

B&B Gas Well Services, LLC
HSE Manual

**B&B Gas Well Services, LLC.
Health, Safety and
Environmental Manual**

**PERSONAL PROTECTIVE EQUIPMENT
PROGRAM**

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

Table of Contents

<u>Topic</u>	<u>Page</u>
1.0 Objective	3
2.0 Scope	3
3.0 References	3
4.0 Training	3
5.0 Responsibilities	4
6.0 Definitions	4
7.0 Hazard Determination	5
8.0 Engineering Controls	5
9.0 Procedures	5
10.0 Contract and/or Temporary Employees	9
<u>Appendices</u>	
Appendix I – Eye and Face Protection Selection Chart	
Appendix II – Filter Lenses for Protection against Radiant Energy	
Appendix III – PPE Certification for Hazard Assessment	

1.0 OBJECTIVE

The purpose of the Personal Protective Equipment Program is to ensure that adequate protective measures are established to protect employees from recognized hazards in the workplace. This program will set forth selection and use requirements for specific types of Personal Protective Equipment (PPE). This program will also establish the guidelines for specific hazard assessments of the various job tasks performed within the work place.

2.0 SCOPE

The provisions of this program apply to all job tasks where hazards are present or likely to be present that would necessitate the use of PPE.

The provisions of this program are applicable to all employees (including contract and temporary employees) of B&B Gas Well Services, LLC ("B&B", "the Company").

Note: As with all B&B's Health, Safety and Environmental (HSE) programs and procedures, should our client's requirements be more stringent than B&B's, then the more stringent requirement applies, so long as it does not endanger the employees' life or health, nor endanger the environment or the general public. A violation of a customer's requirement is also considered a violation of a B&B requirement.

3.0 REFERENCES

Occupational Safety and Health Administration, Department of Labor; 29 CFR 1910.132, 133, 135, 136, 138.

4.0 TRAINING

Each employee will be trained and tested to know at least the following:

When PPE is necessary;

What type of PPE is necessary:

How to properly Don, Doff, adjust and wear PPE;

The limitations of PPE;

The proper care, maintenance, useful life and disposal of the PPE.

Management will ensure that each employee has received and understands the required training through a written certification and documentation that contains the name of each employee trained, the dates of the training, and that identifies the subject of the certification.

Initial training shall be provided prior to initial job assignment.

Refresher training shall be provided:

When management has reason to believe that any employee who has already been trained does not have the adequate understanding or skill required;

When changes in the workplace render previous training obsolete;

When changes in the types of PPE to be used render previous training obsolete;

When inadequacies in an employee's knowledge or use of PPE indicate that the employee has not retained the information presented during initial training.

All training for employees will be documented in the HSE files.

5.0 RESPONSIBILITIES

Employees (as listed in Section 2.0) shall be familiar with and comply with the contents of this program.

Management will:

Implement, support and enforce this program; periodically review and evaluate its overall effectiveness, and make modifications as necessary.

Assess each job task and work site for hazards that would necessitate the use of PPE to protect employees from potential injury.

Establish the selection criteria for appropriate PPE by completing a PPE Hazard assessment.

Provide all required PPE to employees and ensure that PPE is available when needed;

Ensure employee-owned PPE is adequate, properly maintained and in a sanitary and reliable condition.

Employees will:

Understand and comply with the requirements of this program prior to commencement of work.

Employees will inspect PPE for condition and proper fit prior to use.

Stop the task at hand and alert the Designated Person In Charge if PPE or circumstances compromise safe job performance.

6.0 DEFINITIONS

Designated-Person-In-Charge (DPIC) – The person on-site who has the overall responsibility for a facility, project, work crew or work area.

Don – To put on (as in a respirator)

Doff – To remove or take off

7.0 HAZARD DETERMINATION

PPE Hazard Assessments must be completed for all facilities and operations to determine if hazards are present that necessitates and justifies the use of PPE.

See Appendix III, Certification of Hazard Assessment Form, shall be used to assess jobs/tasks for hazards that would necessitate the use of PPE, especially for those tasks which may produce hazards that are not identified on the form.

The Hazard Assessment shall be documented and retained by the Safety Dept.

8.0 ENGINEERING CONTROLS

PPE will be used as secondary protection for the employee. Every task must be evaluated to remove as many hazards as possible. Guards, shields, blinds, sound reduction devices, work practices, and other engineering controls will be utilized to reduce the hazard(s) as feasible.

