA staff will be particularly proactive and work closely with Local 78 Administrative staff to monitor any problems with the site, particularly in the first two months. In our experience, most of the system tweaking that will be needed will occur in the first two months of site use. After the first two months, it is expected that support needs will diminish.

Cost

Year 1, post deployment: $9000

Year 2, post deployment and thereafter: $5400/yr

Part 3: PHSD Model & Web Interface Design

Note: There remains unknown a significant amount of information pertaining to [a] what is contained in the District Council database, [b] the level of support that the PHSD vendor can expect from the District Council database support personnel, and [c] the most efficient and effect way to build the interface between to two databases. Also, as noted in an earlier section, there was contradictory information in the RFP and the subsequent answers to questions. For these reasons, our proposal recommends adding a discovery phase to Part 3 of the proposal. This is necessary in order to develop a realistic estimate of the District Council IT support time and resources needed for the proposal that Mt. Sinai is developing.

Timeline & Procedure

10-18-11	CA staff to meet with District Council's IT support personnel and acquire its database schema. If possible sample data acquisition would be helpful. The project goals and project proposal will be reviewed. Discuss the database filtering process and possible methods of exporting data from the District Council's database. Discuss security and process concerns.
	CA staff will work with District Council's IT support personnel to develop the specifications for the work to be done (whether by the District Council's IT support personnel or a third party vendor of their choosing). An RFP will be released and estimate(s) will be requested
	CA staff will work with District Council's IT support personnel and project supervisors to resolve the conflict noted in the "Development of database & web interface" section above.
	CA staff will work with project supervisors to [a] incorporate the description and cost of the work needed to build the District Council's database export component, [b] otherwise assist in developing the proposal that is to go forward to CPWR
11-4-11	CA staff will deliver the model of the database and web interface

Cost

$4000	Build the model of the database and web interface
$4000	Work with District Council's IT support personnel to develop the specifications and budget, and to otherwise assist in project supervisors in developing the proposal
Total	**$8000**

Part 4: References

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Pierce H. Jones, PhD

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Part 5: Portfolio of Related Work

Name: eLCOSH, the Electronic Library of Construction Occupational Safety & Health

Description: A large database of construction occupational safety & health information

Completion date: 2000

URL: www.elcosh.org

Name: CPWR Construction Solutions

Description: A database of information on health hazards, and practical control measures to reduce or eliminate those hazards.

Completion date: 2007

URL: www.cpwrconstructionsolutions.org

Name: NASD: The National Ag Safety Database

Description: A large database of agricultural occupational safety & health information

Completion date: 2007

URL: www.nasdonline.org

Name: SynQuest Laboratories

Description: A commercial site for a chemical manufacturing firm

Completion date: 2010

URL: www.synquestlabs.com

Part 6: List of Supported Work

2010-2011	Florida Weatherization Training Center: Supporting Green Jobs and Safe Weatherization Activities through a Self-Sustaining Statewide Training Network, Role: Technical Producer. National Energy Technology Laboratory funded project (Funding Opportunity # DE-FOA-0000220), $183,000, subcontracted through the University of Florida Program for Resource Efficient Communities, Project Director: Pierce H. Jones (UF)
2010-2014	Construction Solutions: Work Hazards, and Options for Making Work Safer, Role: Technical Producer. NIOSH funded project (Contract # U60 OH009762), $234,000, subcontracted through the Center to Protect Workers' Rights (Subcontract #3001-011-01), Project Director: Erich J. Stafford (CPWR)
2010-2014	eLCOSH: The ElectronicLibrary of Construction Occupational Safety & Health, Role: Technical Producer. NIOSH funded project (Contract # U60 OH009762), $341,000, subcontracted through the Center to Protect Workers' Rights (Subcontract # 3001-019-02), Project Director: Erich J. Stafford (CPWR)
2007-2010	Expansion and Maintenance of the National Ag Safety Database, Role: Technical Producer, NIOSH funded project (Contract # 1 R25 OH008968-01), $235,450, subcontracted through the University of Florida (Subcontract #00064796), Project Director: Carol J. Lehtola (UF)
2005-2009	eLCOSH: The ElectronicLibrary of Construction Occupational Safety & Health, Role: Technical Producer. NIOSH funded project (Contract # 1U54/OH008307), $389,000, subcontracted through the Center to Protect Workers' Rights (Subcontract #s 1030-18, 1030-60, 1030-65), Project Director: Erich J. Stafford (CPWR)
2005-2009	Construction Solutions: Work Hazards, and Options for Making Work Safer, Role: Technical Producer. NIOSH funded project (Contract #s 1U54/OH008307, U60/CCU317202), $342,500, subcontracted through the Center to Protect Workers' Rights (Subcontract #s 1030-38, 1030-64, 1020-75), Project Director: Erich J. Stafford (CPWR)
2001-2006	National Ag Safety Database, Role: Technical Producer, NIOSH funded project (Contract # 1U50-OH07551), $240,000, subcontracted through the East Carolina University/Southern Coastal Agromedicine Center, Project Director: John Sabella (ECU)

