APPENDIX C

ONONDAGA LAKE PRE DESIGN INVESTIGATION: PHASE I PROJECT SAFETY PLAN

Syracuse, New York

Prepared For:

Honeywell

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Prepared By:

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REVIEWED AND APPROVED BY:

Industrial Division Safety Manager: Gregory H. Beck (FLJ) 8/11/05
Date

Project Safety Manager: [signature] 8/11/05
Date

AUGUST 2005

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LIST OF ACRONYMS

AED	Automated External Defibrillator
AHA	Activity Hazard Analysis
CHSO	Corporate Health and Safety Officer
CPR	Cardiopulmonary Resuscitation
EMS	Emergency Medical Services
FCEs	Functional Capacity Exams
HAZWOPER	Hazardous Waste Operations and Emergency Response
IDLH	Immediately Dangerous to Life and Health
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PARCOMM	Parsons Commercial Technology Group
PEL	Permissible Exposure Limit
PID	Photo Ionization Detector
PPE	Personal Protective Equipment
PSM	Project Safety Manager
PSP	Project Safety Plan
SCBA	Self Contained Breathing Apparatus
SSO	Site Safety Officer
SSP	Subcontractor Safety Plan
SUNY	State University of New York
TBD	To Be Determined
UV	Ultraviolet Radiation
VOC	Volatile Organic Compounds
WP	Work Plan
SAP	Sampling and Analysis Plan
NAPL	Non-aqueous phase liquid
GBU	Global Business Unit
SOW	Scope of Work
CPT	Cone Penetrometer Testing
MIP	Membrane Interface Probe

SECTION C1

INTRODUCTION

This Project Safety Plan (PSP) has been prepared for the Onondaga Lake Pre-Design Investigation (PDI) under the job number 441797. It provides guidance for all office and field activities required to complete the scope of work.

The primary field activities include lake bottom profiling, sediment investigation, ground water discharge evaluation, and a porewater methods evaluation. Most work activities will be conducted from a boat, barge, or from a near-shore location. These activities will be conducted in accordance with the Onondaga Lake Pre-Design Investigation Work Plan (PDI WP) and the Onondaga Lake Pre-Design Investigation Sampling and Analysis Plan (SAP).

During sampling and other field activities, Parsons' staff and its subcontractors may be exposed to hazards associated with chemicals of concern at Onondaga Lake. Employees will be required to use personal protective equipment (PPE) suitable for the level of contaminates present. Monitoring will be conducted to verify contamination levels and ensure proper PPE upgrade is implemented if necessary.

Field staff may also be exposed to other hazards that are encountered during field activities including slips, trips, falls, automobiles, traffic, heavy equipment, drill rigs, winches, and marine hazards. Depending upon the time of season, field staff may be exposed to biological hazards, for example insect bites, stings, ticks, and snakes. Meteorological hazards such as lightning, wind, rain, and ultraviolet radiation may also be present.

For the office-based activities, field staff may be exposed to routine office hazards, including slips trips, and falls and ergonomic issues from computer stations.

This PSP addresses these potential exposures for this project. This PSP is based upon the Parsons Model Project Safety Plan provided as Attachment A1 in the SHARP Management Manual, Version 1.0, August 2004. The Parsons Workplace Health and Safety Policy is provided in Exhibit C1.1.

C1.1 PARSONS WORKPLACE HEALTH & SAFETY POLICY

Exhibit C1.1
Parsons Workplace Health and Safety Policy

CORPORATE POLICY
Workplace Health & Safety

POLICY: WORKPLACE HEALTH AND SAFETY

STATEMENT OF POLICY:

As an industry-leading engineering, construction and technical services firm, Parsons is firmly committed to maintaining a safe and healthy working environment at all its offices and project facilities. We share the National Safety Council's Safety and Health Code of Ethics as the principles guiding our commitment to safety.

- We will hold safety and health as our highest core value.
- Executive management will lead the safety improvement process.
- Safety will be a responsibility shared by everyone in our organization.
- Safety performance will be a key indicator of our organizational excellence and will be incorporated into our business processes.
- We will communicate safety performance openly with employees.
- All employees will be given the knowledge and skills necessary to safely perform their jobs.
- We will extend our safety efforts beyond the workplace to include transportation, homes and communities.
- We will continually strive to improve our safety and health processes.

To meet its health and safety objectives, all Parsons employees are expected to act proactively with regard to health and safety issues. This requires the combined efforts of a concerned management, responsible and knowledgeable supervision, and conscientious, well-trained employees.

Parsons will take all reasonable action to meet or exceed the applicable occupational health and safety requirements, domestically and internationally, and will continuously monitor and improve operations, procedures, technologies and programs that are conducive to maintaining a safe and healthy working environment.

RESPONSIBILITIES:

Parsons GBU management and supervisory personnel are responsible to:

- Comply with this policy and ensure that the applicable health and safety requirements at each domestic and international office and project facility are effectively implemented and monitored at all times.

1 of 3

The Company may change, rescind or add to any policies, benefits or practices described on the PWEB, other than employment-at-will policies, from time to time in its sole and absolute discretion with or without prior notice. The Company will advise employees of material changes within a reasonable time.

Exhibit C1.1
Parsons Workplace Health and Safety Policy (Cont'd)

CORPORATE POLICY
Workplace Health & Safety

RESPONSIBILITIES: **(cont'd.)**

- Ensure that the applicable health and safety requirements at each domestic and international project facility are effectively integrated with the preparation of proposals, project planning, and project execution.
- Monitor subcontractor safety performance in accordance with contract specifications as required by the contract with client.
- Ensure that safety information and statistics are reported to Parsons Corporate Safety Manager on a consistent and regular basis, as shown in Appendix.1, *Safety Monthly Report*.

Parsons Corporate Safety personnel are responsible to:

- Develop, communicate, and oversee Parsons health and safety programs at all Parsons business units.
- Provide assistance to Parsons business unit managers regarding health and safety regulations, reporting requirements, safety training, and other related issues.
- Monitor the effectiveness of Parsons health and safety programs, conduct investigations, develop OSHA reporting and worker's compensation claim procedures.
- Collect and maintain safety information and statistics for all Parsons business units and operations, as shown in corporate policy Workplace Health and Safety, Appendix.2, *OSHA Safety and Health Statistics*.
- Keep senior management informed of significant internal and external developments regarding health and safety.

Parsons employees are responsible to:

- Exercise maximum appropriate care and good judgment at all times regarding health and safety, and adhere to safety procedures to prevent accidents and injuries.
- Promptly report all accidents and injuries to supervisory personnel.
- Promptly report any near misses, unsafe conditions, equipment, or practices to supervisory personnel.

Exhibit C1.1
Parsons Workplace Health and Safety Policy (Cont'd)

CORPORATE POLICY
Workplace Health & Safety

REFERENCES:

National Safety Council Safety and Health Code of Ethics
Parsons Construction Health and Safety Manual
Parsons Injury and Illness Prevention Program (Cal-OSHA IIPP)
Parsons Safety Monthly Reports, Workplace Health and Safety - Appendix.1
Parsons Health and Safety Statistics, Workplace Health and Safety – Appendix 2

DATE: 7/23/04

C1.2 THE PROJECT SAFETY PLAN

Parsons goal is zero accidents and zero injuries with work tasks designed to minimize or eliminate hazards to personnel, process, equipment, and the general public. No employee should ever perform tasks that may endanger his/her own safety and health or that of others.

This Project Safety Plan (PSP) outlines safety and health requirements and guidelines developed by Parsons for project work. When implemented, these requirements will help protect site personnel, visitors, and the public from exposure to potential safety and health hazards.

This PSP should be updated as conditions change or situations change, usually by addenda. All Parsons and subcontractor personnel must understand and implement the safety plans and any addenda. Parsons documents this by having employees sign an acknowledgement form stating that they understand the plan and its requirements.

C1.3 SUBCONTRACTOR SAFETY PLANS

Subcontractors must establish a safety program for their work and employees. Contract specifications require all subcontractors to accept Parsons PSP and prepare their own subcontractor safety plan (SSP) for presentation to the Parsons Project Manager at least 10 days before site mobilization. At a minimum, subcontractor safety and health plans must meet the requirements of this PSP and provide safety equipment and safeguards suitable for the hazards involved. This PSP may not cover all potential hazards on every project, and subcontractors must ensure that appropriate safety and health information is available for all project tasks.

All PSP requirements for Parsons' personnel (e.g., training, substance abuse screening, and incident reporting) also apply to subcontractor personnel and should be spelled out in the subcontractor's safety plan.

If subcontractor is performing activities that require specialized training (i.e., confined space entry, excavation/trenching, scaffold use, Hazardous Waste Operations and Emergency Response (HAZWOPER, etc.), then copies of training certifications must be provided for applicable employees AND the supervisor. Refer to Section C5.7 for more details on SSP requirements.

Below are the names of subcontractors and the work activities they will be performing as part of the PDI.

SUBCONTRACTORS	WORK ACTIVITIES
1. ATL	Drilling & Cone Penetrometer Testing (CPT)
2. QEA	Vibracoring and Sampling
3. OSI	Vibracoring
4. Columbia Labs	Membrane Interface Probe (MIP) Work
5. CR Environmental	Bathymetric Surveying

SECTION C2

SCOPE OF WORK

C2.1 SCOPE OF WORK

Parsons, in their contracted role with Honeywell, is providing pre-design investigation services for the work as specified under job number 441797. The work is being performed under the Parsons Commercial Technology Group (PARCOMM) Industrial Division, and is the responsibility of Syracuse Program Manager, Mr. Stephen Warren and Project Manager, Mr. Edward Glaza, P.E.

The field activities associated with the PDI includes lake bottom profiling with bathymetric and geophysical surveys, sediment, porewater and surface water sampling, geotechnical stability evaluations, odor and emissions testing, non-aqueous phase liquid (NAPL) evaluation, treatability studies, and evaluation of ground water discharge. These activities will be conducted in accordance with details provided in the PDI WP and SAP.

C2.2 PROJECT SAFETY PLAN APPLICATION

The purpose of this PSP is to establish personnel protection standards and mandatory safety practices and procedures for field investigation efforts conducted at Onondaga Lake, located in Onondaga County, New York. This plan assigns responsibilities, establishes standard operating procedures, and provides for contingencies that may arise during pre-design investigations at Onondaga Lake, Onondaga County, New York. The standard operating procedures and safety practices presented in this plan shall be followed by all personnel conducting work at Onondaga Lake.

The provisions of this plan are mandatory for all Parsons personnel engaged in on-site hazardous waste operations. Subcontractors working for Parsons must prepare and administer a plan with equivalent requirements unless otherwise specified. All Parsons and Parsons contract personnel who engage in project activities must be familiar with this plan and comply with its requirements.

SECTION C3

PROJECT SAFETY MANAGEMENT RESPONSIBILITIES AND AUTHORITY

C3.1 SAFETY RESPONSIBILITY MATRIX

Exhibit C3.1 summarizes the responsibilities of selected roles related to the primary safety activities identified in the PSP.

Exhibit C3.1
Roles and Responsibilities

	Work Elements	Project Manager	Project Safety Manager	Project Controls Manager	Project HR Manager	Sector Manager	Division Manager	GBU Safety Manager	GBU QC Manager	GBU Risk Manager	GBU President	Corporate Workers Compensation Analyst	Corporate Safety	Resident Engineer/ Superintendent	GBU BD Manager	Parsons CEO/President
	1. Zero Incident Techniques and SHARP Management	X	D	P	P	R	R	R	E	S	E		E	S	S	E
	2. Business Development Phase	X	P	P	P	R	E	S		S	E		E	P	D	E
Startup Phase	3. Initial Hazards Analysis and Planning	X	P	P	P	R	E	R	E	P	E	P		P		
Startup Phase	4. Project Safety Plan (PSP)	X	D		P	R	E	R		R	E		C			E
Startup Phase	5. Stakeholder PSP Alignment Meeting	X	D			E	E	P					C	P		
Administration/ Design Phase	6. Awareness Campaign	X	D	P	P	E	A	R					C	P		
Administration/ Design Phase	7. Employee Orientation	P	P	P	D	R	A	E					C	P		
Administration/ Design Phase	8. Training	X	D	P	P	R	A	E					C			E
Administration/ Design Phase	9. Health and Safety Committee	X	D	P	P	R	A	R					C			
Administration/ Design Phase	10. Incident Investigations	X	P	P	P	R	R	A				P	E			E
Administration/ Design Phase	11. Measurement and Reporting	X	D	P	P	R	R	S				P	E			E
Administration/ Design Phase	12. Audits, Inspections and Record Keeping	X	X	P	P	R	R	S	R	R			E			E
Construction or Field Phase	13. Preconstruction Safety Activities	X	X			E	E	R					C			
Construction or Field Phase	14. Project Site Orientation	X	D	P	P	E	E	S					C			
Construction or Field Phase	15. Meet Local OSHA, Building Trades, and Other Agencies	X	D			E	E	S					C			
Construction or Field Phase	16. Review Contractor/Subcontractor Safety Programs	E	X			E	E	S					C	P		
Construction or Field Phase	17. Subcontractor Premobilization Meeting	X	P	P		E	E	S					C	P		
Construction or Field Phase	18. Risk Mitigation Planning (Two-week Look-ahead)	P	P			E	E	S					E	X		
Construction or Field Phase	19. Activity Hazard Analysis	E	P			E	E	S					E	X		
Construction or Field Phase	20. Recurring Field Safety Meetings/Training	X	D	P	P			S					E	P		
Construction or Field Phase	21. Project Management Site Safety Inspections	X	D					S					E	P		
	Testing, Commissioning, Operations, and Decommissioning Phases	(to be developed)														
Closeout Phase	22. Lessons Learned and Final Safety Report	E	X		X	E	E	S	R				E	P		
Closeout Phase	23. Records Retention	E	X		P	A	A	R					E			

Legend:

A – Approves tools, plans, etc. established by the project.

C – Consultant providing expert advice to the development leader.

D – Development leader tasked to establish the tools, plans, etc. needed for the work element.

E – Sponsor responsible to reinforce the need to comply with the established requirements.

P – Participants in team or group implementation efforts, supporting the implementation leader.

R – Reviews and comments on tools, plans, etc. established by the project to achieve the goal of the work element.

S – Establishes requirements applicable to the project.

X – Accountable and responsible to ensure that the project develops and implements the work element in accordance with established requirements.

SECTION C4

ADMINISTRATIVE PHASE

C4.1 PROJECT SAFETY COMMITTEE

The project must have a safety committee that includes representation from all project stakeholders. The Safety Committee meets on the first Tuesday of each month, times and locations to be determined and posted by the chairperson on the safety billboard at least one week in advance.

For calendar year 2005, safety committee members are as follows:

- Honeywell Representative- John McAuliffe
- Project Manager - Ed Glaza (chairperson)
- Deputy Project Manager - Tim Johnson
- Project Safety Manager (PSM) – Matt Biondolillo
- Field Team Leader (FTL) – Tom Drachenberg
- Site Safety Officer (SSO) –Tom Drachenberg
- Subcontractor Representative(s)*- Jim Thew (ATL); Jim Rhea (QEA); David Bell (OSI); John Sohl (Columbia Labs); and Chip Ryther (CR Environmental)

*The current subcontractors working on site are required to have a representative attend the monthly meeting.

Charter of the Safety Committee: The safety committee represents the mutual interests of all project participants in completing the work with zero injuries. The committee meets monthly to consider incentive programs, recent near misses or injuries, potential unsafe conditions, training programs, safety awareness, audit results, and related issues. The committee advises and works with the Project Manager, who retains sole decision-making authority.

The nature of the field work and the short duration of work performance limits the availability for all subcontractor representatives to attend the monthly safety meetings. The work tasks are scheduled for 2 to 3 week durations. Daily safety meetings will be conducted and workers will be encouraged to submit suggestions and topics for the daily safety talks.

C4.2 PROJECT ORIENTATION

The Project Safety Manager (PSM) helps to develop the orientation and meets with new workers to review site procedures and requirements. Topics covered in the PSP overview include:

- Names of personnel responsible for site safety and health
- Reporting emergencies, incidents and unsafe conditions
- Emergency/evacuation plans
- Safety, health and other hazards at the site

- Review of all activities on site and related Activity Hazard Analyses (AHAs)
- Proper use of personal protective equipment
- Work practices by which a worker can minimize risk from hazards
- Safe use of engineering controls and equipment on site
- Acute effects of compounds at the site
- Decontamination procedures

All personnel, including subcontractors and visitors, on a project must attend the orientation program (Exhibit C4.2) on their first day and sign an acknowledgment form (Exhibit C4.3) indicating they attended and understood the orientation. Any individual who is unsure of any information presented in the orientation must request clarification. Individuals who do not participate in the orientation or refuse to sign the acknowledgment cannot work on site.

C4.3 AWARENESS CAMPAIGN

The project has established an awareness program consistent with the Parsons safety-awareness campaign and its various elements (e.g., signs, posters, banners, and focus briefings). This program promotes worker awareness of safety goals and daily risks, hazards, and exposures in the field. In addition to topics selected by corporate safety each month, the project will supplement the awareness program with information specifically applicable to the scope of work.

Safety bulletin boards maintained by the PSM and the SSO, are primary information points for the project awareness campaign. Bulletin boards and additional safety material will be posted in the field office/trailer located onsite.

The PSM may also provide training, presentations, or informational materials as part of the awareness campaign.

C4.4 STAKEHOLDER PSP ALIGNMENT MEETING

A stakeholder PSP alignment meeting must be held. The following representatives attended the meeting held on **TBD:**

1. Honeywell-John McAuliffe
2. Parsons- Ed Glaza, Tim Johnson, **TBD**
3. Subcontractors- Jim Rhea (QEA); Jim Thew (ATL); David Bell (OSI); John Sohl (Columbia Labs); and Chip Ryther (CR Environmental)
4. **TBD-Name, title, and affiliation**
5. **TBD-Name, title, and affiliation**

Parsons presented the PSP, and all stakeholders concurred with the approach outlined in the plan. The meeting also included a review of stakeholder roles and responsibilities and elements of control appropriate to project risks.

C4.5 TRAINING

The project has a comprehensive health and safety training program tailored to the scope of work. All employees receive a general safety orientation as outlined in Section C4.2 upon assignment to the project. All Parsons new hires shall receive a facility employee orientation within the first 7 days of employment, provided by Human Resources, the Safety Representative and the Staff Coordinator. Depending on the client, scope of work and location of the project, specific training topics may also include:

- CPR/First Aid/AED and blood borne pathogens
- Back Safety – lifting and carrying
- Defensive Driving
- Visitor Training
- Respiratory Protection
- Emergency Response
- Hazard Communication
- Initial Site Training
- Honeywell Accident/Incident Reporting Procedures
- Parsons Accident/Incident Reporting Procedures

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120, including, but not limited to, initial 40-hour, 8-hour Supervisor and annual 8-hour refresher training.

C4.6 AUDITS AND INSPECTIONS

The PSM will implement an audit and inspection program in conjunction with the GBU and corporate safety and quality assurance departments. The Project Manager, together with the PSM or their designee, will conduct a safety inspection each month. Office work areas (including trailers) are audited according to the corporate office audit standard attached as Exhibit C4.1.

Additional information on audits and inspections during field work is detailed in Section C6.5 of this PSP.

C4.7 MEETINGS

All project meetings of three or more people must begin with a safety topic. The meeting chairperson may present the safety topic or ask for a volunteer to open the discussion. In general, the "safety moment" is only one or two minutes long and is directly relevant to the work at hand or applicable to most individuals outside the workplace.

Daily toolbox safety meetings are held with all personnel at the beginning of each shift to review current site conditions, incidents or injuries from the previous shift activities, safe or at-risk observations from the previous shift, activities planned for the current shift, anticipated hazards, engineering controls, work practices, PPE to protect against hazards, and any

additional safety topic or comments. Toolbox safety meetings shall be documented and signed by all individuals accessing the site using a Safety Meeting Sign-In Sheet (Exhibit C7.3).

C4.8 MEASUREMENT AND REPORTING

C4.8.1 Reporting

To accurately measure performance and comply with corporate and regulatory requirements, Parsons utilizes an online safety reporting system to report monthly work hours, near-miss incidents, first aid cases, property damage and personal injuries for its employees and subcontractors. The online safety reporting system instructions can be found in Attachment A. A wallet card containing Incident Reporting Guidelines is also available online and shown in Attachment A.

The Parsons Accident/Incident Report Form and the Near Miss Report form can be found in Attachment A. Honeywell also requires the completion of their Accident/Incident Report Form and a Motor Vehicle Incident Report Form which can be found in Attachment B.

C4.8.2 Measurement

The Safety Manager and Project Manager establish and post a measurement system to provide indicators of safety performance, including the following metrics for the project:

- Project start date and field task start dates
- Days without a recordable injury – updated monthly
- Date of last OSHA recordable injury (if applicable)
- Percent of safe observations from each monthly audit

C4.8.3 Incident Reporting

Employees involved in or witnessing an incident or near-miss incident must immediately report it to the responsible Field Team Leader (FTL) or Site Safety Officer (SSO), who in turn immediately relays the report to the Parsons Project Manager, Ed Glaza, (315) 451-9560 x 2130 and Honeywell representatives, per Event Reporting Requirements in Appendix B. Near-miss incidents that could cause significant injury or loss of life must also be immediately reported in the same manner. No supervisor may decline to accept or relay a report of injury or significant near-miss incident from a subordinate.

Ed Glaza, Project Manager must ensure that all incidents are reported to Greg Beck, Safety Manager, (908) 887-1973, and to Steve Warren, the Program Manager, (315) 451-9560, and other management personnel (as required) within four hours. The Project Manager (who has been trained on Parsons' reporting requirements and Online Safety Reporting System) then prepares and submits the incident information.

The GBU Safety Manager must notify the local Occupational Safety and Health Administration (OSHA) office immediately if an accident involves the death of an employee or hospitalization of three or more workers.

Subcontractors must submit a monthly report (Attachment A) of exposure hours (hours worked on the project, paid or unpaid) to the Parsons Project Manager within three (3) days

after the end of each month. The Project Manager compiles the figures and submits them to the Program Manager (or via the online safety reporting system if instructed by the Program Manager) and to Honeywell by the first Friday of each month. Where necessary, estimated figures are acceptable.

C4.9 INCIDENT INVESTIGATIONS

All incidents and significant near-miss incidents are investigated by an individual or team with training in accident investigation and root cause analysis. Subcontractors must investigate incidents involving their employees or activities and submit an investigation report to the Parsons Project Manager within 48 hours of an incident.

In Parsons, the GBU Safety Manager investigates or assigns an investigator to each significant incident. The investigator submits a final investigation report using the online safety reporting system within 72 hours of the incident. The PSM maintains the investigation file.

C4.10 RESPONSIBILITY/IDENTIFICATION OF KEY LINE PERSONNEL

A listing of the personnel responsible for the implementation and maintenance of Parsons' Safety, Health, and Risk Program (SHARP) Management is provided in Table C4.1.

Table C4.1 ONONDAGA LAKE
Program/Project Level Authority and Responsibility

Industrial Division Safety Manager **Greg Beck, CSP**	Has overall authority of Parsons' Industrial Division Safety Program.
Program Manager/Project Manager **Stephen Warren/ Edward Glaza, P.E.**	Reports to upper-level management, has authority to direct response operations, assumes total control over Program/Project site activities.
Project Safety Manager (PSM) **Matt Biondolillo**	Advises the Program/Project Manager and SSO on all aspects of health and safety.
Site Safety Officer (SSO) **Tom Drachenberg**	Reports to the PSM on all aspects of Health and Safety onsite, performs day-to-day health and safety tasks, stops work if any operation threatens worker or public health and/or safety.
Parsons Project Staff and Subcontractors **C. Kiehl-Simpson; J. Scheutz; M. Billi; M. Raybuck; S. Dillman; S. Chmura; T. Drachenberg; T. Johnson; ATL; QEA: Columbia; OSI; and CR.**	Act proactively with regard to project-specific and general health.

These personnel have the authority and responsibility for implementing the provisions of this program.

Table C4.2 Onondaga Lake Project Contact Information

Project:	Onondaga Lake Pre-Design Investigation
Project Location:	Onondaga Lake, Onondaga County, New York
Office:	Parsons Syracuse Office
Address:	290 Elwood Davis Road, Suite 312, Liverpool, NY 13088

Telephone:	(315) 451-9560
Fax:	(315) 451-9570
Program Manager:	Mr. Stephen Warren
Contact No.:	(315) 451-9560
Project Manager:	Mr. Edward Glaza, P.E.
Contact No.:	(315) 451-9560
Deputy Project Manager:	Mr. Timothy Johnson
Contact. No.:	(315) 451-9560
Project Safety Manager:	Mr. Matt Biondolillo
Contact No.:	(315) 657-2729
Field Team Leader:	Mr. Tom Drachenberg
Contact No.:	(315) 451-9560
Site Safety Officer:	Mr. Tom Drachenberg
Contact No.:	(315) 451-9560
Client - Project Management:	Mr. John McAuliffe
Contact No.:	(315) 431-4443 ext. 4 (office)

C4.11 MEDICAL REQUIREMENTS AND WORKERS COMPENSATION

In accordance with corporate requirements, the PSM (or the GBU Safety Manager) has established and implemented the following medical requirements for the project:

C4.11.1 Medical Surveillance and Functional Capacities Exams (FCEs)

Parsons requires all subcontractors working on site to meet requirements of 29 CFR 1910.120(f) for medical surveillance. Personnel requiring medical surveillance must have a baseline medical examination prior to working on site, and an annual medical examination thereafter (or biennial medical exam based upon exposure history and Medical Review Officer approval). The medical examination includes a complete medical and work history and a standard occupational physical, in accordance with the hazardous waste operations regulations contained in 29 CFR 1910.120(f) and as determined by the examining physician. A medical certification for employment on hazardous waste projects, or any restrictions on his/her utilization that may be indicated, will be provided by the physician. This evaluation will be repeated as indicated by substandard performance or evidence of particular stress that is evident by injury or lost-time illness on the part of any worker. All personnel who wear a respirator must be medically qualified by a physician, trained and fit-tested on an annual basis, even if they are not required to participate in a medical surveillance under 29 CFR 1910.120(f).

FCEs are not necessary for these activities except for the divers conducting installation of porewater samplers (Peepers), and any other necessary dive work. FCEs are only required if personnel are required to wear Level A, B or C PPE.

For Parsons staff working on the Onondaga Lake Pre-Design Investigation, baseline medical examinations and FCEs (when required) are conducted by:

Industrial Medical Associates (IMA)
5655 East Taft Road
North Syracuse, NY 13212
Phone: (315) 458-1335

C4.11.2 Substance Abuse and Alcohol Testing

The Division Safety Manager administers required substance abuse tests, including random drug and alcohol testing. A link to the corporate policy follows: https://livelink.parsons.com/livelink/livelink.exe/Substance_Abuse.doc?func=doc.Fetch&nodeId=2471927&vernum=6&docTitle=Substance+Abuse%2Edoc

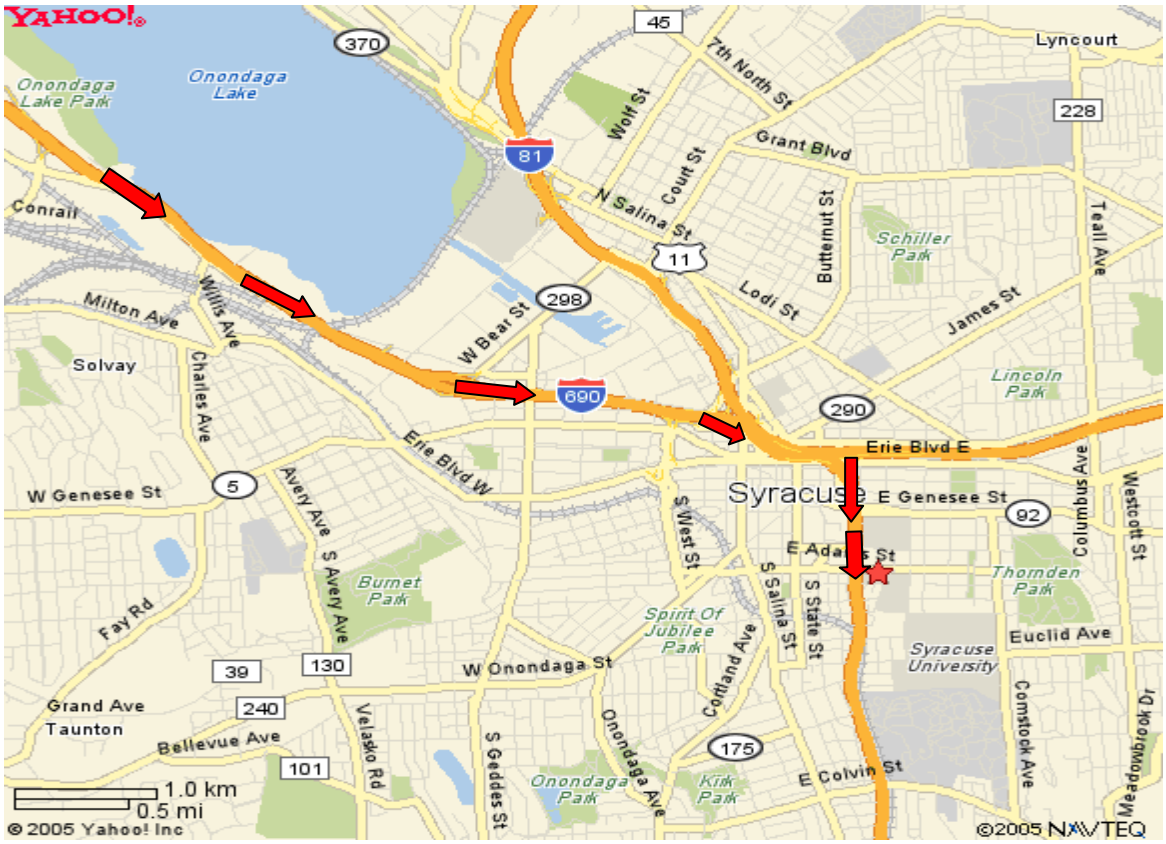
Honeywell Specification 01620 (CD-13) states that all individuals doing the work (i.e., operating equipment and physical labor as opposed to management oversight, design, etc) must receive a negative drug test within the past 2 weeks prior to starting work on a project.