9.0 PROCEDURES

Unless otherwise noted in this program, all PPE required for the task will be provided by the Company. Each required PPE item will be issued to the employee. Each employee in turn is required to ensure PPE is adequate, inspected, and cared for.

Damaged or Defective PPE

PPE that is defective, damaged or is in poor condition ***is strictly prohibited***; each employee will immediately replace all PPE that is defective, damaged or in poor condition

Eye and Face Protection

Safety glasses with side shields or other protective eye wear meeting the requirements of the American National Standards Institute standard ANSI Z87.1-2003, "High Impact" are **required to be worn by all B&B, contract and temporary employees when working in or on any work location or other work environment**. This requirement also applies to **all visitors** to these areas.

Exceptions: Safety glasses are not required to be worn in non-hazardous areas such as offices, meeting rooms, and riding in closed vehicles. Safety glasses can be removed during onsite meetings (only when work stoppage has occurred in the immediate area and all involved conclude it is safe to remove eye protection).

Chemical (splash) safety goggles will be worn when working with or near any chemical or other liquid eye hazard (i.e., liquid hydrocarbons) requiring such protection as stated in the Material Safety Data Sheet (MSDS).

A full-face shield will be worn with impact resistant safety goggles or safety glasses with side-shields when the nature of the work is likely to produce flying projectiles that are an injury hazard to the face, as well as the eyes. This will include but is not limited to the following types of tasks: grinding, chipping, chiseling, sanding, woodworking, weed-eating, buffing, use of striking tools, etc.

Proper eye and face protection will be utilized when working with or near equipment that produces light and/or radiation hazards such as those associated with welding and cutting operations. Some of the applicable protective devices include: welding hoods/helmets, and infrared filtering lenses available in a variety of tints. Minimum required lens tinting is provided in Appendix II:

See Appendix I for eye and face protection selection criteria.

Head Protection

Protective helmets (hardhats) meeting the requirements of the American National Standards Institute standard ANSI Z89.1-1997 Class E&G are **required to be worn by all B&B, contract and temporary employees when working in or on any location or other work environment.** This requirement also applies to **all visitors** to these areas.

Exceptions: Protective helmets are not required to be worn:

- In non-hazardous areas such as offices, meeting rooms, and in vehicles. Protective helmets are not required for machinists while stationed at the machine and operating same in a machine shop.
- In parts areas where the stored material above shoulder height weights less than 6 lbs.
- During onsite meetings in operating areas (only when work stoppage has occurred and all involved conclude it is safe to remove head protection).
- When necessary for close visual inspections (as long as work stoppage has occurred in the immediate area and all involved concur it is safe to perform close visual inspections without head protection).
- During welding, a welding hood may replace a protective helmet for only the period of time the person is welding.
- Designated safe areas.

The protective helmet provided by the Company will be the only authorized helmet for use by employees.

Protective Helmets will not be altered in any way: Do not paint, apply unauthorized decals, name plates or cut, drill or bend the hard hat. The suspension cannot be modified or altered in any way.

Protective helmets will be designed to reduce electrical shock hazard. Therefore, ***metal hardhats are not allowed.***

Foot Protection

Protective footwear (safety-toed) meeting the requirements of the American National Standards Institute standards ANSI Z41-1999 is **required to be worn by all B&B, contract and temporary employees when working in or on any location or other work environment.** This requirement also applies to **all visitors** entering live work areas (see exceptions below). Protective footwear must provide ankle protection and have soles with defined heels for climbing ladders. Metatarsal guards are required when duties present a hazard of equipment or material crushing the foot.

Exceptions: Protective footwear is not required to be worn in non-hazardous areas such as offices, meeting rooms, and in vehicles. Protective footwear is not required during onsite meetings (only when work stoppage has occurred in the immediate area and all involved conclude it is safe to allow personnel without or removal of protective footwear).

Daily-use safety-toed footwear is provided by the employee (so long as it is common footwear and the employee can wear it off duty).

Electricians, when working near exposed electrically energized equipment, will wear protective footwear designed for electrical hazards.

Protective footwear made of canvas, nylon, or soft porous leather is not acceptable for job assignments hazardous chemicals.

