CITY OF FAIRFIELD

RESOLUTION NO. 2016 – 07

RESOLUTION OF THE CITY COUNCIL APPROVING THE PLANS AND SPECIFICATIONS AND AWARDING A CONTRACT TO CARBON ACTIVATED CORPORATION FOR THE NORTH BAY REGIONAL WATER TREATMENT PLANT FILTERS #2, #3, & #6 MEDIA REPLACEMENT PROJECT

WHEREAS, the bid opening for the North Bay Regional Water Treatment Plant Filters #2, #3, & #6 Media Replacement took place on December 8, 2015; and

WHEREAS, the apparent low bidder was Carbon Activated Corporation in the amount of $753,296.34.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF FAIRFIELD HEREBY RESOLVES:

Section 1. The plans and specifications for the North Bay Regional Water Treatment Plant Filters #2, #3, & #6 Media Replacement are hereby approved.

Section 2. The City Manager is authorized and directed to enter into a contract with Carbon Activated Corporation for the North Bay Regional Water Treatment Filters #2, #3, & #6 Media Replacement in the amount of $753,296.34.

Section 3. The City Manager is hereby authorized to implement the above-mentioned contract.

PASSED AND ADOPTED this 19th day of January 2016, by the following vote:

AYES: COUNCILMEMBERS: PRICE/TIMM/BERTANI/MOY~~/VACCARO~~

NOES: COUNCILMEMBERS: NONE

ABSENT: COUNCILMEMBERS: Vaccaro

ABSTAIN: COUNCILMEMBERS: NONE

John F. Price
MAYOR

ATTEST:

Karen L. Rees
CITY CLERK

pw

ARTICLES OF AGREEMENT

THIS AGREEMENT, made on the day of February 9, 2016, by and between CITY OF FAIRFIELD, party of the first part, hereinafter called the CITY, and CARBON ACTIVATED CORPORATION, party of the second part, hereinafter called the CONTRACTOR.

It is understood Engineer representing the CITY shall be the City Engineer of Fairfield, acting directly or through properly authorized agents.

WITNESSETH, that the CONTRACTOR and the CITY, for the consideration hereinafter named, agree as follows:

I. SCOPE OF WORK

The CONTRACTOR hereby agrees to furnish all of the materials and all of the equipment and labor necessary and to perform all of the work shown on the plans and described in the specifications for the project entitled:

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

all in accordance with the requirements and provisions of the following Documents which are hereby made a part of this Agreement:

a. Advertisement for Bids.

b. The Accepted Bid, dated December 7, 2015

c. Instructions to Bidders.

d. Specifications consisting of:

1) Special Provisions.
2) City of Fairfield Standard Details and Specifications, 2015 edition.
3) Standard Specifications issued by State of California, Department of Transportation, Division of Highways, dated July, 2010.

e. Performance Bond, dated Jan 27, 2016.

f. Labor and Material Bond, dated Jan 27, 2016.

All of said documents are intended to cooperate so that any work called for in one and not mentioned in another, or vice versa, is to be executed and performed the same as if mentioned in all of said documents. Said documents, comprising the complete Contract, are sometimes hereinafter referred to as the Contract Documents. Should there be any conflict between the terms of this instrument and the bid or proposal of CONTRACTOR or any of the other Contract Documents, this instrument shall control.

II. TIME OF COMPLETION

a. The work to be completed under this Contract shall be commenced upon written notice to proceed.

b. The work in filters #2 and #3 shall be completed no later than **December 31, 2016**, and the work in filter #6 shall be completed no later than **April 1, 2017**.

c. Failure to complete the work within the number of days stated in this Article, including extension granted thereto as determined by the Engineer, shall entitle the City to deduct from the monies due to the CONTRACTOR as "Liquidated Damages" (LDs) an amount equal to **Five Hundred Dollars ($500)** for each calendar day or fraction thereof that expires after the time specified herein of the Contractor to complete the work and the facility or improvements are useable for its intended use. LDs shall apply cumulatively and shall be presume to be damages suffered by the City resulting from delay in the completion of work.

d. Liquidated Damages for delay in completion of work shall only cover administrative, overhead, general loss of public use damages, interest on bonds and lost revenues when applicable, suffered by the City as a result of delay. LDs shall not cover the cost to complete the work, damages resulting for defective work, costs of substitute facilities, or damages suffered by others who seek to recover their damages for the City (for example, delay claims from other contractors, sub-contractors, tenants, or third-parties, and defense costs thereof.