C4.11.3 Medical Services and Panel of Physicians

The Project Manager, in conjunction with the Parsons Workers Compensation Analyst, establishes a panel of medical providers for the project and selects medical facilities to treat work-related injuries and illnesses, as follows:

- University Hospital, 750 East Adams Street, Syracuse, NY 13210 (Figure C4.1)

Figure C4.1 University Hospital
750 E. Adams Street
Syracuse, NY 13210
(315) 464-5611



Route to Hospital:

1. Exit the site to the south and turn left onto State Fair Blvd.

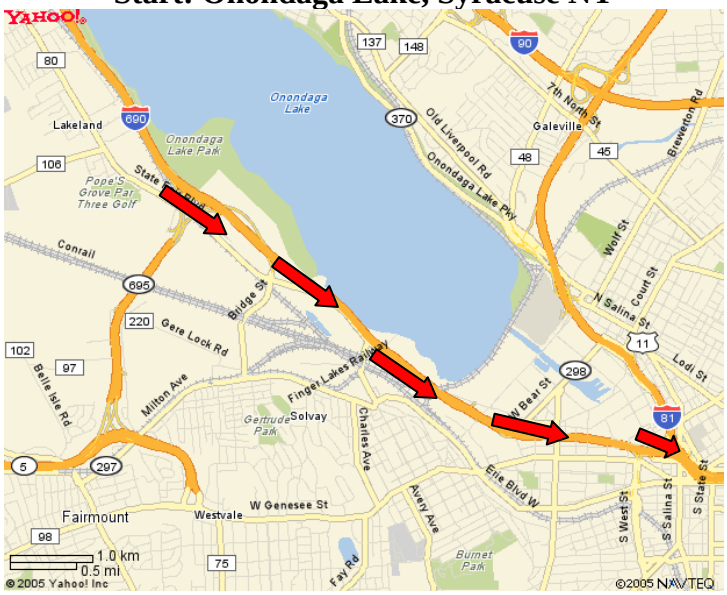
2. Travel southeast approximately 1.0 miles and turn left onto the I-690 on-ramp.

3. Take I-690 East approximately 6 miles and exit onto Route 81 south.

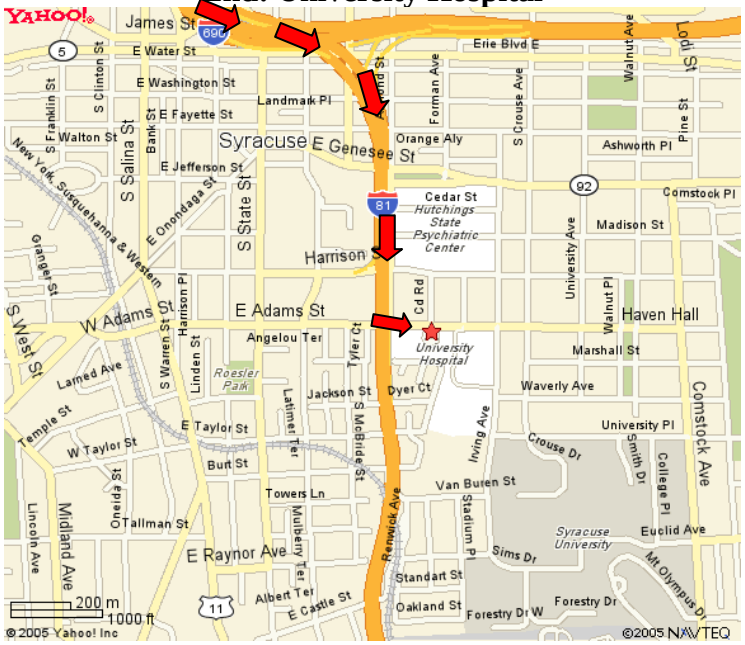
4. Take Route 81 south approximately 100 yards and exit at the Harrison/Adams St. exit. Stay left on the exit ramp. Merges to Almond Street (under Route 81).

5. Take Almond Street 2 lights and turn left onto Adams Street. Hospital Emergency Room entrance is on the right.

Start: Onondaga Lake, Syracuse NY



End: University Hospital



C4.11.4 Emergency Medical Response

The project shall display posters/signs with emergency telephone numbers and locations of facilities in visible locations and at selected phone locations throughout the project area (including subcontractor facilities).

Emergency Contacts	Phone Number
Ambulance (Onondaga Fire Control)	**911**
Fire Department	**911**
State Police (NYS)	**911**
Onondaga County Sheriff	(315) 435-2111
Syracuse Police	(315) 469-1160
SUNY Health Science Center Hospital	(315) 464-5611
Parsons Contract Physician (Qualisys)	(800) 874-4676
Poison Control Center	(800) 252-5655

C4.11.5 Workers Compensation Program

The Corporate Risk Management department establishes the appropriate workers compensation carrier. If a workers compensation loss occurs, the Corporate Workers Compensation Analyst (Donna Miller, 661-904-0978) handles all communication with the carrier.

This project does not participate in an OCIP or project-specific insurance program. The workers compensation policy covering Parsons' employees on this project is as follows:

AIG
15 Cornell Drive, 2nd Floor
Latham, NY 12110
(877) 640-2450
Policy Number: 0007169963

C4.11.6 Medical Monitoring

Potential health hazards associated with this project will be monitored. If hazards thresholds are reached, then the project will require implementation of the following medical monitoring:

Labor Classification	Monitor For	Comments
Field team (i.e. those working around drill rig, vibracore, including drillers, field team leader, site safety officer and other personnel located within near vicinity of noise source.)	Noise	Activities with the potential for noise hazards will be initially mitigated with hearing protection. Noise level monitoring will be conducted to determine if an employee must participate in a Hearing Conservation Program. If noise exposures exceed 85 decibels over an 8-hour time weighted average, an employee must participate in a Hearing Conservation Program.
Field Team (e.g. those who handle and process sediment and water samples, including drillers, field team leader, site safety officer, and other personnel located within the exclusion zone.)	Chemical exposures	To verify exposure, air monitoring will be conducted. If an employee is exposed at or above the Permissible Exposure Limit (PEL) of a chemical for more than 30 days in a year, they must participate in a Medical Surveillance Program.
Field Team (e.g. those who handle and process sediment and water samples, including drillers, field team leader, site safety officer, and other personnel located within the exclusion zone)	Respirator use	Medical qualification, training and fit-testing must be received on an annual basis. If an employee wears a respirator more than 30 days per year, they must participate in a Medical Surveillance Program.

Gregory H. Beck, Safety Manager, (908) 887-1973 administers the medical monitoring program.

PARSONS

Exhibit C4.1 Office Audit Protocol

Office Location: _____
Audit Conducted By: _____
Audit Date: _____

Question	Satis-factory	Unsatis-factory	N/A	Comments
General Work Environment				
Are all workstations, cubicles, and offices clean and orderly?				
Are work surfaces kept dry or appropriate means taken to ensure that the surfaces are slip-resistant?				
Are all spilled materials or liquids cleaned up immediately?				
Are warning signs available when items are spilled?				
Is combustible scrap, debris and waste stored safely and removed from the office?				
Are coffee pots turned off at night?				
Is accumulated combustible dust routinely removed from elevated surfaces, including the overhead structure of buildings?				
Walkways				
Are aisles and passageways kept clear?				
Are aisles and walkways marked as appropriate?				
Is there safe clearance for walking in aisles where motorized or mechanical equipment is operating.				
Are spilled materials cleaned up immediately?				
Are materials or equipment stored in such a way they will not interfere with the walkway?				
Are changes of direction or elevations readily identifiable?				
Stairs and Stairways				
Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?				
Exiting or Egress				
Are all exits marked with an exit sign and illuminated by a reliable light source?				
Are the directions to exits, when not immediately apparent, marked with visible signs?				

Question	Satis-factory	Unsatis-factory	N/A	Comments
Are doors, passageways or stairways, that are neither exits nor access to exits and which could be mistaken for exits, appropriately marked NOT AN EXIT, TO BASEMENT, STOREROOM, etc.?				
Are exit signs provided with the word EXIT in lettering at least 5 inches high and the stroke of the lettering at least 1/2 inch wide?				
Are exit doors side-hinged?				
Are all exits kept free of obstructions?				
Are there sufficient exits to permit prompt escape in case of emergency?				
Are special precautions taken to protect employees during building maintenance, construction, and repair operations?				
Is the number of exits from each floor of a building, and the number of exits from the building itself, appropriate for the building occupancy load?				
Where exiting will be through frameless glass doors, glass exit doors, storm doors, and are such doors fully tempered and meet the safety requirements for human impact?				
Exit Doors				
Are doors that are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?				
Are windows that could be mistaken for exit doors, made inaccessible by means of barriers or railings?				
Can exit doors be opened from the direction of exit travel without the use of a key or any special knowledge or effort, when the building is occupied?				
Is a revolving, sliding, or overhead door prohibited from serving as a required exit door?				
Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?				
Where exit doors open directly onto any street, alley or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?				
Are doors that swing in both directions and are located between rooms where there is frequent traffic provided with viewing panels in each door?				
Portable Ladders				
Are all ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play?				
Are non-slip safety feet provided on each ladder?				
Are non-slip safety feet provided on each metal or rung ladder?				
Are ladder rungs and steps free of grease and oil?				
It is prohibited to place a ladder in front of doors opening toward the ladder except when the door is				

Question	Satis-factory	Unsatis-factory	N/A	Comments
blocked open, locked or guarded.				
It is prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height.				
Are employees instructed to face the ladder when ascending or descending?				
Are employees prohibited from using ladders that are broken, missing steps, rungs, or cleats, broken side rails or other faulty equipment?				
Are employees instructed not to use the top 2 steps of ordinary stepladders as a step?				
When a portable rung ladder are used to gain access to elevated platforms and roofs, does the ladder always extend at least 3 feet above the elevated surface?				
Is it required that when portable rung or cleat type ladders are used the base is so placed that slipping will not occur, or it is lashed or otherwise held in place?				
Are portable metal ladders legibly marked with signs reading CAUTION, Do Not Use Around Electrical Equipment, or equivalent wording?				
Environmental Controls				
Are all work areas properly illuminated?				
Is employee exposure to chemicals in the workplace kept within acceptable levels?				
Can a less harmful method or product be used?				
Is the work area's ventilation system appropriate for the work being performed?				
Are restrooms and washrooms kept clean and sanitary?				
Are employees instructed in the proper manner of lifting heavy objects?				
Is equipment producing ultra-violet radiation properly shielded?				
Fire Protection				
Do you have a fire prevention plan?				
Does your plan describe the type of fire protection equipment and/or systems?				
Have you established practices and procedures to control potential fire hazards and ignition sources?				
Are employees aware of the fire hazards of the material and processes to which they are exposed?				
Is your local fire department well acquainted with your facilities, location, and specific hazards?				
If you have a fire alarm system, is it tested at least annually?				
If you have a fire alarm system, is it certified as required?				
If you have interior standpipes and valves, are they inspected regularly?				
If you have outside private fire hydrants, are they flushed at least once a year and on a routine preventive maintenance schedule?				
Are fire doors and shutters in good operating condition?				

Question	Satis-factory	Unsatis-factory	N/A	Comments
Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?				
Are fire door and shutter fusible links in place?				
Are automatic sprinkler system water control valves, air and water pressures checked weekly/periodically as required?				
Is maintenance of automatic sprinkler system assigned to responsible persons or to a sprinkler contractor?				
Are sprinkler heads protected by metal guards, when exposed to physical damage?				
Is proper clearance maintained below sprinkler heads?				
Are portable fire extinguishers provided in adequate number and type?				
Are fire extinguishers mounted in readily accessible locations?				
Are fire extinguishers recharged regularly and noted on the inspection tag?				
Are employees periodically instructed in the use of extinguishers and fire protection procedures?				

Question	Satis-factory	Unsatis-factory	N/A	Comments
Electrical				
Are all employees required to report as soon as practicable any obvious hazard to life or property observed in connection with electrical equipment or lines?				
Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment or lines?				
Are electrical appliances such as vacuum cleaners, polishers, and vending machines grounded?				
Do extension cords being used have a grounding conductor?				
Are multiple plug adapters prohibited?				
Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets or enclosures?				
Is sufficient access and working space provided and maintained about all electrical equipment to permit ready and safe operations and maintenance?				
Are electrical enclosures such as switches, receptacles, junction boxes, etc., provided with tight-fitting covers or plates?				
Transporting Employees				
Do employees who operate vehicles on public thoroughfares have valid operator's licenses?				

Question	Satis-factory	Unsatis-factory	N/A	Comments
When seven or more employees are regularly transported in a van, bus or truck, is the operator's license appropriate for the class of vehicle being driven?				
Is each van, bus, or truck used regularly to transport employees, equipped with an adequate number of seats?				
Are seat belt requirements enforced by the driver?				
Emergency Action Plan				
Are you required to have an emergency action plan?				
Does the emergency action plan comply with OSHA, requirements?				
Have emergency escape procedures and routes been developed and communicated to all employers?				
Do employees, who remain to operate critical operations before they evacuate, know the proper procedures?				
Is the employee alarm system that provides a warning for emergency action recognizable and perceptible?				
Are alarm systems properly maintained and tested regularly?				
Is the emergency action plan reviewed and revised periodically?				
Do employees know their responsibilities: For reporting emergencies? During an emergency?				

Question	Satis-factory	Unsatis-factory	N/A	Comments
Ergonomics				
Can the work be performed without eyestrain or glare to the employees?				
Does the task require prolonged raising of the arms?				
Do the neck and shoulders have to be stooped to view the task?				
Are there pressure points on any parts of the body (wrists, forearms, back of thighs)?				
Can the work be done using the larger muscles of the body?				
Can the work be done without twisting or overly bending the lower back?				
Are computers positioned so that tasks can be performed comfortably?				
Are all pieces of furniture adjusted, positioned, and arranged to minimize strain on all parts of the body?				

Exhibit C4.2 Project Orientation Outline

* To be modified as needed by the SSO or FTL

I. Names of personnel responsible for site safety and health

A. Project Manager, Safety Manager, Site Safety Officer, and Field Team Leader
B. Contact Information

II. Emergencies

A. Call 911 or your Program Manager, Project Manager, Safety Manager for emergencies.
B. Route to Hospital
C. Other Emergency numbers

III. Incidents

A. Honeywell Accident/Incident – Reporting Procedures
B. Parsons Accident/Incident- Reporting Procedures

IV. Safety, health, and other hazards at the site

A. Review specific AHAs as appropriate to the worker's activities.
B. Review chemicals of concern and associated hazards
C. Other hazards(e.g. slips, trips, weather, equipment, etc.)

V. Proper use of personal protective equipment

A. Review Minimum Personal Protective Equipment – (i.e., hard hat, safety glasses, work boots).
B. Review Additional Personal Protective Equipment- (i.e., Personal Floatation Device (PFD), tyvek, latex and rubber gloves when potential with contaminates of concern in soil, sediment or groundwater.)

VI. Work practices by which the employee can minimize risk from hazards

A. Training - all personnel must receive site-specific training and attend/review daily toolbox safety meetings.
B. Contamination - no eating, drinking or smoking in the work zone.
C. Proper hygiene – wash hands and face before eating, drinking and smoking and only in designated areas.
D. "Buddy System" – use two-way radio/ cell phone for communicating and reporting emergencies.

VII. Safe use of engineering controls and equipment on the site

A. Mobile equipment – use horns to alert others, mirrors and back-up/travel alarm must be functional.

IX. Decontamination procedures

A. Review Decontamination Procedures for work zones, equipment, PPE (e.g. coveralls, gloves, footwear) must be decontaminated or disposed before leaving the exclusion zone. Tyvek coveralls and gloves cannot be worn outside the exclusion zone, even if they are clean. Use boot wash stations when appropriate. Exclusion zones exist around the perimeter of intrusive activities. Support zones are at the perimeter of the exclusion zone.

Exhibit C4.3 Project Orientation Attendance Sheet

(For All Parsons and subcontract employees on site)

I hereby confirm that site-specific health and safety training has been conducted by the site health and safety officer, which included:

- Names of personnel responsible for site safety and health
- Safety, health, and other hazards at the site
- Proper use of personal protective equipment
- Work practices by which the employee can minimize risk from hazards
- Safe use of engineering controls and equipment on the site
- Acute effects of compounds at the site
- Decontamination procedures

For the following project:

(Project Title)	(Project Number)	(City, State)

Name (print)	Signature	Company	Date

Maintain in Health & Safety Plan file.

SECTION C5

PRE-FIELD WORK PHASE

C5.1 RISK ANALYSIS AND SAFETY SPECIFICATION DEVELOPMENT

Procurement procedures require that a site-specific risk analysis be conducted before issuance of investigation and remediation request for proposals (RFPs). Using the site specific risk review checklist (Exhibit C5.1), the Project Manager leads this analysis, which documents existing exposures that may impact the work, surrounding facilities, equipment, workers, or the public at large. The analysis includes locating, documenting, and photographing items such as:

- Overhead and underground power lines
- Sewer and water utilities
- Existing building interferences
- Crane access ways
- Traffic
- Security
- Fences
- Water hazards
- Existing geographical and environmental conditions
- Investigation of Derived Waste (IDW) Disposal
- Confined spaces

Upon completion of the site specific risk analysis, high-risk activities are listed in the RFPs (as applicable), and bidders must describe controls and mitigation strategies in their proposals. The RFP notes that the list is representative and that the selected contractor must identify and control all work-related hazards.

Pre-field work safety activities include a detailed analysis of the scope of work and safety specifications in the prime contract, Parsons' project schedule and PSP, draft RFPs, and proposed subcontractor agreements. The Project's standard safety specifications are given below.

- Site Specific Risk Review Checklist – Exhibit C5.1
- Contractor Safety Evaluation Package – Exhibit C5.2
- Pre-Field Work Safety Meeting – Exhibit C5.3

C5.2 DESIGN AND REMEDIAL ACTION REVIEW

- *NOT APPLICABLE FOR CURRENT PHASE OF WORK*

C5.3 PRE-BID MEETING

Pre-bid meetings are required to ensure that bidders understand the RFP, including expectations for safety and health performance. During the pre-bid meeting, the Project Manager will review project safety philosophy, principles, and Parsons' requirements with all prospective bidders. Although this information is included in the RFP, the meeting reinforces the message.

C5.4 SUBCONTRACTOR PREQUALIFICATION REVIEW

Project procurement procedures require that all subcontractors submit prequalification documentation for evaluation. The Procurement Manager or Division Safety Manager conducts the safety prequalification evaluation in accordance with the attached Parsons Contractor Safety Evaluation Package (Exhibit C5.2).

C5.5 PRE-FIELD WORK MEETING

The Project Manager holds a pre-field work meeting before the subcontractor begins work. The meeting includes subcontractor representatives, contracts manager, and representatives from all disciplines, including safety. During the safety review, the meeting participants review specific safety site/area, pre-bid risk analysis, and competent person and site-specific safety plan requirements. In addition, the Project Manager obtains a safety point of contact and emergency management information. The attached Pre-Field Work Safety Meeting Checklist (Exhibit C5.3) is used by the Project Manager to document the meeting.

C5.6 COMPETENT PERSON SUBMISSION REVIEW

Parsons and its subcontractors must identify OSHA-regulated and certified competent persons for work or tasks requiring that level of supervision. The supervisor of the competent person must certify in writing the specific competencies of the named competent person.

The supervisor and competent person sign and submit the attached Parsons competent person document to the Parsons Project Manager (Exhibit C5.4).

C5.7 SUBCONTRACTOR SAFETY PLAN SUBMISSION REVIEW

All subcontractors must submit safety plans to the Parsons Project Manager for review before they begin work on site. The Project Manager reviews the program for adequacy in accordance with the PSP. The Subcontractor Safety Plan Review Sheet is included as Exhibit C5.5.

C5.7.1 Contractor Site-Specific Safety Plans

At least 10 days before work begins, each subcontractor must submit two copies of its subcontractor safety plan (SSP) to the Parsons Project Manager for review. The Project Manager and PSM review the SSP to ensure that it meets Parsons' requirements.

If a contractor needs assistance developing an SSP, the PSM provides an electronic copy of Parsons' sample SSP from Attachment A2 of the SHARP Management manual.

The SSP must address the following elements:

- Responsibility
- Compliance
- Communication
- Hazard assessment
- Accident exposure and investigation
- Hazard correction
- Training and instruction
- Recordkeeping

The SSP must include applicable requirements of Parsons PSP and OSHA CFR 1910/1926:

- Scope of work evaluation that describes the sequence of work and associated hazardous activities.
- Specific activity hazards analysis (AHA).
- A project site employee orientation program that addresses location specific issues relative to safety and health.
- A site-specific emergency action plan that includes a list of key management contacts with home office, project site, home, and cellular telephone numbers.
- A site-specific medical emergency plan that lists qualified first aid personnel by name and includes copies of their current certificates.
- Key line management personnel, by name and position, who will enforce the SSP.
- Key competent or qualified personnel by name and copy of current documentation identifying specific certified competency (e.g., scaffolding, excavations, and fall protection).
- Written progressive disciplinary program for violations of safety procedures.
- Trenching and shoring plan (if applicable).
- HAZWOPER training documentation (if applicable).
- Contractor task hazard planning.
- Subcontractor weekly safety planning submission.
- Contractor workers daily task safety planning.

C5.8 MOBILIZATION/KICKOFF SAFETY MEETING

The Project Manager and SSO conduct the Mobilization/Kickoff Safety Meeting on the first day of subcontractor mobilization in the field and at the work site. The meeting includes documentation with the Mobilization/Kickoff Safety Meeting (Exhibit C5.6) and the completion of a Site-Specific Risk Review Checklist (Exhibit C5.1) combined with a walkthrough of the work area to locate items on the site specific risk review checklist.

Exhibit C5.1 Site-Specific Risk Review Checklist

Date:_____ Project or Location:_____

Risk/Hazard	Detail	Present
Employee Exposure	Hazardous chemicals	_____
	Lead	_____
	Asbestos	_____
	UXO	_____
	PCB	_____
	Airborne contaminants (dust, mists, fumes)	_____
	Other (specify)	_____
	_____	_____
Hazardous Waste	Handling, removal or storage of hazardous is required	_____
	_____	_____
Crane Work	Mobile cranes	_____
	Tandem lifts	_____
	Bridge cranes	_____
	Derricks	_____
	_____	_____
Powered Industrial Trucks	Forklift training is required	_____
Aerial Lifts	Hydraulic booms	_____
	Scissor lifts	_____
	Mobile scaffolding	_____
	_____	_____
Drilling		
Sediment Sampling	Vibracore	_____
	Grab Sampling	_____
Electrical	Staging area	_____

Risk/Hazard	Detail	Present
Marine or Over Water Work	Work on or over water is required	_____
	Underwater (diving) work is required	_____
	_____	_____
Personal Protective Equipment	Work activities or work site requires hearing protection	_____
	Work activities or location requires using respirators	_____
	Work activities or location requires special protective clothing	_____
	_____	_____
Public Exposure	Work activities or location requires special precautions to protect the public	
	_____	_____
Permits	required	_____
	Hot permit	_____
Other Exposures	Other exposure or high-risk activities (list)	
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

Notes: _____

_____

Reviewed by: _____ Title: _____ Date: _____

Exhibit C5.2 Contractor Safety Evaluation Package

	CONTRACTOR HOME OFFICE INFORMATION		Parent Company Info. (if applicable)
NAME			
ADDRESS 1			
ADDRESS 2			
CITY, STATE ZIP			
WEB ADDRESS			
H&S CONTACT NAME			
H&S CONTACT TITLE			
TELEPHONE			
FAX			
H&S CONTACT EMAIL ADDRESS			

1. Contractor Activity

Select the type of activity that best describes your company.

Asbestos Abatement		Carpentry		Concrete		Consulting		Demolition		Drilling	
Earthwork		Electrical		Engineering		General Contractor		Heavy Construction		Maintenance	
Masonry		Plumbing/ HVAC		Roofing/ Sheet Metal		Surveying		Other			

2. Substance Abuse Policy

Does your company certify that employees and other individuals (subcontracted labor, temps, etc.) hired by your company to work at a Parsons project site will be drug and alcohol free?	No		Yes	
Do BOTH your employees and other individuals as stated above participate in pre-employment drug testing?	No		Yes	
Do BOTH your employees and other individuals as stated above participate in post-accident drug testing?	No		Yes	
Do BOTH your employees and other individuals as stated above participate in just cause drug testing?	No		Yes	

Do BOTH your employees and other individuals as stated above participate in random drug testing?	No		Yes	
If you answered "Yes" to the question above, what percent of your employees are randomly drug tested on an annual basis?			N/A	

3. Safety Personnel

Number of Board Certified H&S Professionals on staff:					CIH		CSP	
Who handles safety in your company?	Other		Safety Consultant		Part-Time Safety Person		Full Time Safety Person	
Total years of safety experience for person handling safety (above)?	<5 years		5-9 years		10-14 years		>15 years	
Years managing safety with Company for person handling safety (above)?	<5 years		5-9 years		10-14 years		>15 years	

4. OSHA Inspections/Violations

Has OSHA inspected any of your job sites in the past five (5) years?					Yes		No	
If "Yes" above, indicate the number of inspections (including zero) for each type listed below.								
Other		Accident		Complaint		Referral		Planned
Indicate the total number of citations (including zero) issued for each type of violation listed below.								
Willful		Serious		Repeat		Other		

5. Work Activities

Are your employees involved with any of the activities described below? If yes, check all that apply below.									Yes		No
Confined Space Entry		Excavation/ Trenching		Zero Energy – Lockout/Tagout		Forklift Operations		Aerial Lifts/ Scissor Lifts		Respirators	
Cranes		Hot Work		Scaffolds		Asbestos Abatement		Emergency Response		Loading/Shipping Hazardous Materials	
Clean-Up Operations with hazardous substances											
Have employees engaged in activities that expose them to hazardous substances and health hazards received HAZWOPER training?									No		Yes
Are employees that wear a respirator more than 30 days a year in a medical surveillance program?									No		Yes
Are employees exposed to hazardous substances or health hazards at or above the established permissible exposure limit, without regard to the use of respirators, in a medical surveillance program?									No		Yes

6. Safety Maturity

Does your company have a written Safety Manual?	No		Yes	

Does your company conduct safety audits after a project begins? If "Yes", indicate the frequency and type of audit (documented or not documented).										No		Yes	
Other – not documented		Monthly – not documented		Weekly – not documented		As required – documented		Monthly - documented		Weekly - documented			
Does your company conduct safety meetings? If "Yes", indicate the frequency and type of meeting (documented or not documented).										No		Yes	
Monthly – not documented		Weekly – not documented		Daily – not documented		Monthly – documented		Weekly - documented		Daily - documented			
Does your company provide safety training to employees? If "Yes", indicate the type below.										No		Yes	
Other – HAZWOPER, CPR/First Aid		On-the-Job/ Buddy System		Site-specific (i.e. HASP)		New hire orientation		Behavior-based safety					

7. Safety Statistics

Does your company maintain an OSHA 300 Log? If no, provide a reason below and skip to Section 8.		No		Yes	
Reason:					
What is the SIC or NAICS code reported on your OSHA Form 300A?					

STAFFING	2002	2003	2004	YTD
1. Average number of employees				
2. Average number of temporary workers				
STATISTICS – from OSHA 300 Logs	2002	2003	2004	YTD
1. Number of fatalities				
2. Number of injuries w/days away from work and/or restricted				
3. Number of injuries w/days away from work				
4. Number of days away from work				
5. Number of days of restricted work activity				
6. Number of injuries without lost workdays				

8. Experience Modification Rate (EMR)

RATING – from insurance carrier/broker	2002	2003	2004	Current year
Experience modification rate (EMR)				

9. Workers Compensation

CLAIMS – from insurance carrier/broker	2002	2003	2004	YTD
1. Total Number of WC Claims filed				
2. Number of Open WC Claims				

3. Total Amount of WC Claims (in $000's)				
4. Amount of Reserves for WC Claims				

10. Areas of Service

Identify the region or state(s) that your company can provide service in.														
All States														
Canada		Alberta	Ontario	Saskatchewan	Manitoba	Quebec	British Columbia							
West Coast		AZ	CA	CO	ID	MT	NM	NV	OR	UT	WA	WY		
Midwest		AR	IA	IL	KS	MN	MO	ND	OK	SD	TX	WI		
Southeast		AL	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV		
Northeast		CT	DE	IN	MA	MD	ME	MI	NH	NJ	NY	OH	PA	RI	VT

11. Certification – by an Authorized Company Representative

I hereby certify that all information provided in this Contractor Safety Evaluation Package is accurate and correct.	No		Yes	

Contractor/Company Name	
Representative Name	
Representative Title	
Representative Signature	
Date	

Questions and/or completed packages should be forwarded to:

Gregory H. Beck, CSP

PARSONS
200 Cottontail Lane
Somerset, NJ 08873
(732) 537-3502 office
(732) 868-3110 fax
gregory.beck@parsons.com

PARSONS

Exhibit C5.3 Pre-Field Work Safety Meeting

Date:		Project/Location:	
Subcontractor Representative:		Parsons Project Manager:	
Phone:		Phone:	
Subcontractor Safety Rep:		Parsons Safety Manager:	
Phone:		Phone:	

The following items were identified and reviewed with the subcontractor.