Rubber/chemical resistant safety-toed boots or chemical resistant overshoes must be worn while working with hazardous chemicals when there is a potential for splashing or sufficient quantity to create standing liquids.

Hand Protection

Hand protection is required to be worn by all B&B, contract and temporary employees, when employees' hands are exposed to injury causing hazards such as those from skin absorption of harmful substances, cuts or lacerations, abrasions, puncture wounds, chemical burns, and harmful temperature extremes.

Hand Protection will be inspected before each use for holes, tears and worn areas. Defective gloves shall be discarded immediately.

Respiratory Protection

Respirators will be used in accordance with the requirements set forth in B&B's Respiratory Protection.

Flame Resistant Clothing

Flame resistant clothing is required for employees who routinely work in areas or perform tasks where they are exposed to hydrocarbons and there is a risk of exposure to a flash fire or electric arc.

Clothing

Long sleeve shirts are recommended on work sites; "tank top T shirts" or other apparel which leave the shoulder or upper chest exposed is prohibited and trousers with legs that reach the shoe or boot shall be worn at all times.

Clothing made from natural fibers, such as 100% cotton, is recommended.

Loose, poorly fitted or torn clothing is prohibited when working around machinery with moving parts. It is highly recommended, that all jewelry is removed prior to performing work; when not practical (e.g., wedding rings); jewelry must be protected from contact with tools and equipment.

Additional protective clothing will be worn when working with hazardous substances (i.e., acid, crude oil, chemicals, etc.).

Seat Belts

All employees, when operating or occupying any company owned, leased, or personal vehicle while performing services for B&B, (regardless of the location) will wear seat belts.

Fall Protection

When working at heights reaching or exceeding six (6) feet, all employees will be protected from falling by an approved guardrail system, or approved personal fall arrest system.

Please refer to B&B's ***Fall Protection Program*** for additional information.

Sunscreen

Due to the dangers of skin cancer associated with over-exposure to ultraviolet rays from sunlight, it is recommended that all employees apply sunscreen to all exposed skin prior to working outdoors. It is advised that personnel use a sunscreen with a minimum Sun Protection Factor (SPF) of 15.

10.0 CONTRACT AND/OR TEMPORARY EMPLOYEES

The provisions of this policy apply to all contract and temporary employees of B&B.

All contractors shall provide PPE for all their employees (meeting the requirements of this program) unless stated otherwise in the contract.

All temporary employees will be provided with PPE as noted in this program.

Appendix I

Eye and Face Protection Selection Chart

<i>Source</i>	Assessment of Hazard	Protection
IMPACT Chipping, grinding, machining, woodworking, sawing, drilling, chiseling, power fastening, riveting, and sanding.	Flying fragments, objects, large chips, particles, sand, dirt, dust, etc.	Impact resistant goggles; Full face shield; Safety glasses with side-shields
HEAT – Pouring, casting, hot dipping, and welding.	Hot sparks, splash from molten metal, high temperature exposure	Face shields, impact goggles; Face shields, splash goggles; Screens, reflective face shields
CHEMICALS – Acid and chemicals handling, crude oil, etc.	Splash, or irritating mists	Splash goggles and chemical face shield for severe exposure
DUST – Woodworking, buffing, general dusty conditions (i.e., excavations)	Nuisance dust	Goggles – impact resistant or splash (or combination)
LIGHT and/or RADIATION Welding: Electric arc Welding: Gas Cutting, Torch brazing, Torch soldering Glare	Optical Radiation Optical Radiation Optical Radiation Poor Vision	Welding helmets or welding shields. Typical shades 10-14 Welding goggles or welding face shield. Shades: Gas Welding 4-8, Cutting 3-6, Brazing 3-4 Safety glasses with side-shields or welding face shield. Typical shades 1.5.-3.0 Tinted safety glasses.

Notes to the Eye and Face Protection TABLE 1:

- 1) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
- 2) Operations involving heat may also involve light radiation.
- 3) Face shields (when required) must be worn in conjunction with primary eye protection – safety glasses with side-shields or goggles.
- 4) As required by the standard, filter lenses must meet the requirements of 1910.133 (a)(5) for shade designations. Tinted/shaded lenses are not filtering unless they are marked and identified as such.
- 5) Caution should be exercised in the use of metal frame protective devices in electrical hazard area.
- 6) Welding helmets or welding face shields (when required) will be used over primary eye protection-safety glasses with side-shields or goggles.