APPENDIX 4 Proposal from Worldgate, Inc.

Worldgate, llc
1760 Reston Parkway,
Reston, VA 20190

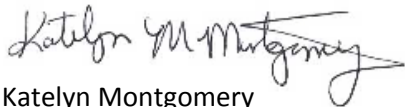October 6th, 2011

Dear Alice Freund,

Worldgate, LLC is pleased to submit a proposal in response to the Mount Sinai School of Medicine RFP in conjunction with Laborers Local 78 and Environmental Contractors Association for a Portable Health and Safety Database (PHSD) System. This proposal contains Worldgate's understanding of the requirements, our proposed solution, and approach for delivering the requested scope of work.

As President of Worldgate, I am authorized to sign this proposal on behalf of Worldgate.

It is Worldgate's understanding that Mount Sinai is facilitating this project to achieve the goal of building a Portable Health and Safety Database to serve as an efficient system for the Unions, Contractors and all other stakeholders who must access worker's health and saftey information. We look forward to the opportuinty to partner with Mount Sinai to support this goal as they strive to provide the highest quality system for all the stakeholders involved.

To achieve Mount Sinai's goal of a Portable Health and Safety Database, Worldgate proposes a solution to meet and exceed the goals of your RFP. Our solution gives Mount Sinai the benefit of lessons learned from other database and web implementations within the state and local industries. Our proposal is broken into two(2) Phases with the option to continue into Phase 3 for future expansion of the PHSD soultion. The first Phase (1) is the discovery and delivery of the data model, and the second Phase (2) is the implemetation of a research quality PHSD soultion. Our solution can be extended beyond initial scope and has the ability to grow within the industry for years to come through a partnership with Mount Sinai.

Worldgate has worked for many years in the State and Local industy implemeting Data Warehouse and Buiness Inteligence solutions which access organizational data through a secure and unifed web portal. Leif Johnston is our proposed lead developer and brings 20 years of experience in software development. With our combined experince, Worldgate truly understands the importance that the Portable Health and Safety Database initiative carries for Mount Sinai and the stakeholder community. We look forward to an opportunity to share our solution in greater detail and are confident in our team's ability to deliver and exceed your expectations.

Katelyn Montgomery
President
Worldgate, llc
kmontgomery@Worldgatellc.com

worldgate

Customized Solutions. Delivered.

Response to Mount Sinai School of Medicine in conjunction with Laborers Local 78 for Portable Health and Safety Database(PHSD)

October, 7th 2011

MS SM

MOUNT SINAI SCHOOL OF MEDICINE

Prepared By:

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Table of Contents

Introduction

Worldgate is pleased to have the opportunity to reply to the Mount Sinai RFP for a Portable Health and Safety Database. Worldgate understands the stakeholders are looking for a tool that will enable the portable transfer of health and saftey information for laborers. Worldgate applauds Mount Sinai for taking these bold steps to improve the efficenices within the industry.