Health & Safety		Medical	
Site-Specific Safety Plans/Model Program		Substance Abuse Screening	
Competent/Qualified Person Documentation		Emergency Procedures	
Safety Audits/Inspections		Site Security	
Subcontractor Responsibilities		Smoking Policy	
Site Orientation Requirements		Medical Services Requirements	
Premobilization Safety Meeting/Date		Treatment Locations/Addresses/Phone List	
Crane Inspection Certification		Other	
Personal Protective Equipment (PPE)			
Environmental Hazards			
Other			

Additional Notes/Comments:

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Exhibit C5.4 Subcontractor Competent Person Form

Definition

A competent person is a person having the ability to recognize existing and predictable hazards and having the authority to correct them.

Responsibility

The designated subcontractor competent person is responsible for recognizing and correcting safety risks/hazards. This person has the authority to stop work in a potential safety concern on the jobsite. This Subcontractor Manager and competent person are considered the contacts for Parsons projects.

This form must be completed by each subcontractor's manager and the subcontractor's designated competent persons. *Where a subcontractor is responsible for multiple crafts, it will be necessary to maintain additional designated competent persons and forms.* Each subcontractor on a Parsons project must submit this completed form to the Parsons Construction Manager before beginning work on the project and must update it any time the designated representative(s) changes.

Acknowledgment

I,_____ representing, _____
Subcontractor Manager Subcontractor Company Name

have assigned _____ to be the competent person in the areas indicated and I _____ acknowledge that this individual has been thoroughly trained and is experienced in hazard recognition and has the authority to stop work and correct hazards in the event of a potential hazardous or imminent danger situation.

_____ _____
Subcontractor Manager (Signature) Date

I, _____ acknowledge that I have been thoroughly trained and have the experience
Competent Person (Signature)

to perform the duties as the _____competent person in the areas marked below and
Subcontractor Company Name

I understand that I have the responsibility and authority to correct hazards and to stop work in the event of a potential hazardous or imminent danger situation.

_____ Asbestos	_____ Hearing Protection	_____ Welding/Cutting
_____ Respiratory Protection	_____ Scaffolding	_____ Rigging
_____ Cranes/Derricks	_____ Electrical	_____ Lead
_____ Fall Protection	_____ Ladders	_____ Excavations/Trenches
_____ Demolition	_____ Tunnels/Shafts	_____ First Aid/CPR
_____ Underground Const.	_____ Material/Personnel Hoists	_____ Concrete/Forms/Shoring
_____ Marine Work/Diving	_____ Bolting/Riveting/Fitting	_____ Mechanical Demolition
_____ Sediment Sampling	_____ Permits	_____

PARSONS

Exhibit C5.5 Subcontractor Safety Plan Review

Date: _____ Project/Location: _____

Subcontractor: _____ Parsons Safety Manager: _____

The information provided here is based on a review of a subcontractor's safety plan. Areas identified as incomplete are reevaluated and modified based on the standards in the contract specifications and the Project Safety Program manual. Subcontractors resubmit corrected sections of the SSP to the Parsons Construction Manager within one week of receiving review documentation.

Section	Complete	Incomplete	Section	Complete	Incomplete
Site Specific Safety Plan			Specific Activity Hazard Analysis (AHA)		
Responsibilities assigned			Project Site Employees Orientation Program		
Compliance			Emergency Action Plan		
Hazard Communication			Site Specific Medical Emergency Plan		
Hazard Assessment			Identification of Key Line Personnel		
Accident Investigation			Identification of Competent & Qualified Personnel		
Hazard Correction			Written Progressive Disciplinary Program		
Training and Instruction			Written Trenching and Shoring Plan (if applicable)		
Recordkeeping			Written 100% Fall Protection Plan (if applicable)		
Scope of Work Evaluation			Other		

Additional Comments:

_____

_____

_____

_____

Reviewed by:

Name _____ Title _____ _____

PARSONS

Exhibit C5.6 Mobilization/Kick Off Safety Meeting

Date: _____ Project/Location: _____

CM Representative: _____Subcontractor Representative:_____

The following project site safety, health, and security requirements, procedures, and hazards have been identified and reviewed with the subcontractor.

SSP/Emergency Planning/Response Plan			Demolition	
Competent/Qualified Person			Personal Protective Equipment	
Hazardous Materials/Waste			Cranes/Hoists/Annual Inspection Certificate	
Vehicle/Heavy Equipment			Overhead Power Lines	
Lockout/Tagout			Confined Spaces (Permit/Non-Permit)	
Electrical			Excavations/Trenching	
Fire Protection			Site Security/Visitor Control/Public Exposure	
Hot Work/Welding/Cutting			Process Safety Management (PSM)	
Fall Protection/Guardrails/ Scaffolding/Ladders			Permits (Excavation/Scaffolding/Demolition/Traffic/Confined Space/Hot/etc.)	
Drilling			Electrical and other utilities for stage area	
Sediment Sampling – Vibracore/grab samples				

Additional Project Concerns:

_____

_____

_____

_____

Other Attendees:

Name	Title	Company

SECTION C6

INVESTIGATION PHASE

C6.1 SITE RISK ANALYSIS

Before work begins, Project Managers lead a team that performs a risk analysis at each work site to identify hazards that require specific control measures. During weekly progress meetings, the FTL and subcontractors submit written summaries of upcoming work tasks and associated risks and control measures to the Project Manager using Exhibit C6.1 located at the end of this section. The weekly summaries identify upcoming mobilization or demobilizations tasks, audits and inspections, competent person changes, training and new activities requiring an Activity Hazard Analysis (AHA). Subcontractors add activities to these summaries at least two weeks in advance of the work. Potential hazards that may be encountered during the pre-design investigation are listed below. The AHA for the work activities are found in Attachment C.

C6.1.1 Chemical Hazards

Health hazards and the exposure limits associated with chemicals of concern are presented in Table C6.1. These hazards can be encountered during subsurface and intrusive investigation in and around Onondaga Lake. Based on previous investigation and sediment sampling, monitoring will be conducted in the workers breathing zone using a photoionization detector and a Jerome mercury analyzer, or equivalent, during intrusive activities and sample activities.

C6.1.2 Physical Hazards

Physical hazards that may be encountered during the pre-design investigation include but are not limited to heat stress, cold-related illness, ultra-violet radiation and noise hazards.

Heat Stress:

Heat stress is one of the most common (and potentially serious) illnesses that affect field personnel. When site personnel are engaged in operations involving hot environments, a number of physiological responses can occur which may seriously affect the health and safety of the workers. Heat stress can result in health effects ranging from transient heat fatigue to serious illness or death. Heat stress can be eliminated or controlled through the use of a comprehensive heat stress prevention and monitoring program.

Cold-Related Illness:

Cold-related illness, like heat stress, is very common and can seriously affect field personnel if the appropriate controls are not established. Exposure to low temperatures presents a risk to employee safety and health, in the form of hypothermia and frostbite. Both can be controlled or eliminated by implementing employee training, periodic physiological screening, establishment of administrative controls, selecting proper work clothing, and wind-chill monitoring which all contribute to the prevention of hypothermia and frostbite.

Ultraviolet Radiation:

The sun emits ultraviolet radiation (UV) as heat and light. The skin's natural defense mechanisms attempt to reject the UV by distributing melanin pigmentation where needed. However, overexposure to direct sunlight can cause inflammation or blistering of the skin (sunburn). The use of sunscreen, long sleeve shirts, and wide brim hats can help prevent sunburn. Chronic exposure to UV radiation is known to cause skin cancer. In case of sunburn, do not apply burn ointment, cold cream, or butter to relieve pain. Use a dry dressing and get medical attention for severe, extensive sunburns.

Noise:

Operating heavy equipment can be a potential noise source. Hearing protection will be worn by personnel operating heavy equipment, or other personnel in close proximity to the equipment. If noise hazards are of concern for a particular project, appropriate hearing protection should be used.

C6.1.3 Biological Hazards

Biological hazards can result from encounters with mammals, insects, snakes, spiders, ticks, plants, parasites, and pathogens. Mammals can bite or scratch when cornered or surprised. The bite or scratch can result in local infection or infection with systemic pathogens or parasites. Insect and spider bites can result in severe allergic reactions in sensitive individuals. Exposure to poison ivy, poison oak or poison sumac results in skin rash. Ticks carry a number of serious diseases. Dead animals, organic wastes, and contaminated soil and water can harbor parasites and pathogens. Most of the field activities will occur out on the Lake; however, there may be the possibility to encounter biological hazards surrounding the shoreline.

Poison Ivy:

Some of the most common and severe allergic reactions result from contact with poison ivy, poison oak, and poison sumac. Contact with the poisonous sap of these plants produces a severe rash characterized by redness, blisters, swelling, and intense burning and itching. The victim also may develop a high fever and may be very ill. Ordinarily, the rash begins within a few hours after exposure, but it may be delayed for 24 to 48 hours.

Ticks:

Ticks may be common during the spring and summer around the shoreline of Onondaga Lake. Two types of ticks may be encountered: the dog tick and the deer tick. The dog tick is the larger, more common tick. After biting, the dog tick will remain attached to the victim until engorged with blood. Dog ticks may transmit rocky mountain spotted fever and other diseases. The deer tick is much smaller, ranging from poppy seed to grape seed size, and does not remain attached to the skin for very long after biting. Deer ticks can transmit Lyme disease, which can have serious, long-term health effects if left untreated. Lyme disease is characterized by a bulls-eye type rash; light in the center with an outer red area. Flu-like symptoms may also occur. These signs may occur at different times and the rash may not appear. If you discover any bites on the skin, wash the affected area and seek medical attention if a rash or flu-like symptoms appear.

Bees, Wasps, Hornets, and Other Insects:

Symptoms of an insect bite are normally a sharp, immediate pain in the body part bitten. Poisonous insects and insect-like creatures that may be encountered around Onondaga Lake include the following:

- Bees (honeybees, bumble bees, wasps, and hornets);
- Caterpillars; and
- Beetles/Bugs

Spiders:

The two poisonous spiders that may be encountered on the Onondaga Lake Pre-Design Investigation project are the Brown Recluse and the Black Widow. The Brown Recluse is up to one inch long with a violin or "fiddle" shaped mark on the top of the head. The Black Widow is a smaller, bulbous black spider with a red hourglass-shaped mark on the underside.

Reactions to a Brown Recluse spider bite include mild to severe pain within two to eight hours and a star shaped area around the bite within three to four days. Significant tissue death and loss accompanies a Brown Recluse spider bite. Reactions to a Black Widow spider include intense pain at the site of the bite after approximately 15 to 60 minutes, followed by profuse sweating, rigid abdominal muscles, muscle spasms, breathing difficulty, slurred speech, poor coordination, dilated pupils, and generalized swelling of face and extremities.

Persons that have been bitten by a Brown Recluse or Black Widow spider should be immediately transported to a hospital. The spider should be collected (if possible) for confirmation of the species.

Blood borne Pathogens:

Blood borne pathogens enter the human body and blood circulation system through punctures, cuts or abrasions of the skin or mucous membranes. They are not transmitted through ingestion (swallowing), through the lungs (breathing), or by contact with whole, healthy skin. However, under the principle of universal precautions, all blood should be considered infectious, and all skin and mucous membranes should be considered to have possible points of entry for pathogens.

C6.1.4 Environmental Hazards

Slip, Trip, and Fall Hazards:

The site may contain slip, trip, and fall hazards for site workers, such as:

- Holes, pits, tree roots, or ditches.
- Slippery surfaces.
- Steep grades.
- Uneven grades.
- Sharp objects, such as nails, metal shards, and broken glass.

For field personnel on sampling or support vessels, the wet conditions on the deck may contribute to the possibility for field personnel to trip or slip and either injure themselves or

fall off the boat. The presence of cables, rope, buckets, and boat gear contributes to tripping hazards. Extreme care will be taken on board vessels.

Thunderstorm Hazards:

During the course of field operations, severe weather may be encountered, including thunderstorms, lightning, rainstorms, and other unsafe weather conditions (i.e., high winds and tornadoes). Criteria indicating that severe weather conditions may exist include:

- High winds (greater than 40 miles per hour – depending on the tree cover and other site specific conditions);
- Tornado watch or warning in place for the area including the site;
- Visible lightning;
- Extreme temperatures (e.g., greater than 100 degrees F); or
- Heavy rainfall that makes footing treacherous and visibility difficult.

If severe weather is approaching, personnel will stop all work and return to onshore site location to evaluate the alternatives. The SSO and FTL will determine if weather conditions allow for restart of work activities. Monitor weather radio and if possible monitor weather radar via internet.

C6.1.5 Marine Operation Hazards

Safe operation of water craft is important during field activities such as bathymetry/ geophysical surveys, sediment sampling and coring, drilling, and surface water sampling. The barge or boat may be tethered to the lake bottom to limit movement. However, it may be floating freely or idling in one location. While working on a barge or boat, the field team must be aware of other boaters, and weather conditions which may influence the stability of the lake, and possible drowning. All personnel will be required at a minimum to wear Level D personal protective equipment, approved coast guard life vests at all times when not protected by standard top rail, and mid rail and toe-boards when working on the vessel. Employees must follow the standard operating procedure for Marine Safety Operation (Attachment D).

C6.1.6 Fire Hazards

Although fires and explosions may arise spontaneously, they are more commonly the result of carelessness during the conduct of site activities, such as moving drums, mixing/bulking of site chemicals and during refueling of heavy or hand held equipment. Some potential causes of explosions and fires include:

- Mixing of incompatible chemicals, which cause reactions that spontaneously ignite due to the production of both flammable vapors and heat;
- Ignition of explosive or flammable chemical gases or vapors by external ignition sources;
- Ignition of materials due to oxygen enrichment;
- Agitation of shock or friction-sensitive compounds;
- Sudden release of materials under pressure.

C6.1.7 Onondaga Lake Pre-Design Investigation Activity Hazard Analysis

(to be updated as new task/activities are required)

- Activities-Field
- Activities- Barge or Boat
- Site Visit or Site Walk
- Operation- Motor Vehicle
- Operation- Heavy Equipment or Machinery
- Operation- Barge or Boat
- Fueling- Motor Vehicle
- Fueling- Boat or Barge*
- Fueling- Heavy Equipment*
- Diving*
- Survey- Geophysical Investigation*
- Sampling- Sediment
- Sampling- Water
- Sampling- Processing
- Decontamination- Area Set-up
- Decontamination- Boat
- Decontamination- Large Equipment
- Decontamination- Personnel
- Decontamination- Portable Tools
- Cone Penetrometer Testing and Membrane Interface Probe Operation*
- Site Area- Preparation*
- Site Area- Grading*
- Site Area- Electrical Work*

* Indicates that these work activities will be primarily accomplished by subcontractors who will submit an updated AHA (to be added).

C6.2 FIVE HAZARD CONTROL MEASURES – ORDER OF PRECEDENCE

Site hazards and hazards resulting from investigation and remediation activities are controlled using one or more of the control measures listed below. The order of precedence is as follows:

C6.2.1 Engineer/Design to Eliminate or Minimize Hazards

A major component of the design phase is to select appropriate safety features to eliminate a hazard and render it fail-safe or provide redundancy using backup components.

Exclusion Zone

The exclusion zone at this site will be limited to the barge or boat. Unprotected onlookers should be located 50 feet upwind of drilling or environmental sampling activities. In the event that action levels are exceeded in the breathing zone, then all personnel in the exclusion zone must stop work, evacuate, evaluate the situation. If the actions levels continue to exceed recommended limits then upgrade the level of personal protective equipment on properly trained and certified crew members to continue work.

Decontamination Zone

Much of the decontamination of equipment, drill rigs, and tools will occur on a barge or boat, over the water. Additional decontamination facilities, as needed, will be located adjacent to the onshore support zone. Personnel decontamination must take place prior to leaving the decontamination area and prior to entering any personnel hygiene facilities, or before eating, drinking, or smoking. Any decontamination water that has been contained on the barge or boat will be transported to the onshore support zone for appropriate disposal. Soiled Tyvek and boot covers will be removed and placed in drums.

Support Zone

The support zone will be located on shore. Break areas, operational direction and support facilities (to include supplies, equipment storage and maintenance areas) will be located in this area. No equipment or personnel will be permitted to enter the support zone from the exclusion zone without passing through the personnel or equipment decontamination zone.

C6.2.2 Guard the Hazard

Hazards that cannot be eliminated by design must be reduced to an acceptable risk level by safety guards or isolation devices that render them inactive.

C6.2.3 Provide Warnings

Hazards that cannot be totally eliminated by design or guarding are controlled through using a warning or alarm device.

Exposure Monitoring/Air Sampling Program

An environmental and personal monitoring program will be developed based on site-specific information for the project. This plan discusses general information on wind direction monitoring, volatile organic compound (VOC) monitoring, and mercury vapor monitoring.

It is highly unlikely that the sediment sampling could cause a significant impact to the surrounding air. Both the high moisture content and high concentration of organic carbon would substantially retard any releases of volatile organic compounds, semivolatile organic compounds, pesticides/PCBs, mercury or particulates.

Wind Direction Monitoring

A wind direction indicator (such as survey flagging tied to a stake, or a flag on a boat/barge) will be erected at every active work site. This will enable the SSO and on-site personnel to determine upwind locations necessary for proper health and safety procedure implementation, (work areas relative to the excavation) and, if necessary, evacuation procedures.

Volatile Organics Monitoring

Field work at sites with VOC contamination shall use photoionization detector (PID) (OVM-580B/580S or equivalent) equipped with a 10.6e V lamp or other monitoring instrument deemed appropriate by PSM to monitor VOC concentrations in the working area. Readings detected by the PID or other instrument will be used to determine the appropriate levels of protection. Action levels for VOCs and particulates are presented in Table C6.2.1. Action levels for additional sites, if different from the levels in Table C6.2.1, will be presented in an addendum to this PSP.

Mercury Vapor Monitoring

Field work at sites with Mercury contamination shall use a mercury vapor analyzer (Jerome ® Mercury Vapor Analyzer 431X or equivalent) or other monitoring instrument deemed appropriate by the PSM to monitor total mercury in the working areas. Readings detected by the analyzer or other instrument will be used to determine the appropriate levels of protection. Action levels are presented in Table C6.2.1.

Dust Monitoring

If site activities generate sustained, visible dust due to wind erosion of soils, a personal DataRAM meter will be obtained to monitor worker breathing zones for total dust levels. Readings will consider upwind background dust levels, as well as diesel particulate emissions from heavy equipment before upgrades to higher levels of PPE are initiated as shown in Tables C6.2.1 and C6.2.2. Dust is not expected for the majority of the work, as sampling is being conducted on saturated sediments on the Lake.

C6.2.4 Provide Special Procedures or Training

When design, guarding, or warnings cannot eliminate hazards, subcontractors must develop procedures, training, and audits to ensure safe completion of work. Training cannot be a substitute for hazard elimination when life-threatening hazards are present.

Decontamination Procedure

Level D or Modified Level D protection will be worn for initial entry on-site and initially for all activities. If air concentrations exceed action levels, workers will employ engineering controls first before upgrading the level of protection. Personal decontamination may be necessary for activities involving the use of Level C or Level B PPE. Table C6.2.3 includes the proper decontamination procedures that must be implemented if chemical contamination present and PPE protection greater than Level D is used. The SSO will determine the proper procedures for decontamination based on the work activities and amount of contamination.

C6.2.5 Provide Personal Protective Equipment

To protect workers from injury, the last method in the order of precedence is the use of personal protective equipment, such as hard hats, gloves, eye protection, US Coast Guard approved personal flotation devices (i.e., PFDs or life jackets), and other protective equipment with the understanding that bulky, cumbersome, and heavy personal protective equipment is often discarded or not used, rendering this method ineffective without proper controls.

PPE Selection

The selection and use of PPE at individual sites will be initially Level D or Modified Level D unless specified by the SSO. The unknown nature of hazardous waste site work and the possibility of changing conditions during the conduct of the work may require changes in the personal protective equipment. When changes in personal protective equipment become necessary, these changes shall be made in accordance with the action levels and criteria set forth in this plan. As a rule, levels of PPE will need to be reassessed if any of the following occur:

- Appearance of previously unidentified or anticipated chemical conditions or task hazards.
- Ambient weather conditions change which impact the use of assigned PPE.
- A new task is introduced or a previously assigned and evaluated task is expanded in scope.

If work tasks are added to the Scope of Work (SOW) after approval of this PSP, the Corporate Health and Safety Officer (CHSO) or PSM shall identify and assess the task hazards, complete and sign an AHA form and designate the level and type of PPE to be used during conduct of the task. The new AHA, along with any other additions, changes or modifications to the approved PSP shall be approved by the CHSO, PSM and/or the Project Manager.

Initially for all activities, personnel will be in Level D protection. This includes safety glasses, steel toe boots, long pants or jeans, short or long sleeve shirts, hard hat (required only during clearing activities or during drilling). Modified Level D protection will be worn on the barge during drilling and/or sampling activities. This includes the same as Level D with the addition of Tyvek coveralls or rain gear, overboots or steel toed rubber boots (if conditions are wet) or safety boots, safety glasses with side shields, hard hat, nitrile outer and latex inner gloves (required during all sampling activities), heavy duty work gloves for drillers and personal floatation device. Level C respiratory protection with organic vapor/P-100 will be carried by all work crews to be donned when air monitoring indicates the need for respiratory protection. Required equipment for Levels B, C, and D are detailed in Table C6.2.2, Description of Personal Protective Equipment and Levels of Protection.

The organic vapor monitor and mercury vapor analyzer will be the primary instruments for determining contaminant concentrations that may trigger a change in respiratory protection during intrusive and sampling activities. Action levels for changes in personal protection equipment are shown in Table C6.2.1. It should be noted that the action levels for specific sites may vary depending on the site-specific information.

In the event that personal protective equipment is ripped or torn, work shall stop and PPE shall be removed and replaced as soon as possible.

OSHA Requirements for Personal Protective Equipment:

All personal floatation devices (PFD) used during the course of this field investigation must be U.S. Coast Guard approved and available for every person aboard the vessel. All personal protective equipment must meet the following OSHA standards:

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133 29 CFR 1926.102	ANSI Z87.1-1968
Respiratory	29 CFR 1910.134 29 CFR 1926.103	ANSI Z88.1-1980
Head	29 CFR 1910.135 29 CFR 1926.100	ANSI Z89.1-1969
Foot	29 CFR 1910.13629 CFR 1926.96	ANSI Z41.1-1967

ANSI = American National Standards Institute

Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.1025; 29 CFR 1910.134).

Air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency;
- IDLH concentrations;
- High relative humidity; and,
- If contaminant levels exceed designated use concentrations.

C6.3 ACTIVITY HAZARDS ANALYSIS

Parsons and its subcontractors are required to conduct an activity hazards analysis for all aspects of the work. The activity hazards analyses consist of the following three steps:

- Identify the task and break it down into steps.
- Identify the hazards associated with each step.
- Identify the specific hazard control measure used for each step in accordance with the order-of-precedence method of control.

The U.S. Army Corps of Engineers website www.swl.usace.army.mil/safety/asaindex.html contains a library of sample AHAs that may be useful on projects. The Parsons PWeb should also be checked for AHAs. The Project Managers may use the following list as a guide in determining the investigation and remediation activity hazards analyses for various high-hazard operations and critical tasks.

- **Premobilization inspection**. Conduct an initial site inspection for prejob planning. The inspection should cover potential exposures such as the location of electrical lines, underground utilities, nearby structures, traffic conditions, site security needs, public exposures general liability, and other potential exposures.

- **Water, wastewater, and marine work**. Analyze work adjacent to, in, or over water (including lakes, canals, dams, treatment plants, water tanks, clarifiers, and reservoirs) for hazards.
- **Traffic controls**. Plan the traffic controls for delivery of equipment or materials as well as any equipment operations. Control measures include warning signs, flagmen, traffic stoppage and control, and unloading procedures.
- **Material storage**. Consider where materials and equipment will be stored on site. Implement measures to protect against chemical spills/releases, fire, vandalism and theft of tools, equipment, or materials. Also consider the hazards that may exist for workers when they are storing or retrieving those materials.
- **Material handling**. Consider the size and weight of loads, the equipment to be used, how the equipment is set up and protected, and safety and maintenance inspections of material handling and rigging equipment. Also consider to employee training in the use of the equipment or personal body mechanics when engaged in manual material handling activities.
- **Heavy equipment controls**. Evaluate the use of heavy equipment in operations such as site clearing, grading, drilling and excavation or lifting. Controls should include equipment alarms, use of qualified operators, pre-use inspections, and any specific OSHA regulatory requirements.
- **Personal protective equipment (PPE**). Consider operations where PPE is required and the type of PPE required (e.g. eye, head, foot, respiratory, hearing and hand protection, and types of special protective clothing – Tyvek and Nomex coveralls).
- **Portable hand and power tools**. Evaluate the tools to be used and the ways that workers are protected from the hazards associated with the use of tools. Consider tool maintenance requirements; electrical requirements; the use of ground fault circuit interrupters, grounding, extension cords, and tool inspection procedures; and employee training and PPE requirements.
- **On-site traffic**. Internal traffic control plans should include ways to restrict the number of vehicles on site, the flow of vehicles through the site, haul roads, speed controls, subcontractor employee parking areas, merging of site traffic with local vehicle traffic, pedestrian controls in traffic zones, access by emergency and rescue vehicles and operator controls.
- **Employee training**. Always review the safety training needs of employees. Training should include initial site safety orientations. Some operations (e.g., HAZWOPER activities, excavation, blasting, scaffold erection, tunneling, confined space, and operating heavy equipment and working in highly hazardous plant process operations) may require special training that must be checked and evaluated.

Exhibit C6.1 is a sample activity hazards analysis form. Exhibit C6.2 shows a training record to be completed and kept on file for each activity hazards analysis. Completed AHAs can be found in Attachment C.

C6.4 SAFETY SYSTEMS ANALYSIS

GBU Safety Managers use the safety systems analysis for field staff and subcontractors whose work requires that they be on site for over six months. The analysis provides management with a rating that reflects the safety and health program effectiveness. Attachment B1 to the SHARP Management manual provides the program, protocol, and methodology.

C6.5 SITE INSPECTION CHECKLIST AND DAILY SITE WALK

The site inspection is a protocol designed to identify and correct unsafe acts and conditions, as well as recognize safe work practices and accomplishments, in Parsons or subcontractors' scope of work. The Project Manager or PSM should develop standard safety checklists appropriate to the work being performed. Exhibit C6.3 is an example of a simple checklist to evaluate a project's status. The Project Manager shall develop a checklist based on questions from the audit programs in Attachment B of the SHARP Manual.

Inspections involve a daily or weekly site walk of a project site that focuses on safety. The Project Manager or FTL responsible for the work conducts inspections, accompanied by the PSM as necessary. Daily site walks do not have to be documented, but once a week the Project Manager prepares an inspection report using Exhibit C6.3 and forwards it to the PSM for maintaining in the project file. Items found to be out of compliance must be assigned to the responsible party for corrective action and the corrective action tracked to completion. Subcontractors shall be advised of noncompliance items using a Notice of Subcontractor Violation, included as Exhibit C6.4 and Exhibit C6.5.

C6.6 SAFETY AND HEALTH ENFORCEMENT

Parsons and its subcontractors enforce all applicable requirements of OSHA 1910 and 1926, where applicable. In addition, subcontractors must comply with and enforce Parsons' site requirements.

Parsons and its subcontractors have written progressive disciplinary systems available for review in the respective Human Resources departments.

C6.7 NOTICE OF VIOLATION OF SAFETY AND HEALTH REGULATIONS

The project has a formal notice of subcontractor violation of safety and health regulations program to ensure that violations are issued in an immediately dangerous to life and health (IDLH) situation or when the subcontractor repeatedly fails to comply with safety and health requirements.

The notice (Exhibit C6.4) documents poor performance and requires a response from subcontractor senior management. The notice contains five distinct levels of discipline, from submission of a recovery plan to contract termination.

C6.8 COMPETENT FIRST AID PERSON

The OSHA Regulations (29 CFR 1910.151 and 1926.50) state the employer shall ensure the ready availability of medical personnel for advice and consultation on matters of

occupational health. In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite (i.e., 4 minutes for activities that can be expected to result in an accident involving suffocation, severe bleeding, or other life threatening or permanently disabling injury or illness and 15 minutes for other types of injuries), which is available for the treatment of injured employees, a person who has a valid certificate in first-aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first aid. First-aid supplies must be accessible for immediate use and be of sufficient size and number to handle common first aid incidents.

The response time and distance to the nearest clinic, hospital or physician identified in Section C4.11.3 has been determined to be 10 minutes; however this may vary depending location of boat/barge on the lake. Based on the activities provided in the Scope of Work (Section C2.1) and the list of AHA included in Section C6.1.7, the project has the potential for an accident involving suffocation, severe bleeding, or other medical emergencies or permanently disabling injury or illness. Since the response time for Emergency Medical Services (EMS) based on the activities for this project is not reasonably accessible at all times, the project will require at least one individual at the work location to be performed (i.e, on the barge or sampling vessel) to have a valid certificate in CPR and first aid. The employee(s) listed below are assigned to the project, will be on site when work is being performed and will have a valid certificate in CPR and first aid.