Appendix II

Filter Lenses for Protection against Radiant Energy

Operation	Electrode Size 1/32 in.	Arc Current	*Minimum Shade
Shield Metal Arc Welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-500	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas tungsten arc welding		Less than 50	8
		50-150	8
		500-100	10
Air Carbon	Light	Less than 500	10
Air Cutting	Heavy	500-1000	11
Plasma arc cutting	**Light	Less than 300	8
	**Medium	300-400	9
	**Heavy	400-800	10

Torch Brazing			3
Torch Soldering			2
Carbon Arc Welding			14
OPERATION	PLATE THICKNESS – INCHES		MINIMUM SHADE
Gas Welding:			
Light	Under 1/8		4
Medium	1/8 to 1/2		5
Heavy	Over 1/2		6
Oxygen Cutting:			
Light	Under 1		3
Medium	1 to 6		4
Heavy	Over 6		5

*As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum protective shade. In oxy-fuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.

Appendix III
PERSONAL PROTECTIVE EQUIPMENT
CERTIFICATION OF HAZARD ASSESSMENT

Signature: _____

Date: _____

PPE Requirements

PPE	HAZARD	RELATED JOB TASK	Needed
Safety Glasses	Flying fragments, objects, large chips, particles, sand, dirt, dust, etc.	When chipping, grinding, machining, woodworking, sawing, drilling, chiseling, power fastening, riveting, sanding, and welding. (Required at all times)	
Impact Goggles	Flying fragments, objects, particles, etc.	Sand blasting, hydro blasting	
Splash Goggles	Potential exposure to hazardous chemicals, acids, caustics, fine dust, etc.	When working near hazardous chemicals or acids	
Face Shield	Flying fragments, objects, particles, etc.	When cutting, grinding, or drilling. Using chipping hammers or wire wheels	
	Potential exposure to hazardous chemicals, acids, caustics, etc.	When working near hazardous chemicals or acids	
	Exposure to heat – lighting heaters, pouring hot liquids, etc.	When working near hazardous chemicals/acids and/or pouring hot liquids	
Note: Face shields must be worn only in conjunction with primary eye protection; that is safety glasses with side shields or goggles.			
Head Protection	Falling objects, Striking against hazards, flying objects, etc.	Rig site and field environments (required at all times).	
Hearing Protection	High noise areas - All areas where the noise levels are 85 decibels or greater.	Working around engines, compressors, plasma cutting, equipment operations, etc.	
Note: Various styles of hearing protection are available from the Safety Dept.			

B&B Gas Well Services, LLC
HSE Manual

Gloves	Cotton/leather - Cuts, lacerations, abrasions, puncture wounds, etc.	Handling equipment and tools	
	Leather/heat resistant – Harmful temperature extremes	Welding operations, cutting operations	
	Chemical resistant -Skin absorption, or burns caused by chemicals	Handling chemicals	
Foot Protection Rubber/chemical resistant safety-toed boots or overshoes	Standing hydrocarbons/chemicals Standing liquids of any type	Working with heavy objects, working with chemicals (Required at all times)	
	Metatarsal guards - Heavy metal materials or objects, potential for crushing injuries	Working on rig site/customer locations Working in areas that have potential for heavy equipment to fall.	
Respiratory Protection	Atmospheres of unknown contaminants Hydrogen Sulfide, Oxygen deficient atmospheres, Airborne contaminants at IDLH* levels, etc. Dusts, mists, fumes, organic vapors at levels below the IDLH*	Confined space, H ₂ S sites, sand blasting, handling chemicals, grinding operations	
Clothing Water/Chemical Resistant Clothing..... Protective Coveralls... Flame Resistant Clothing	Liquid hydrocarbons, produced water, chemicals Solid airborne contaminants (i.e., fiberglass particles) Flash Fire Potential (See Pages 9 and 10)	Welding and cutting operations, handling chemicals,	
Fall Protection (Full Body Harness with Lanyard/Enclosed platforms)	Working at heights six (6) feet or above.	Tops of tanks	
Retrieval Equipment (Full Body harness and Retrieval Line)	Working in any area defined as a confined space.	Confined space, trenching, H ₂ S sites	

*Immediately Dangerous to Life and Health