This project represents an interesting opportunity to leverage technology to improve a costly and ineffective business process. The management of the information relating to workers respirators and hearing protection is important for worker safety, but complicated by antiquated processes. The issue is sharing information that correlates workers to the respirators and hearing equipment that they have been trained and or certified to use and tracking certain health data. Workers, union representatives, contractors, medical service providers and government agencies all need to know that the worker has the right equipment. Currently, the vision of Local 78 of the Laborers Union and the Environmental Contractors Association is to explore the right data sharing plan to bring this solution into the 21st century with a Portable Health and Safety database.

There are a number of constraints that bind the system implementation:

- The system needs to address hearing protection and two types of respirator need: dusts and poisons since not all respirators perform both functions.

- Fit is certified by medical service professionals and information is currently kept on cards carried by the workers.

- There is also required training for some equipment and this must be tracked as well. Since the training represents a significant expense, presumably providing the workers with the equipment they have been trained to use is less expensive in the long run. Additionally, retraining a worker to use a different device might create delays in ability to perform on site, additional expenses/penalties for non-compliance or worst a physical risk to the worker.

- Additionally, certain baseline data on the worker's health must be maintained for year over year comparison. As we understand it, this baseline data is primarily hearing related but might include broader medical histories that could be confidential.

- The challenge of the system is to share the right personal information with unions, contractors, medical professionals and government agencies at the right time. Pragmatically, the solution needs to be an internet based application that can simplify the sharing of information securely and appropriately.

Since there are multiple entities that have an interest in the data held by the system, we need to make sure that we can understand the needs of each stakeholder. The following sections highlight Worldgate's understanding to date.

Individual Union Members - Workers

Workers are the ultimate reference of the data being collected and shared. Workers privacy will have to be a concern in the development of this system. It is not clear what the role of the individual worker needs to be with respect to this system.

Unions

Local 78 of the Laborers Union is an active participant in this project to better understand how to manage this information. The union is the active agent representing the needs of the workers. The union has the vision to understand how to more effectively manage this information. While this effort is associated with one union, other unions would clearly benefit and we feel it is important to develop a solution that can meet the needs of unions in general.

The unions may be the agents to monitor personal data on their members and certify that information for sharing with contractors and governmental organizations. The exact roles need to be clarified.

Contractors

The Environmental Contractors Association is also an active participant in this project. Contractors are responsible for safety on site and need to be aware of the equipment needs of the workers on their construction sites. Therefore, this system needs to meet the needs of the contractors to track, manage and as needed report on the workers employed at their sites.

Medical Service Providers

Medical service providers need to perform baseline and recurring medical tests related to occupational hazards and certify the results to the unions and perhaps others. Additionally, medical providers may need to know the patient history as managed by the union.

Government Agencies

There is a specific requirement that we identified in the lead up materials that suggested that either New York State or the localities require that contractors can certify that the workers on their jobs are correctly protected and trained on the safety equipment they are using. We would want to better understand this need and who/how it should be accomplished most effectively. There is a further interest in some form from the National Institute for Occupational Safety and Health (NIOSH), but it is not clear what if any active role they might play.

Executive Summary

Worldgate Summary

Background

Worldgate, LLC (www.worldgatellc.com) is a woman-owned IT systems, implementation and integration consultancy founded in 2003. Worldgate offers superior value-priced services and reliable delivery for commerical, state and local sector clients. Worldgate's services are offered on a project or strategic staffing basis across various technology platforms, operating systems, and infrastructures. Worldgate is headquarted in Reston, Virginia and has additional offices in Philadelphia, PA. Please see Section 10, Company Profile, for more information on Worldgate, llc.

Mission Statement:

Customized Solutions. Delivered.

Values:

We value our people.

We establish strong relationships and build lasting partnerships.

We provide distinctive quality service and are 100% committed to our clients.

We are cost effective, flexible and nimble.