- Tim Johnson, Syracuse Office
- Matt Biondolillo, Syracuse Office
- Tom Drachenberg, Syracuse Office
- Scott Dillman, Syracuse Office
- Caryn Kiehl-Simpson, Buffalo Office
- Jim Scheutz, Buffalo Office
- Mike Billi, Buffalo Office
- Mark Raybuck, Buffalo Office
- Sara Chmura, Buffalo Office

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e] (eV)	Physical Description/Health Effects/Symptoms
Acetone	750	750	2,500 (LEL)bb/	100	9.69	Description/Health Colorless liquid with mint-like odor. Irritates nose, eyes, and throat. Causes headaches, dizziness, central nervous system (CNS) depression, and dermatitis.
Aroclorâ-1248 (PCB, Chlorodiphenyl with 48% Chlorine)	0.5 mg/m3gg/ (skin)	0.5 mg/m3gg/ (skin)	5 mg/m3gg/	NA	NA	Irritates eyes and skin. Causes chloracne, liver damage, gastro-intestinal disturbances, and reproductive effects. In animals, causes leukemia and tumors of the pituitary gland and liver. Carcinogen.
Benzene	1 STEL= 5 (29 CFR 1910.1028) dd/	0.5 STEL= 2.5 (skin)	500	4.7	9.24	Colorless to light-yellow liquid (solid<42oF) with an aromatic odor. Eye, nose, skin, and respiratory system irritant. Causes giddiness, headaches, nausea, staggered gait, fatigue, anorexia, exhaustion, dermatitis, bone marrow depression, and leukemia. Mutagen, experimental teratogen, and carcinogen.
Cadmium Sulfide (as Cd)	0.005 mg/m3 z/	0.002 mg/m3	9 mg/m3	NA	NA	Light-yellow, orange, or red, cubic crystals. Causes vomiting, diarrhea, headaches, and muscle cramps. Mutagen and carcinogen.
Chlorobenzene	75	10	1,000	0.21-60	9.07	Colorless, liquid narcotic with an almond-like odor. Irritates eyes, nose, and skin. Causes drowsiness, incoordination, and CNS depression. In animals, causes lung and kidney injury. Mutagen and experimental teratogen.
Chromium (II) and (III) Compounds (as Cr)	0.5 mg/m3	0.5 mg/m3	250 mg/m3(II 25 mg/m3 (III)	NA	NA	Properties vary with compound. Irritates eyes and causes sensitization dermatitis.
Chromium (VI) [based on Chromic Acid (as CrO3) and Chromates]	0.1 mg/m3 (ceiling) r/	0.05 mg/m3	15 mg/m3	NA	NA	CrO3 occurs as dark red, odorless flakes or powder, often used in solutionas H2CrO4 which may burst a sealed container due to CO2 release. Properties vary with compound. Causes respiratory, and skinirritation. Causes nasal septum perforation, eye injury, conjunctivitis,skin ulcers, sensitization dermatitis, blood cell disorders, liver and kidney damage, and lung cancer. Mutagen and carcinogen.

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e/] (eV)	Physical Description/Health Effects/Symptoms
4,4'-DDT (Dichlorodiphenyl Trichloroethane)	1 mg/m3 (skin)	1 mg/m3	500 mg/m3	2.9 mg/m3	NA	Colorless crystals or off-white, powdered, organochlorine pesticide, odorless or with a slight aromatic odor. Irritates eyes and skin. Causes tingling of tongue, lips, face, and hands; tremors; apprehension; dizziness; confusion; vague discomfort; headache; fatigue; vomiting; convulsions; and partial paralysis of the hands. Also affects kidneys and liver. In animals causes liver, lymphatic, and lung tumors. Mutagen, teratogen, and carcinogen. Use Level B protection.
1,2-Dichlorobenzene (o-DCB)	50 (ceiling)	25	200	2.0-50	9.06	Colorless, to pale-yellow, liquid herbicide with a pleasant, aromatic odor. Irritates eyes, skin, nose, and mucous membranes. Causes liver and kidneydamage and skin blisters. Mutagen, experimental teratogen, and questionable carcinogen.
1,4-Dichlorobenzene (p-DCB)	75	10	150	15-30	8.98	Colorless or white, crystalline, solid insecticide with mothball-like odor. Irritates eyes, skin, and respiratory tract. Causes eye swelling, profuse runny nose, headaches, anorexia, nausea, vomiting, low-weight, jaundice, and cirrhosis. In animals, causes liver and kidney cancer. Mutagen, experimental teratogen, and carcinogen.
Ethylbenzene	100	100	800	0.25-200	8.76	Colorless liquid with an aromatic odor. Irritates eyes, skin, and mucous membranes. Causes dermatitis, headaches, narcosis, and coma. Mutagen and experimental teratogen.
Fluorine	0.2 mg/m³	1.6 mg/m³	25		15.7	Pale-yellow to greenish gas with a pungent, irritating odor. Absorbed through the body by inhalation or skin/eye exposure. Causes irritation to eyes, nose, respiratory system. Also cause laryngela spasm, wheezing; pulmonary edema; eye, skin, burns.
Hydrogen Sulfide	10	10	100	0.00001-0.8 k/	10.46	Colorless gas with strong odor of rotten eggs. Rapidly fatigues sense of smell. Irritates eyes and respiratory tract. Causes interrupted breathing, coma, convulsions, conjunctivitis, eye pain, tearing, visual intolerance to light, corneal vesicles, dizziness, headaches, fatigue, irritability, insomnia, and gastrointestinal disturbances.
Hexachlorobenzene		0.002 mg/m³				The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion. The substance may have effects on the liver and nervous system , resulting in impaired functions of organs and skin lesions. This substance is possibly carcinogenic to humans.

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e/] (eV)	Physical Description/Health Effects/Symptoms
Lead	0.05 mg/m3 (29 CFR 1910.1025) dd/	0.05 mg/m3	100 mg/m3	NA	NA	Heavy, ductile, bluish-gray, soft metal. Irritates eyes. Causes weakness, exhaustion, insomnia, facial pallor, anorexia, low-weight, malnutrition, constipation, abdominal pain, gastritis, colic, constipation, gingival lead line, anemia, wrist and ankle paralysis, joint pains, tremors, low blood pressure, and kidney disease. Mutagen, experimental teratogen, and suspected carcinogen.
Mercury (alkyl, organo)	0.01 mg/m3 (skin)	0.01 mg/m3 (skin)	2 mg/m3	NA	NA	Appearance and odor vary depending on the specific (organo) alkyl compound. Causes skin tingling, incoordination, joint dysfunction, visual and hearing disturbances, spasticity, jerking limbs, dizziness, salivation, tearing, nausea, vomiting, diarrhea, constipation, skin burns, emotional disturbances, kidney injury, and possible teratogenic effects.
Mercury (aryl, inorganic, and vapors)	0.1 mg/m3 (ceiling) (skin) 0.05 mg/m3 (vapor) (skin)	0.1 mg/m3 (skin) 0.025 mg/m3 (inorg) (skin)	10 mg/m3	NA	NA	Silver-white, heavy, odorless, liquid or tin-white ductile, malleable, soft, solid metal. Corrosive to skin, eyes, and mucous membranes. Causes dermatitis, coughing, chest pain, shortness of breath, bronchitis, lung inflammation, ringing in the ears, tremors, insomnia, irritability, indecision, headaches, fatigue, weakness, fever, salivation, inflammatory disease of the mouth, gastrointestinal disturbances, anorexia, low-weight, and protein in the urine. Mutagen, experimental teratogen, and questionable carcinogen.
Methanol (Methyl Alcohol)	200 (skin)	200 (skin) 250 (STEL)	6,000	100	10.84	Colorless liquid with characteristic, pungent odor. Irritates eyes, skin, and upper respiratory system. Causes shortness of breath, headaches, drowsiness, dizziness, vertigo, lightheadedness, nausea, vomiting, visual disturbances, tearing, blindness, and dermatitis. Mutagen, experimental teratogen, and carcinogen.
Naphthalene	10	10	250	0.3	8.1	Colorless to brown solid (shipped as a molten liquid) with a mothball-like odor. Irritates eyes, skin, and bladder. Causes headaches, confusion, excitement, convulsions, coma, vague discomfort, nausea, vomiting, abdominal pain, profuse sweating, jaundice, hematoma, hemoglobin in the urine, renal shutdown, dermatitis, optic nerve disorders, and corneal and liver damage. Experimental teratogen and questionable carcinogen.
Nickel (soluble) (insoluble or metal)	0.1 mg/m3 1 mg/m3	0.1 mg/m3 1 mg/m3	10 mg/m3 10 mg/m3	NA NA	NA NA	Lustrous, silvery, odorless, hard, malleable, ductile, metallic solid. Causes nausea, vomiting, diarrhea, conjunctivitis, sensitization dermatitis, allergic asthma, pneumonitis, and lung and nasal cancer. Mutagen, experimental teratogen, and carcinogen.

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e] (eV)	Physical Description/Health Effects/Symptoms
Phenol	5 (skin)	5 (skin)	250	0.05-5	8.50	Colorless to light-pink, crystalline solid with a burning taste and a sweet acrid odor. Irritates eyes, nose, and throat. Causes anorexia, low-weight, weakness, muscle aches and pain, dark urine, blue skin, skin burns, dermatitis, tremors, twitching, convulsions, and damage to the liver, kidneys, pancreas, spleen, and lungs. Ingestion can cause gangrene and corrosion of the lips, mouth, throat, esophagus, and stomach. Mutagen, experimental teratogen, and questionable carcinogen.
Toluene	100	50 (skin)	500	0.2-40 k/	8.82	Colorless liquid with sweet, pungent, benzene-like odor. Irritates eyes and nose. Causes fatigue, weakness, dizziness, headaches, hallucinations or distorted perceptions, confusion, euphoria, dilated pupils, nervousness, tearing, muscle fatigue, insomnia, skin tingling, dermatitis, bone marrow changes, and liver and kidney damage. Mutagen and experimental teratogen.
1,2,4-Trichlorobenzene	5 (ceiling)	5 (ceiling)	NA	NA	NA	Colorless liquid or crystalline solid (<63°F) with an aromatic odor. Irritates eyes, skin, and mucous membranes. In animals, causes liver and kidney damage and possible teratogenic effects. Experimental teratogen.
Xylene (o-, m-, and p-isomers)	100	100	900	0.05-200 k/	8.56 8.44 (p)	Colorless liquid with aromatic odor. P-isomer is a solid <56°F. Irritates eyes, skin, nose, and throat. Causes dizziness, drowsiness, staggered gait, incoordination, irritability, excitement, corneal irregularities, conjunctivitis, dermatitis, anorexia, nausea, vomiting, abdominal pain, and olfactory and pulmonary changes. Also targets blood, liver, and kidneys. Mutagen and experimental teratogen.
Zinc (based on zinc oxide)	5 mg/m3 v/ 5 mg/m3 o/ 10 mg/m3 hh/	5 mg/m3 v/ 10 mg/m3 hh/	500 mg/m3	NA	NA	Fine, white or yellowish, odorless particulate. Irritates respiratory system. Causes metallic taste, cough, chills, fever, tight chest, headaches, rales, blurred vision, muscle aches, nausea, vomiting, dry throat, weakness, lower back pain, exhaustion, fatigue, vague discomfort, shortness of breath, and decreased pulmonary function. Fumes cause metal fume fever. Mutagen and experimental teratogen.
Zinc Sulfide	NA	NA	NA	NA	NA	Colorless crystals or white to grayish-white or yellowish powder. Causes gastritis, vomiting, and diarrhea. May form hydrogen sulfide in the body.

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e/] (eV)	Physical Description/Health Effects/Symptoms

These footnotes pertain to a "master list" of chemical constituents from which the above table was derived. Some footnotes listed below do not correspond with information presented within this table; however, these footnotes have been kept to maintain consistency with the master list.

a/ PEL = Permissible Exposure Limit. OSHA-enforced average air concentration to which a worker may be exposed for an 8-hour workday without harm. Expressed as parts per million (ppm) unless noted otherwise. PELs are published in the NIOSH Pocket Guide to Chemical Hazards, 1997. Some states (such as California) may have more restrictive PELs. Check state regulations.

b/ TLV = Threshold Limit Value - Time-Weighted Average. Average air concentration (same definition as PEL, above) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH), 1999 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.

c/ IDLH = Immediately Dangerous to Life or Health. Air concentration at which an unprotected worker can escape without debilitating injury or health effects. Expressed as ppm unless noted otherwise. IDLH values are published in the NIOSH Pocket Guide to Chemical Hazards, 1997.

d/ When a range is given, use the highest concentration.

e/ Ionization Potential, measured in electron volts (eV), used to determine if field air monitoring equipment can detect substance. Values are published in the NIOSH Pocket Guide to Chemical Hazards, June 1997.

f/ mg/m3 = milligrams per cubic meter.

g/ Based on coal tar pitch volatiles.

h/ NA = Not available.

i/ Recommended values.

j/ (skin) = Refers to the potential contribution to the overall exposure by the cutaneous route.

k/ Olfactory fatigue has been reported for the compound and odor may not serve as an adequate warning property.

l/ mR/hr = mrem/hr = Milliroentgen equivalent in man per hour.

m/ (STEL) = Short Term Exposure Limit, a 15 minute time-weighted average that should not be exceeded at any time during the work day.

n/ f/cc = fibers per cubic centimeter.

o/ Respirable fraction.

p/ Total dust.

q/ As chlorine.

r/ (ceiling) = Ceiling concentration which should not be exceeded at any time.

s/ Based on exposure limits for petroleum distillates (petroleum naphtha).

t/ LD50 = Median lethal dose; mg/kg = milligrams per kilogram.

u/ Irritation threshold.

v/ Based on fume.

w/ Airborne exposure limit (AEL) developed by United States Department of the Army.

x/ Dulls senses.

y/ Strabismus is a visual disorder due to the turning of one or both eyes from the normal position.

z/ NIOSH recommends reducing exposure to the lowest feasible concentration, and limiting the number of workers exposed.

aa/ Based on selenium oxide.

bb/ Indicates that the IDLH value was based on 10% of the lower explosive limit for safety considerations, even though relevant toxicological data indicated that irreversible health effects or impairment of escape existed only at higher concentrations (NIOSH Pocket Guide to Chemical Hazards, 1997).

cc/ Based on dust.

dd/ Refer to expanded rules for this compound.

ee/ Soluble salts of aluminum.

TABLE 6.1 HEALTH HAZARD QUALITIES OF HAZARDOUS SUBSTANCES OF CONCERN

Compound	PEL [a/] (ppm)	TLV [b/] (ppm)	IDLH [c/] (ppm)	Odor Threshold [d/] (ppm)	Ionization Potential [e/] (eV)	Physical Description/Health Effects/Symptoms

ff/ Trona is also used to refer to sodium sulfate and boron tribromide.
gg/ Based on Aroclorâ-1254.
hh/ Total dust containing no asbestos and less than 1% crystalline silica.
ii/ Soluble salts.
jj/ Based on analogy to phenol.
kk/ Depends upon variety.
ll/ Based on 1,2,4-Trimethylbenzene.
mm/ Methemoglobinemia is the presence of a soluble brown crystalline blood pigment that differs from hemoglobin in containing ferric iron, and in being unable to combine reversibly with molecular oxygen (Webster's New Collegiate Dictionary, 1981).
nn/ Vapor.

Table C6.2.1
Action Levels for Changes in Respiratory Protection

Contaminant	PEL/TLB/ TWA	Monitoring Instrument	Action Level	PPE	Action Taken
Benzene	1.0 ppm	Draeger Tube	<0.5 ppm	Level D	None.
			0.5-5 ppm	Level C (qualitative fit test)	Take 3 consecutive readings. If confirmed, wear half or full facepiece respirator. Continue engineering controls to suppress benzene levels.
			5-25 ppm	Level C (quantitative fit test)	Stop work activities. Take 3 consecutive readings. If confirmed, wear full facepiece respirator.
Mercury	0.1 mg/m3	Jerome Meter	<0.05 mg/m3	Level D	None.
			0.05-0.5 mg/m3	Level C (qualitative fit test)	Take 3 consecutive readings. If confirmed, wear half or full facepiece respirator. Implement engineering controls to suppress mercury levels.
			0.5-2.5 mg/m3	Level C (quantitative fit test)	Take 3 consecutive readings. If confirmed, wear full facepiece respirator. Continue engineering controls to suppress mercury levels.
			>2.5 mg/m3	Level B	Stop work activities. Take 3 consecutive readings. If confirmed, donn supplied air respirator.
VOCs	n/a	PID	<1 ppm	Level D	None.
			1-5 ppm	Level D	Implement engineering controls to suppress vapor levels. Monitor for benzene with draeger tube.
			5-50 ppm	Level C (qualitative fit test)	Take 3 consecutive readings. If confirmed, wear half or full facepiece respirator. Continue engineering controls to suppress vapor levels.
			50 – 200 ppm	Level C (qualitative fit test)	Take 3 consecutive readings. If confirmed, wear full facepiece respirator. Continue engineering controls to suppress vapor levels.
			> 200 ppm		Stop work activities until engineering controls are implemented to suppress vapor levels.

Note: All readings that will be used to determine the appropriateness of an upgrade in PPE shall be taken in the worker's breathing zone. PID readings shall be sustained readings of 30 seconds or more. Jerome readings shall be 12 second sampling periods with the meter held in the worker's breathing zone.
Readings will be taken at the beginning of the day, changes in work activities and during all sampling activities. If readings exceed Level D, then stop work, leave the area or allow to ventilate. If actions levels are maintained then consult with the PSM on upgrading PPE appropriately.

Table C6.2.2
Description of Personal Protective Equipment and Levels of Protection

LEVEL D

Level D protection will be worn for initial entry on-site and for all activities unless otherwise noted by the SSO. Level D protection will consist of:

- Standard work clothes with long pants;
- Steel-toe safety boots
- Safety glasses (goggles must be worn when splash hazard is present)
- Hearing protection (when working around heavy equipment)
- Nitrile outer gloves and latex or nitrile inner gloves (sampling operations)
- Hard hat (when overhead hazard is present)

Modified Level D protection may include Level D protection and any of the following additional equipment if directed by the SSO:

- Tyvek coveralls (for sampling operations)
- Disposable boot coverings or rubber over boots
- Personal floatation device (activities near or around water and the potential for drowning exists)

LEVEL C

Level C protection, unless otherwise specified by the SSO, will consist of Level D equipment and the following additional equipment:

- Full-face air-purifying respirator
- Combination dust/organic vapor cartridges or
- MSA Mesorb® P-100 cartridges (or equivalent, for mercury) with colored expiration tab,
- Tyvek coveralls
- PVC or nitrile inner and nitrile outer gloves

LEVEL B

Level B protection will consist of the following equipment:

- Hard hat
- Positive Pressure self contained breathing apparatus (SCBA) or positive pressure air line and respirator with escape SCBA
- PE-Coated Tyvek coverall with hood
- Nitrile outer and latex or nitrile inner gloves
- Steel-toed Boots
- Nitrile boot covering

***OTHER MATERIALS MAY BE SPECIFIED TO PROVIDE BETTER PROTECTION WHEN WORKING WITH CERTAIN TYPES OF CHEMICALS**

Table C6.2.3
Decontamination Procedure

* Decontamination procedures can be modified by the SSO based on work activities and potential contamination.

STATION	NAME	DESCRIPTION
Station 1	Segregated Equipment Drop	Deposit equipment used on the site (tools, sampling devices and containers, monitoring instruments, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination.
Station 2	Suit, Safety Boots, and Outer Glove Wash	Thoroughly wash chemically resistant suit, safety boots and outer-gloves. Scrub with long-handle, soft-bristle scrub brush and copious amounts of Alconox/water solution. Necessary equipment includes: • Wash tub (30 gallon or large enough for person to stand in); • Alconox/water solution; and, • Long-handle soft-bristle scrub brushes.
Station 3	Suit, Safety Boots, and Outer Glove Rinse	Rinse off Alconox/water solution using copious amounts of water. Repeat as many times as necessary. Necessary equipment includes: • Wash tub (30 gallon or large enough for person to stand in); • Spray unit; • Water; and, • Long-handle, soft-bristle scrub brushes.
Station 4	Outer Gloves Removal	Remove the outer gloves and deposit in individually marked plastic bags. Necessary equipment includes: • Plastic bag
Station 5	Canister, Air Tank, or Mask Change	If a worker leaves the exclusion zone to change a canister, mask or air tank, this is the last step in the decontamination procedures. The worker's canisters or tank are exchanged, new outer glove donned, and joints taped. Worker returns to duty. Otherwise the worker proceeds to Station 6. Necessary equipment includes: • Canisters, air tanks, or mask; • Tape; and, • Gloves.
Station 6	Removal of Chemically Resistant Suit	With assistance of helper, remove suit. Deposit in container with plastic liner. Necessary equipment includes: • Container with plastic liner
Station 7	Inner-Glove Wash	Wash inner gloves with Alconox/water solution that will not harm skin. Repeat as many times as necessary. Necessary equipment includes: • Alconox/water solution; • Wash tub; and, • Long-handle, soft-bristle brushes.
Station 8	Inner-Glove Rinse	Rinse inner-gloves with water. Repeat as many times as necessary. Necessary equipment includes: • Water; and, • Wash tub.

Table C6.2.3 (Continued)
Decontamination Procedure

* Decontamination procedures can be modified by the SSO based on work activities and potential contamination.

STATION	NAME	DESCRIPTION
Station 9	Respirator Removal	Remove face-piece. Avoid touching face. Wash respirator in clean, sanitized solution, allow to dry and deposit face-piece in plastic bag. Store in clean area. Necessary equipment includes: • Plastic bags; • Sanitizing solution; and, • Cotton
Station 10	Inner-Glove Removal	Remove inner gloves and deposit in container with plastic liner. Necessary equipment includes: • Container with plastic liner
Station 11	Field Wash	Wash hands and face. Necessary equipment includes: • Water; • Soap; • Tables; • Wash basins or buckets; and, • Clean towels.
Station 12	Redress	If re-entering Exclusion Zone put on clean field clothes (e.g., Tyvek, gloves, etc.). Necessary equipment includes: • Table; and, • Clothing. The site safety officer (SSO) will monitor the decontamination system for effectiveness.

PARSONS

Exhibit C6.1 Activity Hazards Analysis

Page____ of _____

Project Name & Number:	AHA No.	Date:	New:
Location:	Contractor:		Revised:
Required Personal Protective Equipment		Analysis by:	Date:
	Superintendent/Competent Person	Reviewed by:	Date:
Work Operation:		Approved by:	Date:

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements

Training Requirements:

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Exhibit C6.2 Activity Hazards Analysis Training Record

JOB NUMBER_____

AHA NUMBER_____

JOB LOCATION_____

DATE:_____

NAME OF TRAINER:_____

SUBJECTS COVERED:_____

_____

_____

_____

TRAINING AIDS USED:_____

_____

_____

ATTENDEES (PLEASE SIGN NAME LEGIBLY):

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(Use additional sheets if necessary)

Parsons
Exhibit C6.3 Site Safety and Health Inspection Checklist

Project: _____ Date: _____
Name: _____ Time: _____

Any items that have been found deficient must be corrected before work or use.
This checklist includes, but is not limited to, the following:

		Yes	No
Safe Access and Workspace			
Are safe access and adequate space for movement available for:			
Emergencies			
Work area			
Walkways and passageways			
Are ladders, stairways, and elevators properly located and functioning?			
Is protection provided for floor and roof openings?			
Is overhead protection provided for all areas of exposure?			
Is lighting adequate?			
Planning Work for Safety			
Are employees provided with all required protective equipment?			
Have other contractors and trades been coordinated with to prevent congestion and avoid hazards?			
Is all temporary flooring, safety nets, and scaffolding provided where required?			
Utilities and Services Identification			
High voltage lines			
Have all been identified by signs?			
Have high voltage lines been moved or de-energized, or barriers erected to prevent employee contact?			
Sanitary Facilities			
Drinking water			
Are toilet facilities adequate?			
Work Procedures – Materials Handling			
Is material handling space adequate?			
Is material handling equipment adequate and proper?			
Is material handling equipment in good condition?			
Marine Safety			
Slip, trip, fall hazards	Muscle strain from improper lifting		
Heat or cold stress	Pinch points		
Insect bites	Inhaling, touching, ingesting contaminants		
Waves, surges, currents	Drowning		
Noise exposure			
Other (e.g., tunnels, excavations, shafts)			

Comments:

PARSONS

Exhibit C6.4 Notice of Subcontractor Violation of Safety and Health Regulations

Date: _____

Contractor Name: _____
Address: _____

_____

_____

Attention: _____

This letter officially notifies you that you have been found to be in violation of the following Safety Regulations:

_____

on (date) _____, by _____.

Confined Space Entry	___	Lockout/Tagout	___	Hot Work	___	Personal Protective Equipment	___
Knowledge of the environment	___	Awareness of warning alarms	___	Evacuation routes	___	Back-up Alarms	___
Assembly locations	___	Fall Protection	___	Scaffolding	___	Environmental/Hazardous Material Storage	___
Safe Work Practices	___	Security Practices	___		___		___

Other: _____

_____

_____

This/These violations occurred at the following locations: _____

_____

at the following times _____ and dates _____

The name of the employees was/were _____

under the supervision of _____.

PARSONS

Exhibit C6.5 Notice of Noncompliance with Safety and Health Regulations

Under conditions of this enforcement procedure check all items that apply:

_____ 1. You are being notified of this violation and should take corrective action to prevent a reoccurrence. The corrective action shall be documented to the Parsons Construction Management representative immediately.

_____ 2. You must submit a plan for compliance to your Parsons Construction Management representative and the Construction Safety Manager within two days of receipt of this letter. The compliance plan must include the means or methods of compliance and the date that the requirements for compliance will be completed. Once compliance has been achieved, a follow up letter must be sent to the Parsons Construction Management representative and Construction Safety Manager. Failure to comply will result in disciplinary action against your Company.

_____ 3. You are required to review the stated procedures with your Parsons Construction Management representative. Work may not commence on the site until the review is complete and the Subcontractor responds formally that the procedure is understood and will comply.

_____ 4. You are required to review the stated procedures with your Parsons Construction Management representative. Work may not commence on the site until the review is complete and you must confirm formally the disciplinary action to be taken against the supervisor and employees.

_____ 5. All work on the site will stop until the Parsons Construction Management representative reviews all the facts with the Subcontractor and determines if the contract between the parties will be terminated.

Sincerely,

_____
Parsons Representative

cc: Issuing Construction Manager Representative
Job File
GBU Safety Manager
Project Manager

SECTION C7

SAFETY TRAINING

C7.1 PROJECT SAFETY ORIENTATION

The Parsons Project Manager, PSM, FTL, or SSO conducts the site-specific orientation for all new Parsons' staff and subcontractor management personnel. The Orientation takes approximately 1-2 hours to complete and consists of applicable Honeywell, Parsons, and regulatory reference material, including:

- Honeywell - Honeywell Contractor Safety Regulations Handbook (Attachment B)
- Applicable OSHA 1910 General Industry and 1926 Construction Regulations and others as required
- Parsons applicable requirements, including items covered in Section C4.2
- Subcontractor requirements

All visitors must receive a brief orientation as described in Section C4.2, and be escorted by the Project Manager, PSM, FTL, SSO or a designee familiar with the potential hazards on the project.

Subcontractors must conduct similar orientations for their staff and craft employees and must document all orientations using the Employee/Subcontractor Training Acknowledgement and sample form (Exhibit C7.1). The Project Manager maintains the orientation documents and acknowledgement forms.

C7.2 PARSONSU SAFETY MODULES AND START TRAINING – ZERO INCIDENT TECHNIQUES

Consistent with Parsons corporate initiatives in safety training, the Project Manager will identify all applicable personnel (i.e., managers, engineers and supervisors, including subcontractor personnel), that shall be current in the completion of safety modules on ParsonsU and that should receive START training to further Parsons' goal of zero incidents.

The GBU and Division Safety Manager serve as the certified trainers for periodic START training sessions for new personnel. They should be contacted if personnel need to receive training.

C7.3 DAILY HUDDLE AND SAFETY PLANNER

Project Managers, FTLs and Supervisors in the field may conduct daily safety huddles with craft employees to review each day's work and to remind employees of the safe work procedures established for the day's tasks. Safety huddles are informal and brief, usually 5 minutes long, and all workers must participate. Supervisors should always ask whether any workers have questions before they are released for work.

Daily Safety Planners like the one shown in Exhibit C7.2 enable supervisors and employees to formally document safety huddle participation as well as the day's activities, associated risks,

and relevant control measures. Supervisors can distribute planners during safety huddles for employees to complete. Planners engage employees and improve the effectiveness of the safety huddle meeting.

If field supervisors choose to use daily safety planners, employees must carry the planner completed for each day and show it to any manager on a project for signature. This review becomes an audit of field supervisors and can be the basis of an incentive program, with signed cards being eligible for weekly prizes.

C7.4 DAILY TOOLBOX SAFETY MEETINGS

Parsons and its subcontractors conduct daily toolbox safety meetings at the beginning of each day. These meetings include topics relevant to upcoming work and may include reviews of recent incidents on the project. The Project Manager or the FTL is responsible for the toolbox safety training content and documenting and retaining attendance records using Exhibit C7.3.

