13.0 PERSONNEL HASP CERTIFICATION

The following individuals have read the Health & Safety Plan prepared for the Madison Recreation Center arsenic remediation project. The undersigned individuals certify that they have read the contents of the Plan, and agree to adhere to all of its requirements:

NAME	DATE	SS #	SIGNATURE
John Peel	1/10/13		John Peel
Robert Vogel	10 Jan 13		[illegible]
Frank Cugliari	1/10/13		[illegible]
JACK FOSTER	1-10-13	148-66-9136	[illegible]
Paul Cugliari	1-10-13		[illegible]
Chris Michelini	10 Jan 13		[illegible]
Sandra Kehrley	1.10.13		[illegible]
HENRY SHOTWELL	1/10/13		HP Shotwell

State Highway Route 24

VARIABLE WIDTH

709.89'

CONCRETE SOUND WALL

FENCE 0.7'±

CAPPED IRON SET

FENCE 1.5'±

S43°50'44"W 351.13' MAP=S43°44'20"W

DETENTION BASIN

BUILDING

LOT 1 BLOCK 2701 BOROUGH FLORHAM PARK DB 2554 PG 242 CHESHIRE HOME, INC.

MONUMENT

HEADWALL

OUTFLOW STRUCTURE

FOUND CONCRETE

FENCE CORNER 0.9'±

S46°09'16"E 4

MAP=S46°15'40"E

FENCE TO BE CONSTRUCTED ALONG PERIMETER OF IMPACTED AREA

IRON PIPE SET

IRON PIPE SET

IRON PIPE SET

DRAINAGE DITCH

S45°37'57"E 79.89'

S49°59'28"E 68.88'

S35°22'04"E 47.43'

S75°21'41"E 121.35'

NORTH IMPACTED AREA (0.602 ACRES)

R=445.04' L=106.41' D=13°42'00" Ch=N59°05'20"W 106.16'

N52°14'20"W 50.84'

S43°50'44"W 57.28'

3.7'±

CHAIN LINK FENCE

S43°50'44"W 12.65'

CONCRETE PAD

SIGN

N17°06'40"E 92.68'

N65°56'20"W 112.02'

IRON PIPE SET

ACCESS AND UTILITY EASEMENT SCALED FROM FILED MAP NO. 5723

S62°15'11"E 33.05'

IRON PIPE SET

R=339.79' L=97.31' D=16°24'33" Ch=S54°07'41"E 96.98'

R=1492.35' L=87.82' D=3°22'18" Ch=S44°14'15"E 87.81'

S39°38'01"E 138.25'

S01°21'24"W 28.17'

S42°45'37"E 72.76'

S42°05'18"W 84.06'

SOUTH IMPACTED AREA (1.307 ACRES)

2.58'

2.36'

SHED

N46°12'28"W 300.84'

MASONRY BUILDING

11.84'

11.93'

N49°38'14"E 131.84'

CAPPED IRON SET LOCAL: N: 706,063.09 E: 517,933.08 GRID: N: 706,063.23 E: 517,932.98

N80°33'06"W 101.24'

1.6'±

TENNIS COURTS

N46°12'28"W 523

MAP=N46°18'52"W

N23°42'40"W 82.32'

IRON PIPE SET

IRON PIPE SET

STRUCTED ALONG CTED AREA

FENCE

URTS

ARSENIC

What is it?

Arsenic is a naturally occurring element in soil.

How was it used?

As a pesticide, herbicide and insecticide in orchards and farms.

Also, it was a very popular murder weapon!

ARSENIC

How can I be exposed?

For this project, ingestion is the most likely route of exposure, followed by inhalation; a distant second.

How do I “eat” arsenic?

If arsenic-containing soils get on your fingers and hands, it can contaminate anything you touch, including lunch!

ARSENIC

How do I inhale arsenic?

From breathing dust, generated from arsenic-containing soils.

The highest level of arsenic seen in the soils where you will be working was 172 mg As per kg (or 1,000,000 mg) of soil. So I mg of this soil would contain 1 millionth of 172 mg of arsenic, or 0.000172 mg As per mg of soil.

ARSENIC

So what?

At a typical construction site, in the summertime, with lots of trucks and other machinery moving around, the average dust concentration was 3 mg / cubic Meter (M^3).

So, if 1 mg of our soil has at most, 0.000172 mg As, then 3 mg of soil (dust) will have no more than 0.000516 mg As per M^3 of air. It is practically impossible to generate that much dust, given this project's activities.

ARSENIC

So what's my inhalation exposure potential?

The OSHA Permissible Exposure Limit (PEL) is 0.010 mg As per M^3 air, averaged over any continuous, 8-hour interval of time.

The maximum exposure you could experience over a continuous 8-hour period, while working on this project, would be 1/20 th of the PEL!

ARSENIC

What about “eating” arsenic?

In order to minimize the amount of arsenic you’ll eat with your lunch, everyone on-site, who may come in contact with soils, will wear latex gloves underneath work gloves.

When removing the outer glove, you still have the latex between you and the dirty glove.

ARSENIC

What are the symptoms of exposure?

The early symptoms of exposure are just like the flu: Headaches, nausea, vomiting and stomach pain, along with a metallic taste in the mouth and a garlicky breath.

Given the amount of arsenic present at the site, if you get a headache and feel sick to your stomach, you have the flu!

ARSENIC

Who gets exposures?

People who process arsenic or arsenic-containing material, have the potential for occupational exposure. They include copper and lead smelters, wood treatment workers and some pesticide makers.

These people have potential exposures 8 hours per day, 5 days per week, 50 weeks per year, for a working lifetime.

On-Site

Modified Level D: Normal work trousers and long-sleeved shirt and Tyvek™ coveralls, surgical inner gloves, leather outer gloves, safety boots, safety glasses and hard hat, if an overhead hazard exists.

Work Zones

Work zones are concentric circles surrounding the work area. There are 3: Support, Decontamination and Exclusion

Support Zone: The outermost ring. Protective equipment not required.

Decon Zone: PPE in this zone is required. Those in the work area (exclusion zone) must be decon'ed along with their tools, before leaving the zone, unless they are returning to the work area directly.

Exclusion Zone: This is the work area, where potential exposures are most likely. PPE is required. Only authorized personnel are admitted.

Decontamination

When leaving the work area, workers may not enter the support zone without first undergoing decon:

1. Wash soil off boots.
2. Remove Tyvek overalls and place in waste container.
3. Remove outer gloves and set aside for cleaning.
4. Carefully remove surgical gloves and dispose of.
5. Hard hats, safety glasses, etc. may be laid aside.
6. Wash hands.

Hazard Communication Training
ARSENIC

Henry Shotwell, Ph.D., CIH

January 10, 2013