Our packaged sevice solutions include:

Systems Integration	Business Process Redesign
Data Warehouse & Business Intelligence Solutions	Technical Writing
Project Management	Change Management
IT Recruiting	Training
IT Help Desk & Production Support	Web Development

Subcontractor Summary: Technology Catalyst, llc

Technology Catalyst is a private business incubator focused on helping start-up internet businesses develop. Operating for more than 10 years, Technology Catalyst has helped launch more than 25 internet businesses. With excellent technical skills, business management services and experience developing products, Technology Catalyst is a key partner on this project. Highlighted services:

- Software design and development
- Pre-developed Software products
- Business Support Services
- Information Resources
- Software Consulting
- Systems Design

Technology Catalyst has created several products, which have gained national recognition for their efficiency, and ease of use. We also work with companies on a case by case basis providing solutions that save money and help make their business process more efficient, and effective.

Solution Implementation Approach

We believe this solution should be a phased approach. The first Phase (1) is focused on the research and development needed to support the Mount Sinai team's grant application process. The second Phase (2) is the effort needed in conjunction with the grant research. Usually, in work like this the data model needs to be refined, data access business models need to be developed and the security model needs to be finalized. The most logical third Phase (3) at this point would be to resolve any outstanding issues and move to productize the solution so that could support many unions and contractors. At this point, we do not know what will be required once the work of Phase 2 is completed.

Knowing that we are looking to optimize the development process, we have engaged Technology Catalyst as our support partner. Technology Catalyst has a track record of creating insightful internet products and brings a baseline toolkit that can help us deliver on this project against the aggressive timetable and within the budgetary constraints.

Phase 1: Discovery and Data Model

The Phase 1 goal is to meet the needs of the Mount Sinai grant application process. At this point, the estimation of work needed to accomplish that is the initial discovery and the development of a viable data model for the application and processes during the research phase. We will work with the Mount Sinai team to ensure that the understanding gleaned from the documents provided so far is accurate. We will then build a data model for the team and train the team on its implications. This information will be a critical component for the Phase 2 grant application. The documentation of the data model will include entity relationship diagrams to visually represent the design, a data dictionary to articulate the role/description of the data elements and limited use cases to describe how we believe the data will be accessed.

We will also create a collaboration web site for this project. As a part of the development process, we want to use this site to facilitate effective communications on all the project information and the project insights that we are working under.

As we understand it, Phase 1 will begin with a contract award by the Mount Sinai team sometime in the October or November timeframe. We also understand that we will have a fairly short turn around on the project and so we are preparing our team to respond quickly and effectively. Part of this process is to maximize the impact of our time spent on site at with the Mount Sinai team in New York while minimizing travel costs. The website will help our communication so that we use our time effectively.

Phase 2: Build

Phase 2 is the key research time of the project as envisioned. The goal of this phase is to validate and improve the data model constructed in Phase 1; determine the business processes related to the security, access and management of the data collected in evaluation and tracking of union members; and ultimately create a system to test the processes identified. Phase 2 is not expected to create a working product but a tool to support research about the final product. To accomplish this, we see the following five (5) tasks:

Data Model Implementation and Rework

Almost every effort to develop a data model falls short on its initial assumptions. This task will provide an implementation of the data model and provide and administrative access to the database. As the team works with the database, we will identify shortfalls and rework the implementation till it meets the needs of the team.

Process Documentation

Section 2 sought to identify the players in this project. Task 2.2 will focus on what roles the players need with respect to the data; what access procedures are needed for privacy, security and effective data sharing; and any implications that might be derived from that which might impact the system implementation.

Process Implementation

Leveraging the Technology Catalyst toolkit, we will build an initial implementation of the system to support the research. This implementation will coupled the database from task 2.1, the process from 2.2 with the toolkit which provides authentication, application security and content management. The result of this task will be the first usable implementation of the data as it might be seen by all of the stakeholders. The Results of this task will create the first iteration of the software as we understand it.

Testing and Rework

As we complete the implementation, we will work with the Mount Sinai team to ensure that what we built is operating correctly. This process includes both testing and the rework necessary to fix issues or bugs identified.