C7.5 ACTIVITY HAZARDS ANALYSIS TRAINING

When the activity hazards analysis is complete, the Parsons Project Manager, FTL, SSO or subcontractor conducts a training session with all employees involved with the analyzed task. The training may be informal and at the site where the task is performed. Employees should be given an opportunity to provide input regarding task steps, hazards identified, and appropriate control measures.

The Project Manager documents and maintains the activity hazards analyses using Exhibit C6.2.

C7.6 REGULATORY TRAINING PROGRAMS

OSHA regulations require specific training in certain circumstances. Based on the scope of work and meetings with regulatory officials, the following training topics are provided on the project:

- General – all workers engaged in activities which are potentially exposed to hazardous substances and health hazards must be trained to meet 1910.120(e)(1). Annual 8-hour refresher training as per 29 CFR 1910.120(e)(3) is required for workers and supervisors must be trained to meet 29 CFR 1910.120(e)(4).
- CPR/AED/First aid – provided to personnel based on project activities identified in the Scope of Work (i.e. life threatening) and EMS response time (i.e., more than 15 minutes). See Section C6.9.
- Emergency response – only applicable to workers engaged in emergency response as per 29 CFR 1910.120(q).
- Respiratory protection – must meet 29 CFR 1910.134. Medical qualification by a physician is required to wear a respirator. Annual fit testing and training is also required.
- **Others to be added as needed or determined**

The Project Manager determines the necessary training and coordinates the training with the PSM.

OSHA OUTREACH PROGRAMS

- *NOT APPLICABLE FOR CURRENT PHASE OF WORK*

C7.8 SPECIALIZED TRAINING AND ORIENTATIONS

Project personnel receive specialized training on client rules and requirements as well as the unique tools, equipment, and procedures used to perform the work. The project budget includes funding for the following training:

Description	Attendees	Schedule
General rules and safety requirements	All workers assigned to the site	Half-hour training session, provided to new employee on the first day of work at the site.
Honeywell Contractor Safety Handbook	All workers assigned to the site	Handbook should be provided for review during site orientation training.

PARSONS

Exhibit C7.1 Initial Subcontractor Employee Training Acknowledgment

Name of Trainer: _____

Training Subject: _____

Training materials used: _____

Name of employee: _____

Date of hire/assignment: _____

I, _____, hereby certify that I have received training as described above in the following areas:

- The potential occupational hazards in general in the work area and associated with my job assignment.
- General safety requirements indicate the safe work conditions, safe work practices and personal protective equipment required for my work.
- The hazards of any chemicals to which I may be exposed and my right to information contained on material safety data sheets for those chemicals, and how to understand this information.
- My right to ask questions, or provide any information to the employer on safety either directly or anonymously without any fear of reprisal.
- Disciplinary procedures the employer will use to enforce compliance with general safety requirements.

I understand this training and agree to comply with general safety requirements for my work area.

_____ _____

Employee Signature Date

Exhibit C7.2 – Daily Safety Planner

Employee Planning Checklist

Complete the checklist for each new work operation. Check the "YES" box for those items needed to safely perform your work. All boxes marked "YES" should be properly addressed before the work operation begins.

Employee Daily Work Area Assessment

All conditions must be satisfied in order to start or continue working. Formally check your work area at least four times a day and at the start of each new work operation. Report all problems to your supervisor

Supervisor's Safety & Health Audit

Times: ____ ____ ____ ____ ____ ____

Initials: ____ ____ ____ ____ ____ ____

Safety and Health Suggestions

_____

_____

_____

_____

_____

_____

Immediately report all accidents, injuries, fires, hazardous material spills and near miss incidents, no matter how slight, to your supervisor.

Personal Safety & Health Planner for Your Daily Safety Huddle

Employee Name: _____

Date: _____

Employee Number: _____

Craft: _____

Supervisor: _____

Location of Work: _____

Work Description: _____

Employee Preplanning Checklist

Yes	N/A	Personal Protective Equipment
☐	☐	Hard Hat/Safety Glasses
☐	☐	Face Shield
☐	☐	Goggles – Cutting, Chemical, Dust
☐	☐	Hearing Protection _____
☐	☐	Respirator – Type _____
☐	☐	Gloves – Type _____
☐	☐	Clothing – Type _____
☐	☐	Foot Protection _____
☐	☐	Other _____

Yes	N/A	Special Equipment:
☐	☐	Harness/Double Lanyards/Decelerator Device
☐	☐	Life Line – Horizontal, Vertical, Retractable
☐	☐	Air Monitor
☐	☐	Tripod/Rescue Devices
☐	☐	Barricades/Flagging
☐	☐	Fire Extinguishers
☐	☐	Signs
☐	☐	Electrical Insulating Materials, Blankets, Tools, Gloves
☐	☐	Chemical/Oil Spill Kits
☐	☐	Communication Devices – Radios, Horns
☐	☐	Other _____

Yes	N/A	Work Permits:
☐	☐	Activity Hazards Analysis
☐	☐	Trench and Excavation Notice
☐	☐	Confined Space Permit
☐	☐	Welding and Cutting Permit
☐	☐	Crane and Hoist Lift Plan
☐	☐	Crane Suspended Work Platform
☐	☐	Other _____

		Tagging Procedure:
☐	☐	Scaffolding
☐	☐	Lockout/Tagout
☐	☐	Other _____

Employee Daily Work Area Assessment

Times: ____ ____ ____ ____

Initials: ____ ____ ____ ____

A means of safe access and egress is provided to my work area.	☐ ☐ ☐ ☐
My work area is clean and organized	☐ ☐ ☐ ☐
I have the tools and equipment necessary to perform my work.	☐ ☐ ☐ ☐
My work area has adequate lighting.	☐ ☐ ☐ ☐
I know how to, and have the means available, to summon emergency assistance.	☐ ☐ ☐ ☐
I have a copy of or have been trained on the MSDS for the hazardous material I am working with.	☐ ☐ ☐ ☐
The equipment I am working on, or working in, has been properly tagged out/locked out, cleaned, vented, and drained, as well as stored energy released as required.	☐ ☐ ☐ ☐
My work operation is properly controlled so that other workers will not be adversely affected by dust, fumes, sparks, slag, welding flash, floor holes, fall hazards, falling objects, overhead loads, slippery surfaces, etc.	☐ ☐ ☐ ☐
I have performed an act of safety.	☐ ☐ ☐ ☐
I have the necessary training to safely perform my work	☐ ☐ ☐ ☐

Exhibit C7.3 Safety Meeting Sign-in Sheet

Safety Meeting Presenter: _____ Date: _____

Current Weather Conditions:
Temperature (^{o}F) = _____ Wind Direction = _____ Wind Speed = _____

Clear - Sunny – Cloudy – Rain - Snow Forecast = _____

Current Site Conditions (circle as appropriate):
Dry - Wet - Muddy - Frozen - Snow Covered - Other (describe) _____

1. Incidents or Injuries to report from Previous Day Activities: No □ Yes □ - explain below:

_____

2. Safe and/or At-Risk Observations from Previous Day Activities: _____

_____

_____

3. Activities Taking Place Today: _____

_____

_____

3. Anticipated Hazards: _____

_____

_____

4. Engineering Controls-Work Practices-PPE to Protect Against Hazards: _____

_____

_____

5. Additional Safety Topic or Comments: _____

_____

Exhibit C7.3 Safety Meeting Sign-in Sheet

PRINTED NAME	SIGNATURE	COMPANY	LAST 4 DIGITS OF SS #

SECTION C8

RECORD KEEPING AND POSTING

Parsons and its subcontractors must comply with the recordkeeping requirements of OSHA, Honeywell, Parsons Corporation, and this safety program, including:

- OSHA 300 logs
- Medical treatment and follow-up
- Cranes
- Heavy equipment inspection logs
- Fall protection
- Training
- Inspections
- Audits
- Others as required

The Project Manager is the official record keeper for files relating to Parsons' employees. Each subcontractor will provide copies of HAZWOPER training and certification, first aid and CPR certification to the FTL or SSO.

The project displays OSHA posters in conspicuous places as required by OSHA, including one poster on the main bulletin board located in the hallway outside of Conference Room C. Another OSHA poster will be placed in the site trailer. The OSHA 300 log for the project or the GBU shall be posted from February 1 – April 30 of each calendar year.

SECTION C9

SAFETY AND HEALTH REQUIREMENTS

C9.1 SAFETY AND HEALTH REQUIREMENTS

Table C9-1 represents OSHA, owner, and Parsons corporate regulations and requirements applicable to the project. Based on the most recent risk assessments, Parsons Project Manager and PSM update the listed topics periodically. Training and other requirements are updated in this PSP as required by changes to Exhibit C9.1.

Parsons and its subcontractors are individually responsible for training their respective employees and for complying with all project requirements. Failure to comply could lead to disciplinary actions against Parsons' employees and subcontractors or their employees.

Exhibit C9.1 Competent Person and Activity Hazards Analysis Requirements

Safety and Health Requirement	OSHA Regulation	Competent Qualified Person-Supv	Training Required	Written Plan and AHA Required
General Safety & Health	1926.20	Yes	Yes	Yes
Safety Training	1926.21	Yes	Yes	Yes
First Aid and Medical	1926.23, 50	Yes	Yes	Yes
Fire Protection and Prevention	1926.24, 150-155, 352	Yes	Yes	Yes
Personal Protective Equipment	1926.28, 95-98, 100-107	Yes	Yes	Yes
Acceptable Certifications	1926.29	Yes	Yes	Yes
Emergency Employee Action Plans	1926.35	Recommended	Yes	Yes
Noise Exposure	1910.95; 1926.52	Yes	Yes	Yes
Gases, Vapors, Dusts and Mists	1926.1926.55	Yes	Yes	Yes
Ventilation	1926.57, 353	Recommended	Yes	Yes
Hazard Communication	1926.59	Yes	Yes	Yes
Hazardous Waste Operations and Emergency Response	1910.120; 1926.65	Yes Supv – 8 hr	Yes	Yes
Accident Prevention Signs and Tags	1926.200	N/A	N/A	N/A
Waste Disposal	1926.252	Yes	Yes	Yes
Tools	1926.300-307	N/A	N/A	Yes
Electrical	1926.400-415	Yes	Yes	Yes
General Electrical	1926.416	Yes	Yes	Yes
Batteries/Battery Charging Equipment	1926.441	N/A	Yes	Yes
Motor Vehicles, Mechanized Equipment	1926.600-603	Yes	Yes	Yes
Site Clearing	1926.604	N/A	Yes	Yes
Marine Operations and Equipment	1926.606	Yes	Yes	Yes
Diving Scope	1926.1071-1072	Yes	Yes	Yes
Dive Team Quals	1926.1076	Yes	Yes	Yes
Dive Safe Practices Manual	1926.1080	Yes	Yes	Yes
Pre-dive Procedures	1926.1081	Yes	Yes	Yes

Safety and Health Requirement	OSHA Regulation	Competent Qualified Person-Supv	Training Required	Written Plan and AHA Required
Procedures During Dive	1926.1082	Yes	Yes	Yes
Post Dive Procedures	1926.1083	Yes	Yes	Yes
SCUBA Diving	1926.1084	Yes	Yes	Yes
Diving Equipment	1926.1090	Yes	Yes	Yes
Diving Recordkeeping Requirements	1926.1092	Yes	Yes	Yes
Internal Traffic Control	N/A	N/A	Yes	Yes

ATTACHMENT A

PARSONS REQUIREMENTS

- Parsons Online Reporting Instructions
- Parsons Incident/Accident Report Form
- Parsons Near Miss Report Form
- Parsons Wallet Card-Incident Reporting Guidelines
- Parsons Monthly Field/Project Reporting Form & Supplemental Information Form

On-Line Safety Reporting System

Policy Requirements

- Initial incident reports for all incidents, including near misses, shall be reported within 2 hours.
- Detail incident reports are required within 24 hours.
- Reporting is done via on-line (PWeb) incident report form.
- Injuries with Days Away from Work - immediate supervisor and PM must teleconference with GBU President within 4 hours.
- Projects enter hours via on-line form by FIRST Friday of new period.

Reporting Incidents

Corporate policy requires that all employees report safety incidents to their supervisor immediately. Supervisors must report all incidents to the appropriate Project Manager (Department Manager if the incident is not related to a project), who must officially report the incident to the GBU within four hours. This official reporting is done via the PWeb, unless PWeb is unavailable, in which case the incident can be reported by email, fax or telephone.

"Incidents" include work related injuries, work related illness, accidents with property damage only and near misses. "Near misses" are any unplanned event that had the potential to (but did not) result in injury or property damage.

Incident reports should reflect the best available information at the time. Where exact information is not known (recordability, days away from work, etc.) the PM's best judgment should be used when completing the initial incident report. This information can be subsequently revised when the detail incident report is submitted.

When in doubt, submit an initial report or contact the GBU Safety Manager.

On-line Reporting System

The on-line reporting system can be found on the PI&T Safety Page on PWeb. To locate the system, follow these steps:

1. From the Corporate PWeb Homepage, select PI&T from the Org Units menu
2. Locate and select "Safety" from the list of pages in the right hand column
3. Select the "Incident Reporting Form" link

To create and submit a new incident report, select the orange "Add" button from the main page of the reporting system. To update and existing incident report or complete the Detail Incident page, locate and select the appropriate incident from the list.

Creating or Updating Incidents

The Initial Incident page of the report must be completed within four hours of the incident occurring. This page includes basic information needed for the first notification to our insurance carriers. If possible, all of the fields should be completed in the initial report. A list is provided at the end of this document describing all fields contained on the initial incident page.

Incident Detail Reports

Within 24 hours of the incident occurring, the Incident Detail page of the on-line report must be completed. This page includes detailed information about the injured party, the nature and extent of injuries, medical treatment provided, corrective actions taken, and witness statements. In the event of property damage, this page also includes descriptive information on the property owner. Finally, the page includes a section to include electronic attachments. These might include photographs, signed witness statements, etc.

Monthly Reporting of Hours

Hours must be entered into the on-line reporting system no later than the first Friday of the new period. If an accurate accounting of hours is not available, estimated hours are submitted into the system. The estimated hours can be revised later in the month, or the following month, when accurate data is available.

From the "Hours" page, select the GBU and the period (month and year) that is being reported. The system only allows hours to be entered for the period selected. MTD and PTD figures are calculated totals based on the sum of all monthly entries. To enter or correct a prior period entry, simply select that month from the drop-down box and correct the figures for that month.

Be sure to select the correct month and year when entering hours.

Hours must be entered for each (as applicable) of six different labor categories. The categories are as follows:

- Contractor (Field/Craft)
- Contractor (Office/Admin)
- JV Partner (Field/Craft)
- JV Partner (Office/Admin)
- Parsons Employee (Field/Craft)
- Parsons Employee (Office/Admin)

Monthly Statistics Summary Reports

The on-line reporting system automatically calculates incident rates based on incidents and hours entered into the system. To view the statistics, select the "Reports" page from the on-line system. Select "Parsons Safety Statistics Summary", the appropriate GBU, and the appropriate period. (NOTE: The system does not yet provide reports at the Division and Sector level. That enhancement is pending.) Use the checkboxes to select the labor categories desired.

Contact Rick McAlpin or Jim Owen for Assistance

Initial Incident Report Fields

1. GBU – Select the GBU from the drop down box. Incidents are reported primarily by project, and the GBU should reflect the unit responsible for the project. This may be different from the GBU that employees the person injured.
2. Field Project Name, Office Location or Other – If the applicable project is listed in the "Field Project" list, select from that box. If not, and if the incident occurred in a Parsons corporate office, select the office from the drop box. Otherwise, type in the name of the responsible organizational unit in the "Other" field. The GBU must be selected BEFORE attempting to select a Project/Office. Do NOT select both a field project AND an Office Location (or Other). If the appropriate Project or Office name can not be found, manually enter it into the "Other" field.
3. Job and WBS Numbers – These fields should reflect the charge number responsible for the incident. In general, that will be the number that the employee was charging at the time of the incident. Projects are responsible for visitors, regardless of what charge number they use while visiting the job. For example, if the Division Manager is injured while visiting Project X, the project number is entered, not the division overhead account.
4. Near Miss – Check this box if the report is for a near miss only (no injury or property damage occurred).
5. Emergency Response Notified – Check this box if fire, police or ambulance was called as a result of the incident.
6. Three or More Employees Hospitalized – Check this box if three or more employees were injured as the result of a single incident. In this case, the GBU or Corporate Safety Manager must also be immediately notified by telephone.
7. Extent of Injury – Select the appropriate radio button. First aid cases are as defined by OSHA 1904 criteria. All other injuries are considered recordable.
8. Restricted Duty (# of days) – If the injured person was limited (by a physician) to less than normal work duration or duties, enter the number of days. Estimate the days if unknown, and correct the number later. NOTE: this is the number of CALENDAR days (not scheduled work days), and it does NOT include the day of the injury.
9. Days Away From Work (# of days) – If the injured person was ordered by a physician not to return to work, enter the number of days missed. Estimate the days if unknown, and correct the number later. NOTE: this is the number of CALENDAR days (not scheduled work days), and it does NOT include the day of the injury. Injuries with Days Away From Work require a phone call to the GBU President within 4 hours.
10. Fatality (Date of Death) – In the event of a work related fatality, enter the date of death here. NOTE: Fatalities require immediate phone notification of the Division Manager, GBU President, GBU Safety Manager, and Corporate Safety Manager.
11. Property Damage – Check the appropriate boxes if applicable.
12. Place – Describe the exact location that incident occurred. For example, "in the north stairwell of building 21, between the second and third floor."
13. Date – This field reflects the date the incident occurred, not necessarily the date it was reported. If the exact date is not known, an estimate should be used.
14. Time – This field reflects the time of day that the incident occurred. If the exact time is not known, an estimate should be used.

15. Incident Description – Provide a detailed description of the incident. This is a memo field and text will scroll down the window as it is entered. Use as much space as needed to accurately describe the incident and the resulting injuries.
16. Reported by – This field defaults to the employee login ID that was used to access PWeb. However, the field can be over-written if needed.
17. Name – First and last name of the injured party.
18. Status – Select the most appropriate category from the drop box (Employee - Field, Subcontractor - Field, Partner - Field, Employee - Office, Subcontractor - Office, Partner - Office or 3rd Party).
19. Trade/Function – Select the most appropriate category from the drop box.

Parsons Project Incident/Accident Report Form

PLEASE PRINT

Attach all supplemental documentation, including photos, diagrams, witness statements and field reports

Project Information	Project Title		Location	
	Subcontractor			
	Address			
	City, State, Zip			
	Contact Name		Phone Number	

Incident Type	☐ **Worker's Compensation**	☐ **General Liability**	☐ **Builder's Risk**
	☐ Emergency Response Notified (Police, Fire, Medic, etc.)	☐ Bodily Injury/Illness	☐ Equipment
		☐ Real Property Damage	☐ Supplies
	☐ First-Aid Only	☐ Personal Property Damage	☐ Machinery
	☐ Recordable Injury	☐ Utility Property Damage	☐ Work

Incident Location	Date of Loss		Time of Loss	
	Place (exact location)			

Incident Description	Detailed Description of Accident

Worker's Comp Or Personal Injury (circle one)	Injured Name			
	Address			
	City, State, Zip			
	Home Phone		Date of Birth	
	Nature of Injury			
	Medical Facility		Work Status	
	Treatment Received			

Property Damage Or Builder's Risk (circle one)	Owner's Name			
	Address			
	City, State, Zip			
	Home Phone		Work Phone	
	Damage Type		Estimated Cost	
	Utility Type		Marked or Unmarked	
	Description of Damage			

Witness Information	Name			
	Address			
	City, State, Zip			
	Home Phone		Work Phone	
	Where to contact		Time to contact	

Contractor Subcontractor Action	Describe actions taken

Signature _____ Employer _____

Print Name _____ Date _____

Phone No. _____ Fax Number _____

PARSONS	NEAR MISS REPORT FORM

EMPLOYER

1. Name: _____
2. Mail Address: _____
   (No. and Street) (City or Town) (State and Zip)
3. Location :_____
   (if different from mail address)

NEAR MISS DESCRIPTION

4. Location of near miss:_____
   (No. and Street) (City or Town) (State and Zip)
5. Project: _____
6. Was place of near miss on employer's premises? Yes ( ) No ( )
7. Time of near miss: _____
8. Date of near miss: _____
9. How did the near miss occur? _____
   (Describe fully the events that resulted in the near miss.)

   Tell what happened and how. Name objects and substances involved. Give details on all factors that led to near miss. Use separate sheet for additional space).
10. What was employee doing when near miss occurred?_____
    (be specific-was employee using tools or equipment or handling material?)

WITNESS TO MISS

_____ _____ _____
(Name) (Affiliation) (Phone No.)

_____ _____ _____
(Name) (Affiliation) (Phone No.)

RECOMMENDATIONS TO PREVENT NEAR MISS FROM RECURRING

_____

_____

_____

Parsons Wallet Card-Incident Reporting Guidelines

PARSONS - PARCOMM®

Procedures following a Parsons/Subcontractor Incident

Incident Definition: any unexpected or unplanned event involving the above. This includes near-misses, personal injuries, property damage or environmental releases. NOTE: Personal injuries involving medical treatment and incidents resulting in more than $1K shall be verbally reported and submitted on the PWeb within four (4) hours.

Within four (4) hours, verbally notify the following:

- Program Manager, Project Manager and Safety Manager

Within 72 hrs of an incident (except as noted otherwise):

- Enter incident information on the PWeb (PARCOMM Home Page) using the Online Safety Reporting System.
- Complete an incident investigation report to determine root causes and corrective actions to prevent recurrence. 04/05

PARSONS - PARCOMM®

Additional Instructions and Phone Numbers

If the incident is known or believed to be life threatening, immediately notify the following by telephone/in-person:

- President - Chuck Harrington: (704) 905-4363
- Division Manager – Mike Walsh: (704) 307-6924
- Safety Director – Brad Barber: (704) 231-4532
- Human Resources – Andy Berger: (803) 493-1800

Within 24 hours, report all near-misses, first aid cases and other incidents resulting in less than $1K to:

- Safety Manager – Greg Beck: (908) 887-1973

PARSONS Emergency Contact Numbers:

- US/Canada: (866) 727-1411; International: (775) 326-4594

PARSONS **PARCOMM®**

Field/Project Monthly Report Form

Instructions: Enter the total number of labor hours spent in the field by all Parsons employees and subcontractors during the reporting period. Cost Type (CT) "04" used for WebTime labor entries should represent these hours for Parsons employees. Labor hours spent in the office are classified as CT "01" in WebTime. Incidents/near-miss incidents, air monitoring completed and the type of PPE worn by personnel (i.e. Parsons employees and contractors) must also be reported. Submit by the 3rd working day of the following month (an estimation of the monthly field hours based on number of people working on the project each day is acceptable).

Definitions and Reporting Criteria

Field Hours - **time spent by the employee outside his/her home office working at a job site or traveling to/returning from either the job site or a client's office. Working in another Parsons office or at a client's office is not considered field hours for the purposes of this reporting.**

Incident - **any unplanned or unexpected event. This includes near-misses, first aid cases, personal injuries requiring medical treatment, property damage or environmental release.**

Near-miss Incident (NI) - **an unplanned or unexpected event that has the potential for personal injury, property damage or environmental release, but does not occur or almost happened.**

PPE - **Personal Protective Equipment above Level D (work clothes) or Modified Level D (coveralls e.g. Tyvek). This includes Level C (chemical resistant suit and/or air-purifying respirator), Level B (chemical resistant suit and/or supplied air) or Level A (full encapsulation suit with SCBA).**

Subcontractor - contractors hired by Parsons or their subcontractor, to perform activities in the field. Contractor company names should be listed and tracked separately in the Table below, followed by the hiring company in parentheses (i.e. Parsons or subcontractor).

Project Name:		Client:			
Project Location:		Client Contact:			
Parsons Contact:		Project #:		Month:	

Parsons and/or Contractor	Hours	Type of Activities	Incident or NI
Parsons			Yes No
			Yes No
			Yes No
			Yes No

Air Monitoring

Was there any air monitoring that took place during the month? No Yes - If "Yes", indicate below the potential hazards/chemicals monitored (i.e. O2, LEL, dust, VOCs), the monitoring equipment used (i.e. PID, FID, Draeger tubes, 4-gas, DataRAM, cassettes), whether the air monitoring results exceeded an Action Level (AL) or Permissible Exposure Limit (PEL), the level of PPE worn above Level D (C, B or A) and the number of days working in the specific PPE.

Chemical Monitored	Equipment Used	Exceed AL– Exceed PEL	PPE	Days in PPE
		Yes No - Yes		
		Yes No - Yes		
		Yes No - Yes		
		Yes No - Yes		

NOTE: If an AL/PEL is exceeded or PPE above Level D is worn, a Supplemental Information Form (available in the Industrial Division Safety Folder on LiveLink) must be completed. All incidents must be reported on the PWeb (PARCOMM Online Safety Reporting System).

PARSONS PARCOMM®

MONTHLY FIELD/PROJECT REPORT – SUPPLEMENTAL INFORMATION

Employee Name: **Job Title:** **Facility:**

Chemical Exposure Records

Date	Project Name	Chemical Involved	Exposure Duration	Chemical Concentration

Personal Protective Equipment (PPE) Records

Date	Project Name	Level of PPE (A, B or C)	Length of Use (hrs)

ATTACHMENT B

HONEYWELL REQUIREMENTS

- Honeywell – Contractor Safety Handbook
- Honeywell Event Reporting Requirements
- Honeywell Accident/Incident Report Form
- Honeywell Motor Vehicle Incident Report Form

Honeywell Contractor Safety Handbook

This informational Handbook is intended to provide a generic, non-exhaustive overview of a particular standards-related topic. This publication does not itself alter or determine compliance responsibilities, which are set forth in OSHA standards themselves and in the Occupational Safety and Health Act of 1970. Since the regulations, interpretations and enforcement policy may change over time, it may be necessary to seek additional guidance on OSHA compliance requirements. Any and all deviations from the guidelines and rules set forth in this Handbook shall have prior approval by Honeywell.

This Handbook serves as a guide and reference for the minimum rules and standards for contractors performing capital work, maintenance, repair, dismantlement, remediation or other activities that have the potential for an incident.

This Handbook should be issued to each contract employee working at a Honeywell facility, location or site. The perforated page at the back of the Handbook must be signed and returned to the Honeywell contact/representative prior to commencing work. After reviewing each Section of this Handbook, specific attention should be focused on the topics that will be encountered during the project/task.

Contract employees must also be familiar with their company's health, safety and environmental policies, procedures and guidelines.

Revised 12/99

Contractor Safety Excellence

Our Mission

We will achieve a premier level of safety performance for contractors working at Honeywell locations through increased safety awareness, communication of expectations, following work processes that reduce at-risk behaviors and ensuring the proper management of incidents.

Our Commitment

We recognize that outstanding safety performance is essential to the welfare of our employees, contractors and to business excellence. We will continue to improve our global competitiveness by making safety an integral part of all business activities.

Our Safety Principles

- We strive to prevent all incidents that may lead to injuries or illnesses.
- Safety performance is a responsibility of line management and every contractor.
- We design safety into the work place.
- Individual behavior is the most important factor in preventing incidents.
- We expect and require every contractor to work safely.
- Working safely is good business.
- Safety is an integral part of our culture and total quality processes.
- Our safety process must react to all incidents, not just accidents.
- We continually improve our safety process by auditing the process and correcting the root cause of deficiencies.
- We promote safety, both on and off the job.
- We prepare for emergencies.

Table of Contents

A. Introduction

- This handbook sets forth the safety requirements of Honeywell International Inc. ("Honeywell")
- At Honeywell, it is our policy to provide a safe and healthful place in which to work. It is everyone's obligation to work safely and to correct unsafe acts, practices and/or conditions for the protection of yourself and others.
- It is extremely important that you understand how your work is to be done in a safe manner. If you don't know, stop and ask before you begin work.
- All work must conform to plant, local, state, and federal (OSHA) regulations (CFR 29 Part 1910 and 1926).
- The information in this handbook is general in nature and is to be considered the minimum.
  S ave
  A ll
  F ellow
  E mployees
  T his
  Y ear
- During your orientation, you will be informed of the specific safety requirements for your particular site or plant.

B. General Information

Site Entry

- Personnel, vehicles, and equipment are subject to search upon entering or exiting the site premises.
- Personnel may be required to pass a drug test or show proof of passing a drug test within the past thirty (30) days prior to working at the site.

Vehicle Safety

- Operators of vehicles and equipment shall observe all site traffic regulations. Seat belts are to be worn at all times.

Pedestrians

- Pedestrians have the right of way. Pedestrians should use walkways where provided and should not take shortcuts through operating areas, buildings or other areas.

Cameras

- Cameras are not allowed on site without the proper authorization.

Running

- Running is not permitted on site except in an extreme emergency.

Smoking

- Smoking is permitted in designated areas only. Discard smoking materials in approved containers.

Conduct

- Horseplay, fighting, gambling, sexual harassment and the possession or use of firearms, alcoholic beverages and illegal substances is strictly prohibited.

Dress Code

- Pants must cover top of steel-toed leather work shoe and be in good condition. Shirts must have at least 4" of sleeve. Long sleeve shirts may be required at specific locations or for certain tasks.

C. Emergency and Disaster Procedures

In the event there is an emergency, anyone can activate the alarm any time there is a:

- Serious injury or illness
- Fire
- Major spill or release

When an alarm sounds, the following rules are in effect:

- All flame or hot work permits for welding, cutting, and spark producing equipment will be suspended until the all-clear signal is given.
- Smoking is prohibited.
- All traffic will pull to the side of plant roads and shut off engines until the all-clear signal is given.
- Report to your assembly point / area (if previously designated), or contact your Honeywell host.

Site Specific Emergency and Disaster Procedures

- Each Honeywell plant is equipped with an emergency alarm system, designated assembly areas and emergency phone numbers. The specific guidelines for reporting emergencies and disasters should be determined in your orientation.

D. Personal Protective Equipment (PPE)

Head Protection

- Contractors are required to wear approved hard hats that meet ANSI Z89.1-1971. Hard hats must be in good condition and be worn with brim to the front.

Eyes and Ears

- Each employee should know the location of the nearest eye wash/safety shower station in their area before starting work.
- Contractors are required to wear approved ANSI Z87.1 safety glasses with rigid side shields. Additional eye/face protection will be required when performing certain tasks (e.g.: welding, burning, grinding, chipping, sawing, drilling, handling chemicals or corrosive liquids, and pouring concrete or molten materials.) Check plant procedures.
- Approved hearing protection must be worn as specified in all posted areas and while working with or around high noise level producing tools, machines or equipment.

Fingers, Hand and Wrist

- Gloves suitable for the job being performed shall be worn unless the job cannot be done with gloves or wearing gloves increases the hazard.
- Tool holders should be used when driving stakes and wedges or when holding star drills, bull pins or similar tools.

Foot Protection

- In accordance with OSHA 1910.136, all contractors must determine if hazards are present (or are likely to be present) that may require the use of safety footwear.
- Safety footwear for contractors must be in accordance with ANSI Z41-1991, constructed of industrial quality leather and without urethane soles.
- Rubber boots with safety toe protection are required on jobs subject to chemically hazardous conditions.
- Metatarsal protection should be worn when using jack hammers, tamps and similar equipment which has the potential for foot injury above the toes.

Respiratory

- Respirators used by contractors must meet NIOSH/MSHA standards.
- Respirators must be inspected regularly and stored in a dust-free container.
- Employees required to wear a respirator must have a physician's approval and be fit tested. Employees must be clean shaven in the facial area to obtain an acceptable seal.
- Contractor must keep records of qualified users.

Skin

- If the possibility of skin contact with chemicals exists, personal protective equipment required by Material Safety Data Sheets shall be worn.

E. Hazard Communication / Right To Know

Upon beginning work at a Honeywell facility, each individual has the right to know information concerning the hazardous properties of any materials he/she may come in contact with. Training regarding potential hazards must be given to each individual and will include, but not be limited to, the following:

- An explanation of the hazard communication standard and the training requirements.
- An explanation of the project hazard communication program and it's location.
- Notification of the locations of the hazardous

chemicals.
- A description of the plant labeling and hazard rating system.
- A description of the Material Safety Data Sheet (MSDS), their use and location.

F. Permits

Certain types of work are not to be started until approval is given in the form of a signed permit. A written, properly authorized permit listed below may be required before you begin any activities in any production or operating area of the plant.

- **Work Permit** - required before any work can be started on any job in any area of the plant.
- **Line Breaking Permit** - required before breaking screwed, flanged, welded or other type joints on pipelines or vessels containing hazardous materials, or breaking into (disconnecting, drilling, sawing, etc.) non-hazardous materials under pressure.
- **Confined Space or Vessel Entry Permit** - required before entering tanks, vessels, manholes or similar confined spaces that have been in service or connected to operating process equipment and may contain potentially hazardous atmospheric conditions.
- **Lockout / Tagout Permit** - required for the service and maintenance of machines and equipment in which the *unexpected* energization or start up of the machines or equipment, or release of stored energy could cause injury to workers.
- **Excavation Permit** - required to minimize hazards during excavation work and ground breaking operations, specifically when a machine or hand tools are used at a depth greater than one foot. Excavations greater than four foot in depth must be inspected and approved by a competent person and have a Confined Space permit before access by personnel.
- **Hot Work Permit** - required before any flame or spark producing activity can begin in any production, operating, or some construction areas of the plant. This includes, but is not limited to:
  - Welding / Repair of pipe lines under pressure greater than 5 PSI.
  - Welding / Repair of pipe lines containing hazardous or flammable materials.
  - Welding / Repair on any pressure vessel, fired or unfired, under pressure or in the presence of hazardous or flammable materials.
  - Work on energized circuits.
  - Cutting / Burning of pipe lines, vessels, equipment, etc. that may have contained any hazardous material.
  - Grinding
  - Any hot work on carbon steel pipe lines, vessels, equipment, etc. that may have contained sulfuric acid will <u>not</u> be permitted without extensive review with project and plant personnel due to the possible generation of hydrogen gas.

  Each plant may have permits that are required for other specific work procedures. Check with your supervisor for these permits.

G. Fall Protection

- 100% fall protection (i.e. two lanyards when moving in certain areas) is required for all work above six (6) feet.
- Safety full body harnesses must be arranged so the d-ring is in the rear.
- Safety belts are not to be used for support or as a lineman's belt.
- Lanyards must be secured to an anchorage point overhead that can support 5,000 lbs. using as short a line as possible, not to exceed five (5) feet..
- All fall protection equipment shall be inspected by the user prior to each use.
- Lanyards may not be tied-off to any pipe/conduit less than 2" in diameter.
- Safety harnesses shall be worn and tied off when performing work on the following:
  - Sloped roofs
  - Flat roofs without handrails, if within 6 feet of the edge of the roof or opening
  - Any suspended platform or stage
  - All scaffolding six (6) feet above supporting work surface
  - When working on the sixth step or higher

on a ladder
- Ladders near the edge of roofs or floor openings
- Any unguarded areas six (6) feet above any supporting work surface
- An aerial lift.

H. Barricades, Signs, and Floor Openings

All floor openings/penetrations (i.e. holes > 2") must be properly covered or guarded. Barricades and signs must be posted when working in or around the following:

- All manlifts and the immediate working area.
- In ceilings, pipe bridges, etc.
- Removing roofing panels, walls, etc.
- Swing radius of cranes and the area where the lift will be made and moved to.
- Any open excavation.
- Any confined space entry.

Types of Barricades

- Warning barricades call your attention to a hazard but offer no physical protection. Examples: yellow, red, blue synthetic tape on stands or posts, plastic, or wooden snow fence.
- Protective barricades warn and provide physical protection and shall withstand 200 lbs. of force in any direction with minimal deflection (3"). Examples: wood post and rail, cable and wood post and chain.

Guidelines

- Barricades shall be 42 inches high and maintained square and level.
- Barricades shall be erected before any work begins.
- Blinking lights must be used on road blocks after dark.
- An access opening or gate should be provided where practical.
- Barricades and signs shall be fully informative, legible, and visibly displayed.
- Barricades and signs shall be removed when no longer needed.

Hole Covers

- Must be installed immediately.
- Hole covers or barricades are required at any floor elevation.
- Material and equipment must not be stored on a hole cover.
- Must be secured to prevent movement and be marked with the word "HOLE" or "COVER".
- Must extend adequately beyond the edge of the opening (i.e. 3") and must not be more than 1" high.
- 3/4" plywood will be used providing the opening is less than 18". For any opening greater than 18 inches, 2 inch lumber of doubled ¾ inch plywood is required.

I. Ladders and Scaffolds

- Inspect ladders before use - identify defective ladders with "Do Not Use" tag.
- Only a "Type I" ladder with a minimum rating of 250 lbs. is acceptable.
- Metal ladders are prohibited.
- Fall protection must be worn when working on the sixth step or higher.
- When ascending and descending a ladder, face the approved side of the ladder, use at least one hand to grasp the ladder, and do not carry tools or materials in your hands.
- *All* ladders shall have a tie-off rope, non-skid safety feet and be tied-off.
- Never work off a ladder where the midpoint of the body (i.e. belt buckle) must be extended beyond the side rails.

Straight or Extension Ladders

- Follow the 4-to-1 rule when using an extension or straight ladder - position the base of the ladder one (1) foot from the supporting structure for every four (4) foot in height.
- If a ladder is used to reach a higher platform, the top of the ladder must extend three (3) feet past the platform.
- Do not work off of the top three (3) rungs of any straight or extension ladder.

Step Ladders

- Step ladders shall be set with all four (4) feet level.
- Ladders used in traffic areas must be secured or barricaded to prevent displacement.
- Never work off of the top two steps of step ladder.
- Never stand or sit on top of step ladders.

Scaffolding

- All scaffolds must conform to the OSHA Standard (Subpart L)
- All scaffolds are to be erected level - plumb on a firm base.
- When space allows, all scaffolds must be equipped with access ladders that extends three (3) feet past the landing gate. At landings, 42" high handrails rigidly secure, 21" high mid-rails rigidly secure, completely decked with safety planking or manufactured scaffold decking and rigidly secured toeboards on all four sides.
- A competent person must determine the feasibility and safety of providing fall protection for employees erecting and dismantling scaffolds, and train those employees accordingly.
- All scaffolds shall have a tag attached, completed by the competent person, stating what type of fall arrest system is required.
- All personnel working on scaffolds must be trained by a qualified person in the subject matter to recognize the hazards associated with the type of scaffold being used and the nature of any hazards (i.e. electrical, fall, falling objects, etc.).
- Retraining must be provided where inadequacies in an affected employee's work practices involving scaffolds are observed.
- Safety harness and tie-off required when working from scaffolding over one buck high.
- Personnel shall not climb or do any rigging from a scaffold, handrail, mid-rail or braces.
- No one may alter any scaffold member by welding, burning, cutting, drilling or bending.
- Scaffolds shall be tied off or stabilized with outriggers when its height exceeds three times the smaller dimension of its base, but tie-offs must not exceed 26 feet vertically.
- Scaffolds must be tied off horizontally every 30 feet.
- No one shall ride on a rolling scaffold when it is being moved. All tools and materials shall be removed or secured to the decking before moving the scaffold.

J. Housekeeping

Good housekeeping plays a key role in preventing accidents and fires. Good housekeeping is emphasized as a vital safety measure.

- Keep everything in its proper place - store materials and equipment in a safe and orderly manner.
- Put trash, scrap materials and other waste in the proper containers.
- Clean up tools and work areas as your job progresses - do not wait until the end of the work day.
- Keep the floor of the work area clear of tools, cords, and scrap materials.
- Insure that work tables are occupied only by work at hand and tools required for work being done.
- All work areas are to be left in orderly and clean condition at the end of each work day.
- Keep cords and hoses at least seven (7) feet overhead over walkways and work areas or lay them flat outside of walkways.
- Maintain clear access to all work areas. Do not block fire extinguishers, emergency equipment, electrical boxes or panels, or other safety/fire equipment.

K. Tools - Hand and Power

- Do not operate any tool without proper instruction.
- Only qualified persons are to use tools and equipment.
- Honeywell tools and equipment are not to be used by contractors.
- Do not use any tool or equipment for any purpose other than that for which it was designed.
- Personal tools are subject to inspection at any time.

- It is your responsibility to inspect all tools prior to each use. Do not use a tool that is deemed defective. Report and tag all defective tools.
- Do not lift electrical tools by the cord.
- Tools may be inspected and marked with color-coded tape each month. Check with your Supervisor for designations and do not use a tool without the appropriate color-coded tape.

Hand Tools

- Worn tools are dangerous! Replace or repair the tool.
- Every tool was designed to do a certain job. Use a tool for its intended use only.
- Tools subject to impact (chisels, star drills and caulking irons) tend to "mushroom." Keep them dressed to avoid flying spalls. Use tool holders.
- Don't force tools beyond their capacity or use "cheaters" to increase their capacity.

Power Tools

- Material should be secured when power tools are applied to it.
- Each power tool should be examined for damaged parts, loose fittings, and frayed or cut electrical cords before use.
- Portable electrical equipment and tools shall be grounded unless "double insulated." A ground fault circuit interrupter (G.F.C.I.) shall be used for working in damp areas when using permanent plant power or as otherwise required.
- Electrical cords shall be unplugged and air lines deactivated and bled down before adjusting, servicing, repairing, or changing bits and blades in electrical or pneumatic tools.
- Any pneumatic hoses exceeding ½ inch in diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure. All hose connections shall be properly secured.
- All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.
- Only licensed and qualified personnel shall be allowed to operate power-actuated tools.
- Power tools should be unplugged when not in use.

L. Mobile Equipment

- Anyone who operates any mobile equipment (cranes, manlifts, pick-ups, forklifts, etc.) must demonstrate knowledge and competency for each make of equipment.
- All equipment will be inspected daily before use to insure it is in proper operating condition. If the equipment becomes defective in any way, notify your supervisor at once and place a "DANGER - DO NOT USE" tag on it.
- All equipment is to be supplied with seat belts, back-up alarm and fire extinguishers (back-up alarm is not required on pickup trucks.)
- Use of gas/diesel equipment inside operating building is prohibited unless approved by the Safety Department.

M. Cranes

- All operators must be certified and licensed to operate each make and model of crane.
- The operator is solely responsible for the safe operation of the crane.
- The operator has full responsibility for the safety of a lift and may not make a lift until safety is assured.
- A copy of the load chart, manufacturer's operators' manual and inspection record must be in the crane cab or on project site.
- All cranes and the immediate work area must be barricaded at all times.
- No load shall be swung over any persons.
- Outriggers must be leveled and fully extended when making a lift.
- No part of the crane, load, hoist (load and boom) lines, boom and tag line shall come within 10 feet of energized electrical lines.
- For pick and carry operations, consult the manufacturer's operator manual.
- Riding on crane hooks and/or "headache" balls is prohibited.
- Operators are not permitted to leave the crane while holding a live load.

- The use of suspended personnel platforms (crane baskets) must meet all OSHA requirements. The use of a crane or derrick to hoist employees on a personnel platform is prohibited unless all requirements of 1926.550 (g) are met. A company plan and check list must be used.
- A lift plan is required for any critical lift.
- Lifting in high winds (e.g. greater than 20 mph) is not recommended.

N. Material Handling Equipment

- All material handling machines must have backup alarms, horns, rollover protection structures and seat belts when provided by manufacturer.
- The operator must be trained to operate each make and model of machine.

O. Personnel Lifting Equipment

- The operator must be trained to operate all personnel lifts.
- All employees are to have a safety belt or safety harness on and tied off when working out of: manual personnel lifts, power platform lifts, scissors lifts, high-reach lifts, etc.
- Tie-off shall be made to the lifting equipment.
- Personnel are not to get under lifts.
- When exiting the lifting equipment onto a proper working elevated platform, the employee must be tied off to that platform immediately prior to, and during, that exit.

P. Cars, Pickups, and Trucks

You must have a valid driver's permit to operate any vehicles on plant property. You must obey the following rules:

- Wear your seat belt.
- Obey plant speed limits and stop signs.
- Motors must be shut-off when refueling.
- Stop at all railroad crossings.
- No more than three (3) people on a front bench seat, two (2) people if bucket seats.
- Mount and dismount the vehicle only when it is stopped.
- Keep arms, feet and bodies inside the vehicle.
- Look to the rear and sound your horn before backing up.
- Inspect the vehicle each day before use.
- Riding in the rear of a truck is prohibited unless approved seating with seat belts has been provided.

Q. Rigging

- All personnel who perform or assist in rigging operations shall have received appropriate training and be competent.
- Only ONE eye in a hook. Use a shackle to hold two (2) or more eyes.
- Tag lines are required to control lifted loads made by mechanical equipment. Never put hands on a load or wrap tag lines around your hands or body.
- Never raise a load over other people.
- Know the capacities of the rigging equipment and the weights of the loads.
- Never rig from any structural member until you are sure it will support the load.
- Never use plate grips, tongs, pipe clamps, etc. as substitutes for beam clamps.
- Two slings will be used unless impractical. If one sling is used, double wrapping is required.
- Continuous synthetic slings may be used only when heat or chemicals are not a factor, and where load permits.
- Flat nylon straps should not be used for erecting steel. Wide nylon straps may be used for lifting tube bundles, fiberglass ducts or other material that could be damaged by a metal sling. The use of flat nylon strap with any visible tear or defect is strictly prohibited.
- Steel slings should be used where heat or chemicals are a potential factor. The use of steel slings with damaged strands or other defect is strictly prohibited.
- The use of a come-a-longs with cracked or damaged handles is strictly prohibited.
- Chainfalls and come-a-longs must have OSHA approved safety spring return latches on all hooks.
- Daily, weekly, and monthly inspection records will be kept by the contractor.

R. Chain Falls and Hoists

- Inspect hoists daily (operations), monthly (maintenance) and annually (3rd party vendor).
- A chain hoist must be used within its rated capacity, marked on the equipment.
- Do not leave an unsecured and unattended load hanging on a hoist or chain fall.
- Do not stand or have any part of the body below a load suspended on a chain hoist.
- Do not wrap the load chain around the load to be lifted.
- Use of "cheater bars" is strictly prohibited.
- Use a shackle to connect straps to a hook.

S. Fire Protection and Prevention

- Be sure to locate the nearest fire extinguishers in your work area before starting work.
- As warranted by the project, a trained and equipped fire fighting organization (Fire Brigade) will be provided to assure adequate protection of life.
- All fire hydrants, fire extinguishers, fire blankets, etc. shall be clearly marked and not obstructed.
- Combustible materials shall be kept away from steam lines, radiators, heaters, hot process and service lines.
- For any job requiring hot work or open flame or welding, a fire extinguisher must be within 20 feet of where the work is taking place.
- Fire extinguishers shall be checked daily before starting work.
- Portable power equipment must not be refueled while running or when hot. Attach the ground wire before refueling.
- Store flammables in properly labeled metal type containers and in designated areas.
- Fire blankets must be used to protect equipment, control panels, instrumentation, etc. when welding, cutting, burning, or grinding overhead.
- "Borrowing" plant fire extinguishers is not permitted.

T. Material Handling / Stability Control

Proper material handling and stability control insures that personnel, material, and equipment are safe from unexpected movement such as falling, slipping, rolling, tripping, or any other uncontrolled motion.

- Clean up ragged metal edges.
- Pull all protruding nails and wires or bend them flush.
- Set on dunnage for ease of handling.
- Check all material and equipment to prevent rolling.
- Tie down all light, large-surface-area material that might be moved by the wind.
- Put absorbent on all grease and oil spills immediately and clean them up. Notify proper plant personnel of spills if significant.
- Salt or sand icy walk areas immediately.
- Use proper lifting techniques when moving material by hand.
- Know the weight of the object to be handled.
- Protect the area around and below you.

U. Welding and Burning

General

- Before beginning any flame or spark producing operations in the plant, check with your supervisor about any permits that may be required. Follow the requirements on the permit.
- Keep welding leads and burning hoses clear of passageways.
- Each welder is responsible for containing sparks and slag and/or removing combustibles to prevent fires. The welder is also responsible for making sure there is a fire watch and a good fire extinguisher for the duration of the operation.
- Provide adequate screens to protect vision of general public.

Welding - Electric

- All work must have a separate and adequate ground.
- Welding rods are not to be left in the electrode holder when not in use. Stub ends are to be put in proper containers - not on the floor.

- All weld arcs shall be shielded.
- All welding machines are to be shut off when not in use.
- Hard hats with the brim to the front must be worn during welding operations by the welder.
- An approved welding shield must be worn. Use no less than a No. 10 filter plate with safety plate on both sides of the filter plate.
- Powered welding machines should be operated in well ventilated area only and will be diesel fueled only, unless otherwise approved by safety.

Burning - Gas

- The operation of oxygen and fuel gas burning equipment shall only be done by trained and experienced personnel.
- Do not exceed 15 P.S.I. on the torch side of the gauge when using acetylene.
- Only an approved spark lighter should be used to light a burning torch. Do not use matches, cigarettes, lighters or hot work.
- Always clean burning tips with the proper type cleaner.
- All burning rigs must be broken down at the end of the shift with regulators removed and caps screwed down hand tight.
- Approved burning goggles must be worn and No. 4 lenses or darker must be used.
- Keep oil and grease away from oxygen regulators, hoses and fittings. Do not store wrenches, dies, cutters, or other grease covered tools in the same compartment with oxygen equipment.
- Compressed gas bottles shall be kept in bottle carts or secured in an upright position. They must be transported and stored in a secured, upright position with protective caps in place.
- Oxygen and acetylene compressed gas bottles should not be stored together. They must be stored a minimum of 20' apart or have a 5 feet high, 30 minute rated fireproof wall between the two bottles.
- All gauges, hoses, and torches should be inspected on a regular basis. A back flow preventer is required on all regulators.
- When in use, place cylinders and hoses where they are not exposed to sparks and slag from the burning operation.

- Any hot work on carbon steel pipe lines, vessels, equipment, etc. that may have contained sulfuric acid will <u>not</u> be permitted without extensive review with project and plant personnel due to the possible generation of hydrogen gas.
- Handle cylinders with care.
- Lift to upper levels with approved carts only.
- Do not strike an arc on cylinders.
- Do not use cylinders as rollers.
- Do not lift with slings or by the protective cap.

Protective Clothing

- Only cotton, woolen, leather or special fire retardant synthetic clothing should be worn when burning or welding. Synthetics are very flammable and melt and cause more serious burns when exposed to flames and high temperatures.

<u>V. Steel Erection</u>

General

- 100% tie-off is required at ALL times
- Containers shall be provided for storing or carrying rivets, bolts and drift pins, and secured against accidental displacement when aloft.
- A load shall not be released from the hoisting line until the members are secured with not less than two bolts, or equivalent at each connection and drawn up wrench tight.
- Tag lines are required for controlling loads.
- When bolts, drift pins or rivet heads are being knocked out/off, means shall be provided to keep them from falling.
- Impact wrenches shall be provided with a locking device for retaining the socket.

W. Accident / Incident Investigation

- Notify Honeywell personnel (project engineer, plant safety, construction safety, etc.) immediately after any injury (medical treatment and first aid cases), equipment or property damage, environmental excursions, or near-miss incidents.
- A Honeywell Contractor Incident Investigation Report shall be completed by the contractor company immediately upon knowledge of the incident.
- The report may be completed by an investigation team headed up by the contractor company, and assisted by the Honeywell project manager / engineer, site safety leader, the individual(s) involved and any other necessary personnel. All sections of the report are to be completed, signed and dated.

X. OSHA Reference Guide

Subject	Reference
Barricades	Subpart G - 1926.202 Barricades
Cars, Pickups & Trucks	Subpart O - 1926.601 Motor Vehicles
Chain Falls	Subpart H - 1926.251 Rigging Equip. for Mat. Handling
Compressed Gases	Subpart H - 1910.101 General Requirements
Concrete & Masonry	Subpart Q - 1926.700 Scope, Application & Requirements
Confined Space Entry	Subpart J - 1910.146 Permit-Required Confined Spaces
Cranes	Subpart N - 1926.550 Cranes & Derricks Subpart N - 1910.179 Overhead & Gantry Cranes
Demolition	Subpart T - 1926.850 Preparatory Operations
Egress	Subpart C - 1926.34 Means of Egress Subpart E - 1910.35 Definitions
Electrical	Subpart K - 1926.400 Introduction Subpart S - 1910.301 Introduction
Emergency Procedures	Subpart C - 1926.35 Employee Emergency Action Plans Subpart D - 1910.38 Employee Emergency Plans
Excavations	Subpart P - 1926.650 Scope, Application & Definitions
Eye Protection	Subpart E - 1926.102 Eye and Face Protection Subpart I - 1910.133 Eye and Face Protection

Subject	Reference
Fall Protection	Subpart E - 1926.104 Safety Belts, Lifelines & Lanyards Subpart M - 1926.500 Scope, Application & Definitions
Fire Protection	Subpart C - 1926.24 Fire Protection and Prevention Subpart F- 1926.150 Fire Protection Subpart L - 1910.155 Scope, Application & Definitions
First Aid	Subpart C - 1926.23 First Aid and Medical Attention

	Subpart D - 1926.50 Medical Services & First Aid Subpart K - 1910.151 Medical Services & First Aid
Floor Openings	Subpart M - 1926.502 Fall Protection Criteria & Practices Subpart D - 1910.23 Guarding Floor and Wall Openings
Foot Protection	Subpart E - 1926.96 Occupational Foot Protection Subpart I - 1910.136 Foot Protection
Hand Protection	Subpart I - 1910.138 Hand Protection
Hazard Communication	Subpart D - 1926.59 Hazard Communication
Hazardous Waste	Subpart D - 1926.65 Operations & Emergency Response Subpart H - 1910.120 Operations & Emerg. Response

Subject	**Reference**
Head Protection	Subpart E - 1926.100 Head Protection Subpart I - 1910.135 Head Protection
Hearing Protection	Subpart E - 1926.101 Hearing Protection Subpart G - 1910.95 Occupational Noise Exposure
Hoists	Subpart N - 1926.552 Mat. Hoist, Personnel Hoist & Elev.
Housekeeping	Subpart C - 1926.25 Housekeeping
Illumination	Subpart D - 1926.56 Illumination
Incident Investigation	Honeywell Contractor Near Miss/ Incident Investigation Report.
Ladders	Subpart X - 1926.1053 Ladders Subpart D - 1910.22 General Requirements
Lockout/ Tagout	Subpart K - 1926.417 Lockout and Tagging of Circuits Subpart J - 1910.147 Control of Hazardous Energy
Material Handling Equip.	Subpart O - 1926.602 Material Handling Equipment
Materials Handling	Subpart H - 1926.250 General Requirements for Storage
Mobile Equipment	Subpart O - 1926.600 Equipment
Permits	Per Site Specifics. Check With Your Site Contact.
Personal Protective Equip.	Subpart C - 1926.28 Personal Protective Equipment Subpart E - 1926.95 Criteria for Personal Protect. Equip. Subpart I - 1910.32 General Requirements

Subject	Reference
Personnel	Subpart L - 1926.453 Aerial Lifts
Lifting	Subpart N - 1926.552 Personnel
Equipment	Hoist & Elevators
	Subpart F - 1910.68 Manlifts
Respiratory	Subpart E - 1926.103 Respiratory
Protection	Protection
	Subpart I - 1910.134 Respiratory Protection
Rigging	Subpart H - 1926.251 Rigging Material
	Subpart N - 1910.184 Slings
Sanitation	Subpart D - 1926.51 Sanitation
	Subpart J - 1910.141 Sanitation
Scaffolds	Subpart L - 1926.451 Scope, Application & Definitions
	Subpart D - 1910.28 Safety Requirements for Scaffolding
Signaling	Subpart G - 1926.201 Signaling
Signs	Subpart G - 1926.200 Accident Prevention Signs & Tags
	Subpart J - 1910.145 Specifications for Signs & Tags
Stairways	Subpart X - 1926.1050 Scope, Application & Definitions
Steel Erection	Subpart R – 1926.750 Steel Erection
Tools - Hand & Power	Subpart I - 1926.300 General Requirements
	Subpart P - 1910.241 Definitions
Training & Orientation	Subpart C - 1926.21 Safety Training and Education
	Per Site Specifics. Check With Your Site Contact.
Ventilation	Subpart J - 1926.353 Ventilation and Protection
	Subpart G - 1910.94 Ventilation
Welding & Burning	Subpart J – 1926.350 Welding & Cutting
	Subpart Q - 1910.251 Definitions

Y. Acknowledgement Page - Read Carefully Before Signing Below

This is to acknowledge that I have received my copy of the Honeywell Contractor Safety Handbook and an orientation on its contents as well as other project rules and policies. I will read and abide by all rules and regulations in the handbook and any additional rules and regulations of my job. I understand that working safely, complying with and obeying any and all Company and Honeywell safety rules, regulations or standards is a condition of employment. Should I not comply with Company and/or Honeywell safety rules, regulations or standards, I am subject to disciplinary action including removal from the site and possible termination of employment. In consideration of my employment, I further agree that my employment and compensation can be terminated at any time, with or without cause or notice, at the option of either the Company or myself. I understand further that this handbook and the rules and regulations it contains do not in any way constitute a contract (either expressed or implied) of employment between the Company as my employer and me for any indefinite or specified period of time. The Company reserves the right to change its policies as summarized herein.

_____ _____

Print Full Name Signature

_____

Contractor Company Name

_____

Craft

_____

Honeywell Contact/Representative

_____

Date

Note: The perforated last page and the back cover of this booklet contain the same wording. After properly endorsed, the perforated page is to be removed and given to the Honeywell contact/representative.

Rev. 12/99

Y. Acknowledgement Page - Read Carefully Before Signing Below

This is to acknowledge that I have received my copy of the Honeywell Contractor Safety Handbook and an orientation on its contents as well as other project rules and policies. I will read and abide by all rules and regulations in the handbook and any additional rules and regulations of my job. I understand that working safely, complying with and obeying any and all Company and Honeywell safety rules, regulations or standards is a condition of employment. Should I not comply with Company and/or Honeywell safety rules, regulations or standards, I am subject to disciplinary action including removal from the site and possible termination of employment. In consideration of my employment, I further agree that my employment and compensation can be terminated at any time, with or without cause or notice, at the option of either the Company or myself. I understand further that this handbook and the rules and regulations it contains do not in any way constitute a contract (either expressed or implied) of employment between the Company as my employer and me for any indefinite or specified period of time. The Company reserves the right to change its policies as summarized herein.

_____ _____

Print Full Name Signature

_____

Contractor Company Name

_____

Craft

_____

Honeywell Contact/Representative

_____

Date

Note: The perforated last page and the back cover of this booklet contain the same wording. After properly endorsed, the perforated page is to be removed and given to the Honeywell contact/representative.