Hosting Administration

One of the key requirements of the system being considered is access by multiple groups at various locations. Since this requires an internet based solution, we believe that there are a number of system characteristics that are important: regular maintenance, administrative control, access security, network security, data privacy and system monitoring. All of these responsibilities will be accomplished under this task.

Leveraging the Technology Catalyst toolkit allows us to use a secured internet based solution to build the solution we need. After close review of Mount Sinai's RFP and goals, we propose to host this PHSD solution "in the cloud" and take advantage of services provided rather than having to replicate them on local machine hardware. The cost savings of this approach are the only way that we can execute this solution. Replicating the infrastructure needed to support an internet application would be cost prohibitive for a small project like this. Hosting will run for the agreed duration of Phase 2, which we have proposed is three (3) months. Additionally, this time can be extended if required depending on the execution of Phase 3. We will further discuss our proposed 'cloud' solution approach in section 4.2.

Phase 3: Product Development

Phase 3 at this point is a concept. We are unsure exactly what work will be the result of the Phase 2 efforts, but Phase 3 is focused on resolving any outstanding issues and moving the concept toward becoming a commercially available product. True cost savings will accrue when all unions and contractors can use the same system and feed data

effortlessly to the oversight agencies as needed. The following tasks are our best current guess of what might be left to fix or refine on the system implementation.

Process Rework

Given the complexity of the relationships of the different stakeholders and their respective needs, it is unlikely that the ideas developed at the beginning of Phase 2 were correct. The results of the research will likely have identified some different processes and these changes need to be documented and implemented.

Finalizing Authentication

There are likely significant variations in the authentication processes as we consider a product solution. With multiple unions and contractors involved, each has a need to maintain their information without inappropriate access to information of the others. In converse, a medical professional may service many unions with the evaluation of fit, tracking of year over year medical data, etc. and they should not have to have a separate login for accessing each union. Finally, government access might be simplified with specific access in lieu of formal reporting. This task will focus on the designs needed to implement all these variations.

Build Installation Package

Once the issues are resolved with the system, we will need to build the version that allows simple replication. This is commonly called the installation package. With the installation package in place, we will be able to replicate the system easily and simply in the hosting environment.

Testing

System testing for a product is significantly more involved and this task represents that effort.

Branding

As we determine the best avenues for the success of the product, we will likely benefit from rebranding the solution to best align with Mount Sinai and with the final consumers. This has both technical and marketing components. We will also need to develop a pricing plan for the service that will meet the continued operational and maintenance needs for the system.

Hosting and Support

Similar to task 2.5, a continued hosting management effort is required to make sure the system is operating, being backed up, and other administration tasks are accomplished. We will also need to create a technical support capability to be able to help any users experiencing troubles.

Maintenance

On-going maintenance is required in any system and is significantly more important when personal information is being retained in the system. We will need to project the needs for on-going maintenance and upkeep of the system.

Description of Physical System Solution

As described in section 2, the Portable Health and Safety database is focused on tracking and appropriate sharing of data related to union workers respirators and hearing protection. The data being shared helps contractors ensure that the equipment available on the site is correct and keeps the workers as safe as possible. Additionally, the tools being developed will help with the reporting and certification of the job site to the appropriate authorities. The approach to solving this information sharing is to make the application web centric and accessible over the internet.

Internet Frameworks

The solution we are proposing will be built on top of a toolkit developed by Technology Catalyst to help quickly launch internet software products. The toolkit is based on the DotNetNuke (DNN) framework which is an open source system using Microsoft .Net and the Microsoft SQL Server database. This toolkit is the best tool for this project because it can maximize the return on investment. The Microsoft environment is widely available and can be hosted internally or in the cloud (the later note will correlate that the cloud solution is significantly cheaper). Additionally, Microsoft SQL Server is the perfect combination of a high power database, excellent management tools and low cost.

DNN will provide and keep current user authentication, application security and general vulnerability defenses in their routine patch cycle. This will provide you a continuous maintenance upgrade path at virtually no cost, which is important since these are the most common risks for web applications.