Rev. 12/99

* To be completed by the Contractor Company with assistance from Honeywell personnel

Date Incident Reported:	Honeywell Location:	Honeywell Contact:	
Date of Incident:	Time of Incident:	Name of Contractor Company:	
Name of Individual(s) Involved w/Incident:		Name of Injured Worker (if applicable):	Name of Supervisor/Foreman:
If an Individual was Injured, were they working under the direct supervision of Honeywell?		Age of Individual Involved:	Job Classification/Title/Craft:
Length of Work Experience at Job Classification:		Length of Employment with Company:	Length of Time Working at Site:
Was the Individual Involved with the Incident Performing their Regular Job? If "No", explain why:		Date of Site Safety Orientation:	Last Formal/Documented Safety Meeting Attended:
Hours Worked that Day/shift Prior to the	Hours Worked that Week Prior to the Incident:	Consecutive Days/Shifts Worked Prior to the Incident:	Last Day Off Prior to the Incident:
Description of incident according to the individual(s) involved or injured (including what happened and how the incident occurred):			
According to the individual(s) involved with the incident or injured, what could have been done differently to prevent this incident from occurring? Why weren't these done prior to the incident?			
Describe any First Aid or Medical Treatment Provided On Site and/or at a Medical Facility. **NOTE: Any follow-up treatment at a later date must be communicated to Honeywell (Contractor Safety Leader).**			
Date that the Injured Individual Returned to Work?	Any Work Restrictions or Lost Time? If "Yes", describe: **NOTE: Any work restrictions or lost time at a later date must be communicated to Honeywell (Contractor Safety Leader).**		
Was there any Property Damage? If "Yes", describe:			

Contractor Supervisor/Foreman should complete the information below with an Investigation Team

Team Investigation – List the Possible Causes of the Incident Below.		
For Each Possible Cause Listed Above, Reply "Why" or "Why not" the Cause Occurred.		
Corrective Action(s) Taken - List Person(s) Responsible and Target Date:		
Contractor Investigation Team - Leader & Members:		
Approval (Individual Involved/Injured):	Title:	Date:

Date Incident Reported:	Honeywell Location:	Honeywell Contact:
Supervisor Approval (Print Name):	Title:	Date:
Honeywell Site Approval (Print Name):	Title:	Date:

HONEYWELL

01620 EXHIBIT 1
MOTOR VEHICLE ACCIDENT REPORT

Report #:_____

DATE OF ACCIDENT_____ DAY OF WEEK_____ TIME_____

LOCATION OF ACCIDENT_____

ACCIDENT INVOLVED: Employees, contractors, visitors, Vehicle vs. Vehicle, Vehicle vs. Property, Vehicle vs. Pedestrian

VEHICLE NO. 1		VEHICLE NO. 2 (or Pedestrian Info.)
	DRIVER'S NAME	
	STREET ADDRESS	
	CITY AND STATE	
	DRIVERS LICENSE NO.	
	PHONE NO. OR EXT.	
	OWNER'S NAME	
	STREET ADDRESS	
	CITY AND STATE	
	PHONE NUMBER	
	VEHICLE TYPE	
	MAKE, MODEL, YEAR	
	LICENSE PLATE	
	VEHICLE DAMAGE	
	PASSENGERS	
	VEHICLE REMOVED TO (auth.)	

INJURED (type, where taken):_____

POLICE DEPARTMENT/REPORT #:_____

WEATHER:_____

ROAD CONDITION:_____

ESTIMATED SPEED OF VEHICLE 1:_____ VEHICLE 2:_____

VEHICLE DEFECTS RELATING TO ACCIDENTS (Brakes, Lights, Tires, Steering)

VEHICLE 1:_____ VEHICLE 2:_____

STATEMENT DRIVER VEHICLE 1:_____

_____

_____

_____

STATEMENT DRIVER VEHICLE 2:_____

_____

_____

_____

INVESTIGATOR'S COMMENTS:_____

_____

_____

_____

PHOTOGRAPHS TAKEN?:_____

DIAGRAM:

INVESTIGATOR'S SIGNATURE:_____ DATE:_____

SUPERVISOR'S SIGNATURE:_____ DATE:_____

HONEYWELL, SYRACUSE, NEW YORK
EVENT REPORTING REQUIREMENTS

1. INTRODUCTION

To assure Honeywell Health, Safety and Environmental Remediation (HSER) leadership has sufficient knowledge of significant adverse events to enhance decision-making and drive improved performance, the following event reporting procedure will be followed to report Safety & Environmental Incidents and Near Misses (referred to as events in this procedure) for all Honeywell Syracuse Portfolio projects.

These requirements will be reviewed with project staff when they start working on the projects and on a regular basis thereafter.

2. CONTRACTOR REPORTING TO HONEYWELL SYRACUSE PERSONNEL

Event reporting to Honeywell management is the responsibility of Syracuse Honeywell personnel. Contractor personnel should report the incident to the Syracuse Honeywell personnel per Section 2.2 as soon as it is safe to do so. When that call is made, provide the information listed below to assist in classifying the event. *If the event involves any of the items listed under Tier 1 Events, including the possibility of media coverage, and none of the Honeywell Syracuse personnel can be reached within two hours of the event, contractor personnel should make the Honeywell contacts required in Section 3.*

2.1 Event Reporting Information Requirements

Tier 1 Events

- A release to air, water or soil that has an actual or potential off-site *adverse environmental impact*
- One or more on-site fatalities.
- Three or more employees, contractors or visitors admitted to a hospital.
- Any off-site fatalities, injuries or harmful exposures.
- Any security incident that may be **immediately dangerous** to life or property, including fires, bomb threats, chemical release, radiation release, release of a biological or chemical agent (aerosolized or gaseous form).
- Fire, explosion or other catastrophic failure reasonably expected to cause more than $250,000 on-site property damage or more than two days production stoppage.
- Government representatives alleging or suggesting *criminal* non-compliance of any kind.
- Receipt or notice of any regulatory agency directive or other type of injunctive device designed to curtail or restrict operations.
- Actual or likely adverse media coverage from an HSER-related event.
- Product transportation-related events that result in Tier 1 impacts

Tier 2 Events

- Employee or contractor lost workday injuries/illnesses.
- Employee, contractor or visitor recordable injuries/illnesses (Criteria: "Injury and Illness Recordability Guidance Document").
- An environmental *excursion* that does not also trigger Tier 1 reporting.
- A release to air, water or soil that only narrowly avoided an *adverse environmental impact* or had the potential to be an *excursion.*
- Community injuries or diagnoses of illnesses allegedly associated with a company-related incident, event or release to air, water or soil.
- Suspicious materials, package or letter that poses immediate risk to employees and has been isolated.
- Suspicious activities in or around Honeywell facilities or processes that may present a potential security risk.
- Allegations of previously unknown health/safety/environmental effects caused by products, processes, emissions or discharges (Reference: "Risk Management and Reporting", Product Stewardship Guideline PSTEW-3.)
- Fire, explosion or other catastrophic failure reasonably expected to cause $10,000 - $250,000 on-site property damage or 1-day production stoppage.
- Written notification from a governmental agency alleging non-compliance of any kind.
- Proposal or imposition of an HSER fine, penalty or corrective action.
- Receipt of a non-routine request for information from a governmental agency.
- A non-routine regulatory agency inspection.
- Audits (Peer review, Self assessments, SBU, Third party findings and recommendations)
- Significant community activism or adverse media coverage not associated with an episodic event.
- A product recall imposed by a regulatory agency.
- Transportation-related event that results in Tier 2 impacts.

Tier 3 Events

- Any other event that Honeywell Syracuse personnel may decide to record in the system.

2.2 Honeywell Syracuse Contact List

Whenever an event occurs on a Honeywell Syracuse project, the following personnel should be notified as soon as possible.

Primary: John McAuliffe, Site Leader, Syracuse

Work:	315 431-4443 Ext. 4
Fax:	315 431-4777
Mobile:	315 440-0859
Home:	315 699-1565

Alternate 1:	Al Labuz, Remediation Manager
Work:	315 431-4443 Ext. 1
Fax:	315 431-4777
Mobile:	315 420-3505
Home:	315 446-4701

Alternate 2:	Pete Petrone, Resident Contract Engineer
Work:	315 431-4443 Ext. 3
Fax:	315 431-4777
Mobile:	315 430-0156
Home:	315 468-1614

3 HONEYWELL SYRACUSE REPORTING TO CORPORATE PERSONNEL

Reporting to Honeywell Corporate personnel is the responsibility of the designated Honeywell contact that receives the initial call from the field and will be conducted in accordance with Honeywell HSER procedures. *If none of the Honeywell Syracuse personnel can be reached within two hours of the event, the senior contractor person on-site should make these calls.*

	HSER Morristown	**Honeywell Corporate**[1]	**Honeywell Communications**
Primary Contact	Dave Wickersham, Director Remediation & Evaluation Services Work: 973 455-4681 Fax: 973 455-3082 Mobile: 973 768-0478 Home: 973 543-1593 Home Fax: 973 543-2260	Mike Csedrik, Director Safety Excellence Work: 973 455-5227 Fax: 973 455-4835 Mobile: 973 204-3440 Home: 201 939-1873	Victoria Streitfeld, Mgr-Media Rels. & Exec Comm. Work: 973 455-5281 Fax: 973 455-3881 Mobile: 973 722-1324 Home:
Alternate Contact	John Mojka, Engineering & Construction Manager Work: 973 455-4252 Fax: 973 455-3345 Mobile: 973 615-3782 Home: 908 638-5150	Terry Cox, Director Environmental Excellence Work: 973 455-5034 Fax: 973 455-3345 Mobile: 973 722-5786 Home: 732 381-1099	Greg Loh, Eric Mower & Associates Work: 315 466-1000 Fax: 315 466-2000 Mobile: 315 415-6766 Home:

[1] Above Corporate contacts are for reporting safety-related events. For Environmental-related events, Terry Cox is the primary contact and Mike Csedrik is the alternate.

HONEYWELL, SYRACUSE, NEW YORK
EVENT REPORTING REQUIREMENTS

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- Any off-site fatalities, injuries or harmful exposures.
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- Fire, explosion or other catastrophic failure reasonably expected to cause more than $250,000 on-site property damage or more than two days production stoppage.
- Government representatives alleging or suggesting *criminal* non-compliance of any kind.
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- A release to air, water or soil that only narrowly avoided an *adverse environmental impact* or had the potential to be an *excursion.*
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- Suspicious materials, package or letter that poses immediate risk to employees and has been isolated.
- Suspicious activities in or around Honeywell facilities or processes that may present a potential security risk.
- Allegations of previously unknown health/safety/environmental effects caused by products, processes, emissions or discharges (Reference: "Risk Management and Reporting", Product Stewardship Guideline PSTEW-3.)
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- Proposal or imposition of an HSER fine, penalty or corrective action.
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- A non-routine regulatory agency inspection.
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[1] Above Corporate contacts are for reporting safety-related events. For Environmental-related events, Terry Cox is the primary contact and Mike Csedrik is the alternate.

HONEYWELL - CONTRACTOR
NEAR MISS / INCIDENT INVESTIGATION REPORT *

Date Incident Reported:	Honeywell Location:		Honeywell Contact:	
Date of Incident:	Time of Incident:	Name of Contractor Company:		
Name of Individual(s) Involved w/Incident:		Name of Injured Worker (if applicable):		Name of Supervisor/Foreman:
If an Individual was Injured, were they working under the direct supervision of Honeywell?		Age of Individual Involved:	Job Classification/Title/Craft:	
Length of Work Experience at Job Classification:		Length of Employment with Company:		Length of Time Working at Site:
Was the Individual Involved with the Incident Performing their Regular Job? If "No", explain why:		Date of Site Safety Orientation:		Last Formal/Documented Safety Meeting Attended:
Hours Worked that Day/shift Prior to the Incident:	Hours Worked that Week Prior to the Incident:	Consecutive Days/Shifts Worked Prior to the Incident:		Last Day Off Prior to the Incident:
Description of incident according to the individual(s) involved or injured (including what happened and how the incident occurred):				
According to the individual(s) involved with the incident or injured, what could have been done differently to prevent this incident from occurring? Why weren't these done prior to the incident?				
Describe any First Aid or Medical Treatment Provided On Site and/or at a Medical Facility. **NOTE: Any follow-up treatment at a later date must be communicated to Honeywell (Contractor Safety Leader).**				
Date that the Injured Individual Returned to Work?	Any Work Restrictions or Lost Time? If "Yes", describe: **NOTE: Any work restrictions or lost time at a later date must be communicated to Honeywell (Contractor Safety Leader).**			
Was there any Property Damage?	If "Yes", describe:			

Contractor Supervisor/Foreman should complete the information below with an Investigation Team

Team Investigation – List the Possible Causes of the Incident Below.		
For Each Possible Cause Listed Above, Reply "Why" or "Why not" the Cause Occurred.		
Corrective Action(s) Taken - List Person(s) Responsible and Target Date:		
Contractor Investigation Team - Leader & Members:		
Approval (Individual Involved/Injured):	Title:	Date:
Supervisor Approval (Print Name):	Title:	Date:
Honeywell Site Approval (Print Name):	Title:	Date:

*** To be completed by the Contractor Company with assistance from Honeywell personnel**

ATTACHMENT C

ACTIVITY HAZARD ANALYSIS

PARSONS

Activity Hazards Analysis

Activities- Field

AHA No. 001

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 001	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Depending on environment at project site: blanket, sunscreen, cold/hot drink, extra clothing.	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Field Activities		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Outdoor, Physical Activity	Heat Stress ▪ Prickly Heat (Heat rash) ▪ Heat Cramps ▪ Heat Exhaustion ▪ Heat Fatigue ▪ Heat Collapse ▪ Heat Stroke	▪ Adjust work schedules. ▪ Mandate work slowdowns as needed. ▪ Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided. ▪ Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods. ▪ Maintain worker's body fluids at normal levels. ▪ Train workers to recognize the symptoms of heat related illness	▪ Monitor workers physical conditions ▪ Monitor outside temperature versus worker activity.
Working around water Outdoor activities	Cold Related Injuries Frostbite Hypothermia	▪ Educate workers to recognize the symptoms of frostbite and hypothermia ▪ Identify and limit known risk factors: ▪ Assure the availability of enclosed, heated environment on or adjacent to the site. ▪ Assure the availability of dry changes of clothing. ▪ Assure the availability of warm drinks.	Start (oral) temperature recording at the job site: ▪ At the Field Team Leader's discretion when suspicion is based on changes in a worker's performance or mental status. ▪ At a worker's request. ▪ As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind-chill less than 20°F, or wind-chill less than 30°F with precipitation). ▪ As a screening measure whenever

			any one worker on the site develops hypothermia.
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	High winds, dust storm	▪ Wear goggles if dust/debris is visible.	
	Pollen	▪ Take medication (i.e. anti-histamine) to minimize allergic reaction to pollen. Wear dust mask, if necessary.	
	Streams	▪ Observe depth of stream and speed of current before proceeding.	
	Walking on uneven or wet terrain (i.e. slopes, leaves, covered objects, holes, etc)	▪ Wear steel toe rubber boots versus over-the-shoe rubber boots. Use walking stick or other object for additional support/balance and to check for animal burrows/holes.	
	Insects, rodents, animals, etc.	▪ Wear Tyvek coveralls. Apply bug repellant spray or lotion to exposed skin.	
	Vegetation	▪ Create a clear path or route with mechanical equipment, whenever possible. Wear appropriate PPE for the vegetation (i.e. leather gloves, Carhart coveralls and face shield for vegetation that could cause cuts/punctures and/or is higher than waist level.	

Training Requirements:

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Activities - Barge or Boat

AHA No. 002

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 002	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat, steel-toed boots, personal floatation device, gloves (project dependent)	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Activities on a barge or boat		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Load equipment onto vessel	General	▪ Be cautious when boarding vessel. With one hand on the boat, quickly lower straight down into the center of the craft. Never jump into or onto a vessel. ▪ If others are boarding, have them step along the fore-and aft centerline of the boat while the boat is held in place along the pier. ▪ Avoid directly carrying anything aboard. Load the items off the pier or have someone hand them to you one by one. ▪ Never overload the vessel. ▪ Keep weight toward center of the boat and center of gravity as low as possible. ▪ Distribute equipment evenly on vessel.	
	Slips, Trips, Falls- fall off boat	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Wear personal floatation device when working on or near water. ▪ Wear footwear that has sufficient traction to	

		reduce risk of slipping. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Be aware of obstacles on deck. ▪ Personnel will notify the SSO of any unsafe conditions. ▪ Proceed carefully on floating docks and ramps.	
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects.	
	Marine Operation Hazards	▪ Personnel will follow the Marine Safety Standard Operating Procedures when working near or on the water.	
Unloading equipment	Slip, Trips and Falls	▪ Secure boat. ▪ Step carefully off boat. ▪ Use rails or assistance from someone on the dock. ▪ Avoid carrying anything off the boat.	
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects. ▪ Load items off from the boat or have someone hand them to you one by one.	
	Fatigue	▪ Do not let fatigue or tiredness associated with the day's activity compromise attention to proper health and safety. ▪ Follow Marine Safety Standard Operating Procedures.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher.

Medical qualification, training and fit testing must be received on an annual basis's for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of a chemical for more than 30 days in a year, then they must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Site Visit or Site Walk

AHA No. 003

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 003	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (in presence of heavy equipment), steel-toed boots. The following safety equipment is project dependent: gloves, goggles.	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Site Visit or Site Walk		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Site visit/walk	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Work slowly during transit. Jumping, running, and horseplay are prohibited. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions ▪ Follow Marine Safety Standard Operating Procedures	▪ Inspect job site and staging area and identify any concerns. ▪ Inspect job site daily.
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	High winds, dust storm	▪ Wear goggles if dust/debris is visible.	

	Cold and Heat Stress	▪ Visitors will dress accordingly to prevent injuries from extreme heat, or cold. ▪ SSO will monitor for cold/heat stress symptoms.	
	Biological Hazards (ticks, bees, mosquitoes, snakes, etc.)	▪ Personnel will be aware of potential exposure to biological hazards. ▪ Wear appropriate clothing (hat, long-sleeve shirt, long pants, gloves, boots etc.) and insect repellant.	
	Site Hazards Material Exposure	▪ Training and safety awareness of potential exposure to contaminates at the site. ▪ Training of all personnel decontamination procedures (if appropriate to visit). ▪ Appropriate PPE will be worn dependent on site conditions and actions levels. (if appropriate to visit) ▪ Must sign off on health and safety plan. ▪ Visitor will be escorted around site by a 40 hour trained individual unless cleared with the SSO.	

Training Requirements:

Visitors will report to the Site Safety Officer who will give a short health and safety orientation and require sign off on the PSP. The SSO will determine if the visitor can access the site based on verification of 40 training or 8 hour Supervisor training or if the visitor(s) will need to be escorted by a 40-hour trained individual onsite.

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then they must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Operation- Motor Vehicle

AHA No. 004

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 004	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Wear seat belt at all times; make sure that clothing will not interfere with driving.	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Operation of Motor Vehicle		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Driving to and from the job site	Vehicle Accident	▪ All employees shall complete the ParsonsU safety module on Defensive Driving. ▪ Plan your travel route and check maps for directions or discuss with colleagues. ▪ Complete a Vehicle Inspection Report before driving and check for proper equipment/supplies. ▪ Clean windows and mirrors as needed throughout the trip. ▪ Have sun glasses available to reduce sun glare and wear as needed. ▪ Follow vehicle maintenance schedule to reduce possibilities of breakdown while driving.	▪ Inspect all fluid level, air pressure in tires, adjust mirrors and seat positions appropriately, watch fuel level and fill up when level is low.
	Distraction while driving	▪ Stop driving a vehicle, regardless of the speed (i.e. even 5 mph) or location (i.e. private road), when the potential of being distracted by conversation exists. ▪ Drivers are prohibited from using communication devices (e.g., cell phones) while operating any motor vehicle.	

	Fatigue/Falling asleep	▪ Get adequate rest prior to driving. ▪ Pull over and rest if experiencing drowsiness ▪ Change seat position, stretch, open the window, adjust radio if experiencing drowsiness.	
	Weather /Road conditions	▪ Check road and weather conditions prior to driving. ▪ Be prepared to adjust driving if conditions change. ▪ Travel in daylight hours if possible. ▪ Give yourself plenty of time to allow for slow downs due to construction, accidents, or other unforeseen circumstances. ▪ Use lights at night and lights/wipers during inclement weather.	
	Theft/Crime of parked vehicle	▪ Lock the vehicle when leaving the area ▪ Use ant-theft deterrents (e.g., the club, visible alarm indicators, etc.) ▪ Park in well lit areas. ▪ Hide valuables	

Training Requirements:

All drivers are required to have a current valid driver's license and all vehicles must have the required State vehicle registration and/or inspection documentation. It is company policy that all wireless device use, whether "hand-held" or "hands free", ***is prohibited*** while driving any vehicle at any time as follows: for business use *at any time*; or for *personal use* during business hours; and as defined by law.

All employees operating a Company vehicle are required to familiarize themselves with the contents of the AHA before starting a work activity.

PARSONS

Activity Hazards Analysis

Operation- Heavy Equipment or Machinery

AHA 005

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 005	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat, steel-toed boots, leather gloves (as appropriate)	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Operation of Heavy Equipment or Machinery	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Motorized Equipment Operation	Equipment Maintenance	▪ The equipment must be maintained in a proper functioning condition. ▪ All motors must be shut off. Electrical, mechanical and hydraulic components locked when making repairs. ▪ Safety shut off system must be tested daily and not disabled. ▪ Bleed off pressure on hydraulic lines before undoing fittings. ▪ Do not leave tools or parts loose on the equipment after maintenance has been performed.	▪ Follow the maintenance manual recommended procedures for each piece of equipment.
	General Use	▪ All equipment must be inspected daily prior to use. ▪ Equipment must be operated and maintained in accordance to manufacturer's guidelines. ▪ Any equipment that is unattended must be immobilized and secured against accidental movement. ▪ All heavy equipment will have a back up alarm	

	Fire Hazard	▪ All motors must be shut off during refueling. • Smoking in the vicinity of the drilling rig is not permitted. • An A-B-C fire extinguisher must be maintained on the drilling rig and associated motorized equipment. • Fuel containers will not be stored within 10' of the drilling rig motor. • Fuel will be stored in UL approved safety containers with contents clearly label.	
	Operation of Motorized Equipment	▪ Operators of motorized equipment will be trained in the proper operation of that apparatus.	
	Tip Over Struck By Pinch Points	▪ Equipment will be shut off and stabilized accordingly. ▪ All personnel will be aware of moving machinery and parts and wear appropriate PPE when near machinery (e.g., hard hat, safety glasses, gloves etc.).	
	Noise Exposure	▪ Hearing protection will be worn in hazardous noise areas or working around heavy machinery or equipment. ▪ Wear earplugs when noise level from equipment exceeds 90 decibels (dBA) averaged over an eight-hour day.	

Training Requirements:

All personnel engaged in the operation of heavy equipment and machinery will have knowledge and experience in working with and operating the equipment. All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Operation- Barge or Boat

AHA No. 006

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 006	**Date:** June 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat, steel-toed boots, personal floatation device, gloves (project dependent)	**Analysis by:** R. Absolom	**Date:** June 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Operation of a barge/boat		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Navigate	Boat traffic	▪ Maintain a safe operating distance from shoreline, other vessels, shallow water, obstructions, etc.	
	Marine Operation Hazards	▪ Follow Marine Safety Standard Operating Procedures ▪ Follow all posted waterway speed limits. ▪ Operator will be aware of all buoys, shoal markers and other indications of potentially dangerous locations. ▪ Vessel will be equipped with all USCG and project required safety equipment.	
	Heat and Cold Stress	▪ Implement the cold/heat stress control program as appropriate to conditions. ▪ Workers will wear sunscreen and appropriate clothing to protect against cold or heat.	
	Slips, Trips, Falls- fall off boat	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Wear personal floatation device. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately.	

		▪ Be aware of obstacles on deck. ▪ Personnel will notify the SSO of any unsafe conditions	
	Waves, surges, currents.	▪ Be aware of sudden surges caused by incoming waves, unstable waters, and currents.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	High winds, dust storm	▪ Wear goggles if dust/debris is visible.	
	Pollen	▪ Take medication to minimize allergic reaction to pollen. Care should be taken if using medication that may cause drowsiness. ▪ Wear dust mask, if necessary.	
Position vessel over sample location	Boat traffic	▪ Maintain a safe operating distance form shoreline, other vessels, shallow water, obstructions, debris, etc.	
	Waves, surges, currents.	▪ Be aware of sudden surges caused by incoming waves, unstable waters, and currents.	
	Slips, Trips, Falls- fall off boat	▪ Wear footwear that has sufficient traction to reduce risk of slipping. ▪ Wear personal flotation device. ▪ Be aware of any obstacles on deck.	

Training Requirements: All boats will be properly registered for use in waterways of local, state and federal jurisdiction. The boat will be operated by experience personnel only. Additional training such as boating safety course, navigation regulations and emergency procedures is highly recommended.

PARSONS

Activity Hazards Analysis

Fueling-Motor Vehicle

AHA No. 007

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 007	**Date:** June 27, 2005.	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (when working around heavy equipment.	**Analysis by:** R. Absolom	**Date:** June 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Fueling of motor vehicle		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Fueling the vehicle	Overflow/Spills of fuel on to pavement.	▪ Ensure that fuel pumps have a UL listed automatic closing valve. ▪ Use approved safety containers. ▪ Workers will be aware capacity of fuel tank/container. ▪ Do not "squeeze in" extra gasoline to fill up tank. ▪ Inform gas station attendant of fuel spill.	▪ Follow operations manual maintenance and inspection procedures for each piece of equipment used on site.
	Explosion	▪ Ensure that all fuel is in approved safety containers. ▪ No smoking or open flame with in 50 feet. ▪ Equipment/Motors that use flammable fuel shall be shut down during fueling, servicing, or maintenance. ▪ Turn cell phones off during fueling of vehicle.	
	Spill on clothing	▪ Workers should be aware of capacity of fuel tank. ▪ Wear gloves while fueling. ▪ Change clothing if saturated with fuel.	

Training Requirements:

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Fueling-Boat or Barge

AHA No. 008

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 008	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (when working around heavy equipment), steel-toed boots, personal floatation device.	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Fueling of Boat or Barge		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Fueling the boat	Overflow/Spills of fuel in or onto boat or water	▪ Ensure that fuel pumps have a UL listed automatic closing valve. ▪ Use approved safety containers ▪ Workers will be aware capacity of fuel tank/container. ▪ Have spill sorbents or other spill containing/absorbing items available.	▪ Follow operations manual maintenance and inspection procedures for each piece of equipment used on site.
	Explosion	▪ Ensure that all fuel is in approved safety containers. ▪ No smoking or open flame with in 50 feet. ▪ Equipment/Motors that use flammable fuel shall be shut down during fueling, servicing, or maintenance	
	Spill on clothing	▪ Workers should be aware of capacity of fuel tank. ▪ Wear gloves while fueling. ▪ Change clothing if saturated with fuel.	
	No fire extinguishers available	▪ Ensure that boat has an approved fire extinguisher on board.	▪ The fire extinguishers must be inspected and approved at specific intervals.

Training Requirements:

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Fueling-Heavy Equipment and Machinery

AHA No. 009

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 009	**Date:** June 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (when working around heavy equipment	**Analysis by:** R. Absolom	**Date:** June 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Fueling of equipment and machinery		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Fueling the equipment	Overflow/Spills of fuel on to pavement	▪ Ensure that fuel pumps have a UL listed automatic closing valve. ▪ Workers will be aware capacity of fuel tank. ▪ Do not "squeeze in" extra fuel to fill up tank. ▪ Have berms or absorbent pads available.	▪ Follow operations manual maintenance and inspection procedures for each piece of equipment used on site.
	Explosion	▪ Ensure that all fuel is in approved safety containers. ▪ No smoking or open flame with in 50 feet. ▪ Equipment/Motors that use flammable fuel shall be shut down during fueling, servicing, or maintenance. ▪ Turn cell phones off during refueling vehicle. ▪ Ensure that all heavy equipment has a fire extinguisher.	▪ The fire extinguishers must be inspected and approved at specific intervals.
	Spill on clothing	▪ Workers should be aware of capacity of fuel tank. ▪ Wear gloves while fueling. ▪ Change clothing if saturated with fuel.	

	Site Location	▪ Provide refueling driver with directions to site and accessible route to equipment/machinery. ▪ Ensure that there is road (gravel, mats) for refueling truck to drive/park on.	
	Hazardous Site contamination	▪ Decontaminate equipment/machinery prior to refueling and remove from exclusion zone. ▪ Decontaminate refueling truck if contact with potential contaminated material. ▪ Provide training/awareness to driver, escort on site if need be.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Diving

AHA 010

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 010	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (working around drill rigs/heavy machinery), steel-toed boots, gloves, personal floatation device, diving gear (SCUBA).	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Diving	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Divers embark	Lack of Communication	▪ Prior to commencement of daily activities, methods of communication will be discussed. ▪ Personnel will have access to a cell phone or other means of communication. ▪ The activities for the day will be discussed and understood prior to daily start up with review of safety issues. ▪ The vessel will fly a divers flag or give warning to other boats during dive procedures.	
	Boat traffic	▪ Maintain a safe operating distance form shoreline, other vessels, etc. ▪ Ensure that the diving flag is visible to oncoming vessels. ▪ Warn other boaters of dive in progress using a Marine band radio.	
	Waves, surges, currents.	▪ Be aware of sudden surges caused by incoming waves, unstable waters, and currents.	

	Cold Stress	▪ Implement the cold/heat stress control program. ▪ SSO will monitor the divers for hypothermia.	
	SCUBA equipment failure	▪ Check all SCUBA equipment being used to ensure its working properly. ▪ Never dive without a partner. ▪ If oxygen fails, get to the surface as soon as possible following safe diving procedures with assistance from partner, sharing partner's oxygen if necessary. ▪ Administer first aid as needed once aboard boat. ▪ Be aware of marine life, obstacles along sediment surface and areas of potential entrapment.	
	Harm from fauna or flora	▪ Be aware of marine life and potential poisonous vegetation.	
	Carried away by current	▪ Be aware of underwater currents/tows.	

Training Requirements:

All divers will be trained and certified in SCUBA Diving procedures.

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Survey- Geophysical Investigation

AHA 011

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 011	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses, hard hat (working around drill rigs or heavy equipment), steel-toed boots, coveralls, personal floatation device, as appropriate to work: tyvek, splash goggles, nitrile outer gloves and latex inter gloves, rubber over boots.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Geophysical Investigation Survey	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Investigation Survey	Lack of communication	▪ Prior to commencement of daily activities, methods of communication will be discussed. ▪ Personnel will have access to a cell phone or other means of communication. ▪ The activities for the day will be discussed and understood prior to daily start up with review of safety issues.	
	Boat traffic	▪ Maintain a safe operating distance from shoreline, other vessels, shallow water, obstructions, etc.	
	Marine Operation Hazards	▪ Follow Marine Safety Standard Operating Procedures ▪ Follow all posted waterway speed limits. ▪ Operator will be aware of all buoys, shoal markers and other indications of potentially dangerous locations. ▪ Vessel will be equipped with all USCG and project required safety equipment.	

	Waves, surges, currents.	▪ Be aware of sudden surges caused by incoming waves, unstable waters, and currents.	
	Cold/Heat Stress	▪ Implement the cold/heat stress control program.	
	Working on the Lake-trip, slip, fall off boat Drowning	▪ Wear footwear that has sufficient traction to reduce risk of slipping. ▪ Wear personal flotation device. ▪ Be aware of any obstacles on deck.	
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects and equipment.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	High winds, dust storm	▪ Wear goggles if dust/debris is visible.	
	Fatigue	▪ Do not let fatigue or tiredness associated with the day's activity compromise attention to proper health and safety. ▪ Follow Marine Safety Operations Standards.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit

(PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Sampling- Sediment

AHA 012

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 012	**Date:** April 28, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** April 28, 2005
Work Operation: Sediment Sampling- (e.g., split spoon drilling, vibracoring etc.)	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Sediment Sampling	Marine Operation Hazards	▪ Personnel will follow the Marine Safety Standard Operations Procedures when working near or on the water.	
	▪ Inhalation of contaminated dust ▪ Inhalation of volatile contaminants ▪ Ingestion of contaminants ▪ Skin/eye contact with contaminated materials	▪ If exposure to contaminated materials occurs, promptly wash contaminated skin using soap or mild detergent and water. ▪ Wash eyes with large amounts of water. ▪ If a person breathes in a large amount of organic vapor, move the exposed person to fresh air. Perform artificial respiration if breathing stops. ▪ Keep the affected person warm and at rest. Obtain medical treatment for all of these situations as required. ▪ Wear appropriate safety equipment (i.e., goggles, gloves, boots) as appropriate for reducing risk of contamination.	
	Pinch Points/Overhead equipment	▪ Maintain awareness of procedures underway and be attentive of vibracore operations. ▪ Wear hard hats when around machinery and equipment.	

		▪ Keep observers back from active operations. Get operators attention before approaching.	
	Noise Exposure	▪ Hearing protection will be worn in hazardous noise areas or working around heavy machinery or equipment. ▪ Wear earplugs when noise level from equipment exceeds 90 decibels (dBA) averaged over an eight-hour day.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Sampling- Water

AHA 013

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 013	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Water Sampling	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Water Sampling	Marine Operation Hazards	▪ Personnel will follow the Marine Safety Operations Standards when working near or on the water.	
	▪ Inhalation of contaminated dust Inhalation of volatile contaminants ▪ Ingestion of contaminants ▪ Skin/eye contact with contaminated materials	▪ If exposure to contaminated materials occurs, promptly wash contaminated skin using soap or mild detergent and water. ▪ Wash eyes with large amounts of water. ▪ If a person breathes in a large amount of organic vapor, move the exposed person to fresh air, rinse mouth. Perform artificial respiration if breathing stops. ▪ Keep the affected person warm and at rest. Obtain medical treatment for all of these situations as required. ▪ Wear appropriate safety equipment (i.e., goggles, gloves, boots) as appropriate for reducing risk of contamination.	
	Working on the Lake-trip, slip, fall off boat Drowning	▪ Wear footwear that has sufficient traction to reduce risk of slipping. ▪ Wear personal flotation device. ▪ Be aware of any obstacles on deck.	

	Noise exposure	▪ Hearing protection will be worn in hazardous noise areas or working around heavy machinery or equipment. ▪ Wear earplugs when noise level from equipment exceeds 90 decibels (dBA) averaged over an eight-hour day.	
	Struck by Pinch Points	▪ Maintain awareness of procedures underway and be attentive of sampling operations.	
	Cold/Heat Stress	▪ Implement the cold/heat stress control program.	
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Sampling- Processing

AHA 014

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 014	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D- Long pants, safety glasses, hard hat (around heavy equipment or drill rig) nitrile gloves, steel-toed boots, personal floatation device (on a boat/barge).	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Sample Processing (outdoors and within processing trailer)	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Packing sample for off-site shipment to lab	Accidental breakage of glass bottles	▪ Wear cut-resistant gloves during packaging of glass bottles. ▪ Immediate clean-up of spills.	
	Back Injury, muscle strain/stress	▪ Personnel will utilize proper lifting techniques or ask for help with moving/lifting objects.	
	Hazardous Material Exposure	▪ Training and safety awareness of potential exposure to contaminates at the site and decontamination procedure. ▪ Appropriate PPE will be worn (e.g., safety glasses, gloves, etc.). ▪ Personnel will follow decontamination procedure. ▪ Screen for COCs with PID and mercury meter analyzer over samples and in workers breathing zone. ▪ Ventilate work area with fans or vents	

	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Personnel will clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions	
	Heat and Cold Stress	▪ The SSO will implement the cold/heat stress control program as appropriate to conditions. ▪ SSO will monitor workers for heat/cold stress symptoms.	
	Eye Injury	▪ PPE (safety glasses, etc.) will be worn.	

Training Requirements:

All personnel shipping hazardous materials will have appropriate DOT training.

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Decontamination- Area Setup

AHA No. 015

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 015	**Date:** April 27, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D-Long pants, safety glasses, hard hat (in presence of heavy equipment), steel-toed boots, gloves (leather work gloves for construction efforts and clearing).	**Analysis by:** R. Absolom	**Date:** April 27, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
Work Operation: Decontamination Area Setup		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Decontamination area set up	Vehicle and heavy equipment traffic in work area	▪ Operation of heavy equipment in accordance with the PSP. ▪ Be alert when working around heavy equipment. ▪ Ground guides for the backing of all vehicles. ▪ No heavy equipment will be operated without a ground guide. ▪ Barriers, warning signs, designated walkways or other safeguards must be provided where pedestrians are exposed to the risk of collision.	▪ Follow operations manual maintenance and inspection procedures for each piece of equipment used on site.
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	

	Cold and Heat Stress	▪ Implement the cold/heat stress program as appropriate to conditions. ▪ SSO will monitor workers for cold/heat stress symptoms.	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Work slowly during transit. Jumping, running, and horseplay are prohibited. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Injury from Hand Tool Operation	▪ Personnel awareness of potential hazards from hand tool operation. ▪ SSO will ensure that all tools used onsite are in proper working order and are in good condition. ▪ Personnel to inform SSO or Project Manger if tools require repair or replacement.	
	Biological Hazards (ticks, bees, mosquitoes, snakes, etc.)	▪ Personnel will be aware of potential exposure to biological hazards. ▪ Wear appropriate clothing (hat, long-sleeve shirt, long pants, gloves, boots etc.) and insect repellant. ▪ Personnel will wear thick gloves when clearing plants or debris from work area.	
	Injury from Power Tool Operation	▪ All tools will be in good working order. ▪ No damaged equipment will be issued until repaired or replaced. ▪ When power operated tools are designed to accommodate guards, the guard must be in place on the tool. ▪ Fuel powered tools may be refueled, serviced, or maintained only while the tools are stopped and not operating.	▪ Follow operations and maintenance procedures for each piece of equipment used on site.

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Decontamination- Boat or Barge

AHA 016

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 016	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Decontamination boat or barge	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Decontamination of boat (decontaminated water allowed to return to the Lake)	Site Hazardous Material Exposure	▪ Training and safety awareness of potential exposure to COCs at the site and decontamination procedure. ▪ Appropriate PPE will be worn. ▪ Personnel will follow decontamination procedures. ▪ Use caution when hosing or spraying the vessel.	
	Slips, Trips, Falls- falling off boat	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Personnel will clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Heat and Cold Stress	▪ Implement the cold/heat stress control program. ▪ SSO will monitor workers for Heat/Cold stress symptoms.	

	Eye Injury	▪ PPE (safety glasses, etc.) will be worn.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	
	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Snow	▪ Have warm clothes available for cold temperatures.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Decontamination- Large Equipment

AHA 017

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 017	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Equipment Decontamination	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Process items through decontamination in accordance with the PSP	Site Hazardous Material Exposure	▪ Training and safety awareness of potential exposure to contaminates at the site and decontamination procedure. ▪ Appropriate PPE will be worn. ▪ Personnel will follow decontamination procedure	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Personnel will clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Heat and Cold Stress	▪ Implement the cold/heat stress control program. ▪ SSO will monitor workers for Heat/Cold stress symptoms.	
	Eye Injury	▪ PPE (safety glasses, etc.) will be worn.	

Hot Water High Pressure Spray/Steam Clean	Hot Water Burns	▪ Prior to decontamination of large equipment, personnel will ensure that all other workers are outside of the decontamination areas. ▪ Personnel will wear appropriate PPE (e.g. gloves, tyvek, splash goggles, etc.).	
	Spill/Leak of contaminated Water	▪ Decontamination area will be designed to collect all contaminated wash/rinse water and to prevent the spread of run off. ▪ Berms and absorbent pads will be available for use in controlling spills.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8 hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Decontamination- Personnel

AHA 018

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 018	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Personnel Decontamination	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Decontaminate personnel exiting from the Exclusion zone	General	▪ Personnel should dress in suitable safety equipment to reduce exposure. ▪ Collect rinse water and dispose of per appropriate standard operating procedures. ▪ Follow decontamination procedures.	
	Site Hazardous Material Exposure	▪ Training and safety awareness of potential exposure to chemicals of concern at the site and decontamination procedure. Review chemicals of concern. ▪ Appropriate PPE will be worn (e.g. tyvek, nitrile gloves, safety glass, etc.).	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	

	Heat and Cold Stress	▪ The SSO will implement the cold/heat stress control program as appropriate to conditions.	
	Eye Injury	▪ PPE (safety glasses, splash goggles) will be worn.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to, initial 40-hour, 8-hour Supervisor and annual 8-hour refresher.

Medical qualification, training and fit-testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of a chemical for more than 30 days in a year, then they must participate in a Medical Surveillance Program as required by 29 CFR 1910.120(f)

All assigned employees working at potentially contaminated sites are required to familiarize themselves with this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Decontamination- Portable Tools

AHA 019

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 019	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Tool Decontamination	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
General	Site Hazardous Material Exposure	▪ Training and safety awareness of potential exposure to contaminates at the site and decontamination procedures. ▪ Appropriate PPE will be worn (e.g., gloves, splash goggles, Tyvek, etc.). ▪ Personnel will follow decontamination procedures.	
	Eye Injury	▪ PPE (safety glass, etc.) will be worn.	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Personnel will clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
Remove gross contamination with brush.	Damaging equipment or tools	▪ To clean instrumentation: follow manufacturer's instructions.	
Place in decontamination bucket or rinse with	Spill/leakage	▪ Workers will have berms or spill absorbent pads nearby to	

decontamination solution		prevent the spread of contaminated water. ▪ Decontamination area will be designed to minimize exposure and maintain spill containment.	
Clean with wash solution	Chemical reaction with wash solution	▪ A fire extinguisher will be located in an accessible location on site. ▪ Review the chemicals of concern and use appropriate wash solution.	
Rinse with water	Contamination remains	▪ Personnel will repeat proper decontamination procedure.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8-hour Supervisor and annual 8-hour refresher training.

Medical qualification, training and fit testing must be received on an annual basis for individuals that wear a respirator. If an individual wears a respirator more than 30 days per year, or they are exposed at or above the Permissible Exposure Limit (PEL) of chemical for more than 30 days in a year, then them must participate in a Medical Surveillance Program as required by 29 CFR 1910.120 (f).

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Cone Penetrometer Testing &

Membrane Interface Probe Operation

AHA 020

Project Name & Number: Onondaga Lake Pre-Design Investigation 441797	**AHA No.** 020	**Date:** March 17, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Modified Level D- Long pants, safety glasses/ splash goggles, hard hat, steel-toed boots, nitrile outer gloves and latex inter gloves, tyvek coveralls, and personal floatation device.	**Analysis by:** R. Absolom	**Date:** March 17, 2005
Work Operation: Cone Penetrometer Testing & Membrane Interface Probe Operation	**Superintendent/Competent Person:** TBD	**Reviewed by:** M. Raybuck	**Date:** July 5, 2005
		Approved by:	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Drive CPT into sediment and collect data	Lack of Communication	▪ Prior to commencement of daily activities, the methods of communication will be discussed. ▪ Personnel will have access to a cell phone or other means of communication. ▪ The activities for the day will be discussed and understood prior to daily start up with review of safety issues. ▪ Batteries will be checked and recharged prior to start of days work.	
	▪ Inhalation of contaminated dust ▪ Inhalation of volatile contaminants ▪ Ingestion of contaminants ▪ Skin/eye contact with	▪ If exposure to contaminated materials occurs, promptly wash contaminated skin using soap or mild detergent and water. ▪ Wash eyes with large amounts of water. ▪ If a person breathes in a large amount of organic vapor, move the exposed person to fresh air. Perform artificial respiration if breathing stops.	

	contaminated materials	▪ Keep the affected person warm and at rest. Obtain medical treatment for all of these situations as required. ▪ Wear appropriate safety equipment (i.e., goggles, gloves, boots) as appropriate for reducing risk of contamination. ▪ When transferring equipment and samples to land, follow procedures for demobilization.	
	Pinch Points/Overhead equipment	▪ Maintain awareness of procedures underway and be attentive of vibracore operations. ▪ Wear hard hats when around machinery and equipment. ▪ Keep observers back from active operations. Get operators attention before approaching.	
	Working on the Lake-trip, slip, fall off boat Drowning	▪ Wear footwear that has sufficient traction to reduce risk of slipping. ▪ Wear personal flotation device. ▪ Be aware of any obstacles on deck.	
	Noise exposure	▪ Hearing protection will be worn in hazardous noise areas or working around heavy machinery or equipment. ▪ Wear earplugs when noise level from equipment exceeds 90 decibels (dBA) averaged over an eight-hour day.	
	Cold/Heat Stress	▪ Implement the cold/heat stress control program. ▪ Personnel will wear appropriate clothing to reduce the risk of heat or cold stress injury. ▪ SSO will monitor workers body conditions in extreme heat/cold.	
	Ultraviolet Radiation Hazard	▪ Personnel will wear appropriate PPE (e.g., long pants, long sleeves, etc.) and use sunscreen when appropriate.	

Training Requirements:

All personnel engaged in hazardous substance removal or other activities that expose or potentially expose them to hazardous substances or health hazards shall receive appropriate training as required by 29 CFR 1910.120(e), including, but not limited to initial 40-hour, 8-hour Supervisor and annual 8-hour refresher training.

All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Site Area Grading

AHA 022

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 022	**Date:** August 1, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D-Long pants, safety glasses, hard hat (in presence of heavy equipment), steel-toed boots, gloves (leather work gloves for construction efforts and clearing).	**Analysis by:** R. Absolom	**Date:** August 1, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:**
Work Operation: Site Area- Grading		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Site Area Grading	Vehicle and heavy equipment traffic in work area	▪ Operation of heavy equipment in accordance with the PSP. ▪ Be alert when working around heavy equipment. ▪ Ground guides for the backing of all vehicles. ▪ No heavy equipment will be operated without a ground guide. ▪ Barriers, warning signs, designated walkways or other safeguards must be provided where pedestrians are exposed to the risk of collision.	▪ Follow operations manual maintenance and inspection procedures for each piece of equipment used on site.
	Dust inhalation	▪ Implement engineering controls, as necessary, to limit amounts of dust (i.e., keep ground wet, etc.) ▪ If visible dust is observed, monitor dust levels with DataRAM dust monitoring equipment (or equivalent) while grading and leveling.	
	Muscle strain/injuries from improper lifting	▪ Personnel will utilize proper lifting techniques or ask for assistance with moving/lifting objects.	
	Rain	▪ Have proper PPE (i.e. rain gear, footwear, etc) available. Be aware of slip hazards, puddles, etc.	

	Sunshine	▪ Have sunscreen available for ultraviolet protection. Have water for dehydration.	
	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	Cold and Heat Stress	▪ Implement the cold/heat stress program as appropriate to conditions. ▪ SSO will monitor workers for cold/heat stress symptoms.	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Work slowly during transit. Jumping, running, and horseplay are prohibited. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Injury from Hand Tool Operation	▪ Personnel awareness of potential hazards from hand tool operation. ▪ SSO will ensure that all tools used onsite are in proper working order and are in good condition. ▪ Personnel to inform SSO or Project Manger if tools require repair or replacement.	
	Biological Hazards (ticks, bees, mosquitoes, snakes, etc.)	▪ Personnel will be aware of potential exposure to biological hazards. ▪ Wear appropriate clothing (hat, long-sleeve shirt, long pants, gloves, boots etc.) and insect repellant. ▪ Personnel will wear thick gloves when clearing plants or debris from work area.	

Training Requirements: All personnel engaged in the operation of heavy equipment and machinery will have knowledge and experience in working with and operating the equipment. All assigned employees are required to familiarize

themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Site Area- Electrical Work

AHA 023

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 023	**Date:** August 2, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D-Long pants, safety glasses, hard hat (non conductive) non-conductive metal free boots, gloves (rubber gloves for electrical work).	**Analysis by:** R. Absolom	**Date:** August 2, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:**
Work Operation: Site Area- Electrical Work		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Hooking up electrical connection for trailers and vicinity.	Electrical shock, Electrical burns	▪ Follow OSHA's Lockout Tag-Out Procedures when working with live electricity. ▪ Wear proper PPE (e.g., non-conductive hard had, metal free non-conductive boots, safety glasses, rubber gloves, etc.) ▪ Use proper engineering controls when working with electricity (i.e., grounding, bonding, insulation, guarding, etc.) ▪ Restrict access to work area.	
	Electrical Fires	▪ Use proper engineering controls when working with electricity (i.e., grounding, bonding, insulation, guarding, etc.) ▪ Have a carbon dioxide, or CO2 and halon extinguishers available. ▪ Check insulation of wiring. ▪ Install circuit protection devices (e.g. fuses, ground fault interrupters, circuit breakers, thermal sensors, etc.)	
	Rain	▪ Be aware of work conditions and do not work in wet areas with live electricity	

	Lightning	▪ Do not begin or continue work until lightning subsides for 20 minutes.	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and tripping hazards. ▪ Work slowly during transit. Jumping, running, and horseplay are prohibited. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Clean up all spills immediately. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Injury from Hand Tool Operation	▪ Ensure that all tools used onsite are in proper working order and are in good condition, clean, oil free, and have insulated grips. ▪ Do not leave hand tools lying around where they could become a hazard. ▪ Personnel to inform SSO or Project Manger if tools require repair or replacement. ▪ Keep tools in non-conductive container and be aware of metal on tool belts.	
	Injury from Power Tool Operation	▪ All tools will be in good working order and properly grounded. ▪ No damaged equipment will be issued until repaired or replaced. ▪ When power operated tools are designed to accommodate guards, the guard must be in place on the tool. ▪ Do not overload electrical circuits and use a GFCI.	▪ Follow operations and maintenance procedures for each piece of equipment used on site.

Training Requirements: All personnel engaged in the working/installing electrical wiring and conduits will have knowledge and experience working with electricity. All assigned personnel will have appropriate licensing and certification requirements relevant to State requirements. All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

PARSONS

Activity Hazards Analysis

Hot Work

AHA 024

Project Name & Number: Onondaga Lake Pre Design Investigation 441797	**AHA No.** 023	**Date:** August 2, 2005	**New:** Yes
Location: Onondaga Lake, Onondaga County, New York	**Contractor:** Parsons		**Revised:**
Required Personal Protective Equipment:	Level D-Long pants, safety glasses, hard hat (non conductive) non-conductive metal free boots, gloves (rubber gloves for electrical work).	**Analysis by:** R. Absolom	**Date:** August 2, 2005
	Superintendent/Competent Person	**Reviewed by:** M. Raybuck	**Date:**
Work Operation: Hot Work		**Approved by:**	**Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Hot Work (welding, open flame)	Burns, eye injuries	▪ Wear appropriate PPE (e.g., think leather welding gloves, welding shield/ goggles with appropriate filtered lenses; long sleeves and pants, etc.). ▪ During welding operations all employees not performing the work or providing assistance will remain back from the work zone.	
	Fire/ Explosion	▪ Have adequate fire suppression available in immediate work area. ▪ Inspect all torches, tanks, hoses prior to starting. ▪ Remove all flammable material around the work area. ▪ Provide a firewatcher. ▪ Ensure that all fuel valves and torch supply valves are shut off when not in use. ▪ Ensure that all cylinders are properly marked and kept away from heat sources.	
	Rain	▪ Be aware of work conditions and do not work in wet areas.	
	Slips, Trips, Falls	▪ Workers will be aware of potentially slippery surfaces and	

		tripping hazards. ▪ Workers will keep all areas clean and free of debris to deter any unnecessary trips and falls. ▪ Personnel will notify the SSO of any unsafe conditions.	
	Injury from Power Tool Operation	▪ All tools will be in good working order and properly grounded. ▪ No damaged equipment will be issued until repaired or replaced. ▪ When power operated tools are designed to accommodate guards, the guard must be in place on the tool.	▪ Follow operations and maintenance procedures for each piece of equipment used on site.
	Lack of Communication	▪ Prior to commencement of daily activities, the methods of communication will be discussed. ▪ Personnel will have access to a cell phone or other means of communication. ▪ The activities for the day will be discussed and understood prior to daily start up with review of safety issues. ▪ Batteries will be checked and recharged prior to start of days work.	

Training Requirements: All personnel engaged in the hot work will have knowledge and experience working with welding equipment, torches and other necessary equipment. All necessary certification and permits will be provided prior to start of work. All assigned employees are required to familiarize themselves with the contents of this AHA before starting a work activity and review it with their Supervisor during their Daily Safety Huddle.

ATTACHMENT D

MARINE SAFETY STANDARD OPERATING PROCEDURES

Marine Safety Standard Operating Procedures

This Operating Procedure establishes guidelines for the safe operation of water craft during field activities such as biological sampling, sediment sampling, and bathymetry. The Coast Guard and individual states have additional specific requirements. This is intended to apply to the operation of Class A and Class 1 boats.

DEFINITIONS

Class A - a boat less than 16 feet long. Class A has the greatest numbers of boats. They may be transported by a vehicle or trailer. Due to their lightness and small size, many can become unstable if weight in them is excessive or carelessly loaded. Too much weight makes these boats sluggish, reduces their freeboard (the height of their sides above water) and can swamp (flood) them. Class A boats should not be operated in rough water and may not be operated if "Small Craft Warnings" are in effect.

Class 1 - a motorized boat from 16 feet to less than 26 feet in length. Though heavier and more powerful than Class A craft, most are still trailerable.

Type III Flotation Aid - generally the most comfortable, have at least 15.5 lbs of buoyancy in the adult size. They do not turn the wearer face-up and can be jackets or vests.

Type IV Throwable Devices - include the horseshoe, rung, and cushion. They have at least 16.5 lbs of buoyancy and must offer immediate access.

BOARDING SMALL BOATS

Be sure that the boat is secure. With one hand on the boat, quickly lower yourself straight down into the center of the boat, but do not jump into the boat. A life preserver should be worn. If others are boarding, have them step along the fore-and-aft centerline of the boat while you hold the boat in place along the pier. Avoid carrying anything aboard. Step down into the boat and load the items off the pier, or have someone hand them to you one by one.

LOADING OF BOATS

Amount and location of weight (persons and gear: the movable ballast) is critical for capsize protection. In a small utility boat, keep weight toward the middle, both fore-and-aft and side-to-side. If you see waves approaching, take them on the bow. Overloading a small boat inhibits its ability to rise to oncoming waves. Less freeboard means less clearance above the water's surface to prevent swamping. All craft must be operated within the boat manufacturers weight limits (see placard or sticker in boat for load/weight limits.)

BOAT SAFETY EQUIPMENT FOR CONTRACTOR OPERATED CLASS A AND CLASS 1 BOATS

All persons on the boat will wear a US Coast Guard approved Type III personal flotation vest. The type I and II vests (typically orange chest type) are acceptable but are more difficult to work in. However they will turn a victim onto their back and hold the victims face above the water. In addition, throwable Type IV devices will be readily available for use.

At least one 1A 10BC Type US Coast Guard approved hand-held portable fire extinguisher will be on the boat, readily available for use.

A marine VHF radio will be available on the boat for making distress calls, if necessary, to communicate with other vessels, and to monitor weather forecasts.

Visual Distress Signal Flares and a battery operated light will be in good working order and readily available on the boat.

A sound-producing distress signal; either bell, whistle, or horn, will be in good working order and readily available on the boat.

A first aid kit will be available on the boat.

All boat fuel (gasoline) will be contained in engine manufacturer's approved containers that supply fuel to the engine via neoprene fuel lines. No fuel transfers between containers are to be conducted aboard the boat.

A secondary means of propulsion will be available on the boat (oars or paddle).

A boat hook, anchors, and proper mooring lines will be available on the boat.

SAFE BOATING OPERATIONS

All boats will be properly registered for use in waterways of local, state, and federal jurisdictions.

All boat trailers and towing vehicles will be properly licensed and in good working order.

The boat will only be operated by experienced personnel. The US Coast Guard Auxiliary and other organizations regularly sponsor boating safety courses. In addition to basic boating safety, the courses cover navigation regulations and emergency procedures. The training is recommended, even for experienced boat operators.

The boat will be operated in a safe manner and all waterway regulations will be obeyed.

No smoking or alcoholic beverages are permitted on the boat.

No recreational equipment for fishing, hunting, water skiing, or self-contained underwater breathing apparatus (SCUBA) diving will be allowed on the boat unless specifically authorized as part of the work-related equipment.

BOATING ACCIDENTS

Coast Guard regulations, as well as state regulations, require accident reports if significant injuries or property damage occurs. It is normally best to stay with the boat in case of an accident and use signal flares or a distress horn to summon help. Hypothermia (loss of body heat) is a significant risk for these involved in boating accidents due to the rapid conduction of body heat by cold water.

Emergency First Aid Procedures

If an employee working in a contaminated area is physically injured, Red Cross first aid procedures will be followed. Depending on the severity of the injury, emergency medical response may be sought. If the employee can be moved, they will be taken to the edge of the work area (on a stretcher, if needed) where contaminated clothing will be removed (if possible), emergency first aid administered to await transportation to local emergency medical facility.

If the injury to the worker is chemical in nature (e.g., overexposure), the following first aid procedures are to be instituted as soon as possible:

a. Eye Exposure - If contaminated solid or liquid gets into the eyes, wash eyes immediately at the emergency eyewash stations using large amounts of water and lifting the lower and upper lids occasionally. Obtain medical attention immediately. (Contact lenses are not permitted in the Exclusion Areas.)

b. Skin Exposure - If contaminated solid or liquid gets on the skin, promptly wash contaminated skin using soap or mild detergent and water. If solids or liquid penetrate through the clothing, remove the clothing immediately and wash the skin using soap or mild detergent and water. Obtain medical attention immediately if symptoms warrant.

c. Breathing - If a person breathes in large amounts of organic vapor, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Obtain medical attention as soon as possible.

d. Swallowing - If contaminated solid or liquid has been swallowed and the person is conscious, call poison control or refer to MSDS to determine whether it is better to induce vomiting, dilute with water, or neutralize. Obtain medical attention immediately.

FIRST AID PROCEDURES

- In general, moving an injured or exposed person(s) should only be done if there is immediate danger. In those cases, it is critical that personnel fully support the head, neck, and back whenever a victim of trauma, including falls, must be moved. Stabilize the victim on the boat and transport the victim to the site boat dock or marina to meet emergency services.
- Call an ambulance for transport to local hospital immediately. This procedure should be followed even if there is no apparent serious injury.
- Render first aid, if necessary; and decontaminate affected personnel, if necessary.
- Evacuate other on-site personnel to a safe place until the Site Manager (assisted by the SSO) determines that it is safe for work to resume.
- Report the accident to the HSO and Project Manager immediately.