Cloud Based Solution

We believe the most effective solution to this project is to create a cloud based solution – an application hosted at a reliable network and system provider. In this case, we get to exploit a secured networked environment, reduce upfront and recurring costs, and improve collaboration in the process since all parties can interact with the system via an internet browser. This cloud approach addresses developmental benefits and is a viable and secure solution in the long term. Since our development can be shared in progress, we can reduce the need for travel to facilitate presentations that can be effectively done online. This collaboration environment represents a significant travel savings opportunity.

The cloud based solution does require attention to details. The same as would be done with a local system as we need to ensure the system will be secure from a number of perspectives.

Network Security

A cloud based solution like a locally installed solution requires network security. Firewalls, intrusion detection/management systems and secured access mechanisms to support development must all be in place. In cloud hosting environments, the service provider has already implemented sophisticated security to keep their environment secure. In contrast, were we to pursue installing this as a particular location, adding the needed security would be an extensive effort and significant expense.

Application Security

Independent of the development technique, the system must be built to meet the security needs required. Generally, when transactional data is secured, secure sockets layer encryption is employed as we will require. Additional defense will be required to defend the database. Database defenses are generally enforced by network security and maintaining the current security patches on the database. In most hosting environments, both of these efforts are managed by the

hosting provider. In addition, when we use a development framework on a project, many providers will run security analyses against those core systems in an effort to maintain their organizational and network security goals, so again we get additional costs savings.

Access Security

Each application will provide the final level of access control and security and there is little impact from the hosting environment on access security. In this case we are considering using a well known framework for most of our access security controls and that framework has been and continues to be extensively tested. Combining this third party testing with automated system checks, we are confident that we can stay ahead of any vulnerabilities relating to access security with this project.

Frequency of System Enhancements or Upgrades

While our approach includes discussion of a Phase 3, there are no planned upgrades or enhancement to the work we are proposing. The underlying framework and the hosting environment would undergo continual upgrades if implemented as we suggest.

Company Profile

Worldgate, LLC
Federal Tax ID#: 020675651
Virginia State Corporate Commission#: s089027-9

Worldgate Headquaters:

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Worldgate Corporate Overview

Worldgate, LLC (Worldgate) was founded in 2003 as a limited liability corporation and brings over ten years of experience in education consultancy, providing systems integration services, production support services, and data warehousing to school systems in a cost-effective and innovative way. Worldgate specializes in areas of expertise that meet the challenges facing large organizations, such as Information Technology, Business Consulting, Enterprise Systems, Data Warehousing, Training, and Help-Desk. Worldgate has established strong client relationships built on distinctive quality of service and a 100% commitment to clients. The resources Worldgate has at its disposal are highly skilled and qualified technical resources across all relevant disciplines, especially data warehousing.

Worldgate recognizes the challenges the stakeholders will face when embarking on the Portable Health and Safety Database initiative as outlined in the RFP. Success hinges not only on the ability of the implementation team to deliver a sound solution, but also on its ability to address the potential content quality issues. It is therefore essential that Mount Sinai work with a firm that brings the right solution to the table and has the technical resources needed to create a successful soultion for all the stakeholders involved.

Worldgate is committed to a long-term working relationship and partnership with Mount Sinai. Worldgate has assembled a team that provides appropriate focus to the key tasks and work effort necessary to make this project successful and bring Mount Sinai ever closer to their vision for the Portable Health and Safety Database System.

Worldgate Virginia SWAM Woman Owned Certification

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF MINORITY BUSINESS ENTERPRISE

1111 E. Main Street, Suite 300
Richmond, VA 23219

Worldgate LLC

is a certified Small, Woman-owned Business meeting all the eligibility requirements set forth under the Code of Virginia Section 2.2-1400 et seq. and Administrative Code, 7VAC 10-21 et seq.

Certification Number: 647376
Valid Through: August 19, 2014

Accordingly Certified

Ida Outlaw McPherson

Ida Outlaw McPherson, Director

CERTIFIED

SWaM
Small, Women and Minority-Owned

Supplier Diversity Strengthens the Commonwealth
by the Virginia Department of Minority Business Enterprise