III. CONTRACT SUM

a. The CITY shall pay to the CONTRACTOR for the performance of the Contract the amounts determined for the total number of each of the following units of work completed at the unit price stated thereafter. The number of units contained in the attached schedule is approximate only, and the final payment shall be made for the actual number of units that are incorporated in or made necessary by the work covered by the Contract.

b. By mutual agreement, the CITY and the CONTRACTOR may increase or decrease the unit price of granular activated carbon media (Bid Items 4, 9, and 14) specified in this Contract to match the final market price of the materials purchased and incorporated into the work covered by the Contract. The CONTRACTOR will be required to provide evidence of any price change from the Contract for the granular activated carbon media.

c. Extra work not included in Article I, but authorized after the date of the Contract that cannot be classified as coming under any of the Contract units, may be done at mutually agreed-upon unit prices, or on a lump sum basis, or under the provisions of Section 9 of the City of Fairfield Standard

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

BID SCHEDULE

Item No.	Item of Work	Qty.	Unit	Unit Price	Total Price
Filter #2					
1	Remove and dispose of existing filter media in filter #2.	1	LS	$34,493.00	$34,493.00
2	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #2.	100	EA	$7.00	$700.00
3	Furnish new sand media for filter #2.	144	TON	$145.59	$20,964.96
4	Furnish new GAC media for filter #2.	61	TON	$2,460.75	$150,105.75
5	Install new sand and GAC media in filter #2.	1	LS	$44,835.07	$44,835.07
Filter #3					
6	Remove and dispose of existing filter media in filter #3.	1	LS	$34,493.00	$34,493.00
7	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #3.	100	EA	$7.00	$700.00
8	Furnish new sand media for filter #3.	144	TON	$145.59	$20,964.96
9	Furnish new GAC media for filter #3.	61	TON	$2,460.75	$150,105.75
10	Install new sand and GAC media in filter #3.	1	LS	$44,835.07	$44,835.07
Filter #6					
11	Remove and dispose of existing filter media in filter #6.	1	LS	$34,493.00	$34,493.00
12	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #6.	100	EA	$7.00	$700.00
13	Furnish new sand media for filter #6.	144	TON	$145.59	$20,964.96
14	Furnish new GAC media for filter #6.	61	TON	$2,460.75	$150,105.75
15	Install new sand and GAC media in filter #6.	1	LS	$44,835.07	$44,835.07
			TOTAL PRICE		$753,296.34

IV. PROHIBITED INTERESTS

No employee of the City of Fairfield shall have any direct financial interest in this contract. This contract shall be voidable at the option of the City if this provision is violated.

V. WORKERS' COMPENSATION

Contractor hereby certifies that Contractor is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and that Contractor will comply with such provisions before commencing the performance of the work of this contract.

IN WITNESS WHEREOF, the parties have executed this Agreement the day and year first above written.

WITNESS:

Eva Hoff, Deputy
City Clerk

CITY OF FAIRFIELD

By:
City Manager

Carbon Activated Corporation
Contractor

By:

PRESIDENT
Title

Licensed in accordance with an act providing for the registration of contractors.

Contractor's License:

a. Class: A

b. Number: 842091

c. Expiration Date: 07/31/2016

FEI Number: 95-4577883

CARBON ACTIVATED CORPORATION

Bid: "North Bay Regional Water Treatment Plant Filters #2, #3", & #6 Media Replacement

Due Date: December 8th before 2pm

CITY OF FAIRFIELD
STATE OF CALIFORNIA

PROPOSAL

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

To the City Clerk of the City of Fairfield:

The undersigned declares that he has examined the locations of the proposed work, that he has examined the plans, specifications, and all the contract documents, and hereby proposes to furnish all materials, labor, equipment, and perform all the work in strict accordance with said plans, specifications, and contract documents in consideration of the attached schedule.

The undersigned further agrees that, upon written acceptance of this bid, he will within 15 working days of receipt of such notice execute a formal contract agreement with the City of Fairfield, with necessary bonds and certificate and city standard form endorsement of insurance. He also agrees that, in the case of default in executing the contract, the proceeds of the check or bond accompanying his bid shall become the property of the City of Fairfield.

The undersigned agrees that, if awarded the contract, he will commence the work upon written notice to proceed and shall diligently prosecute the same to completion for filters #2 and #3 before **December 31, 2016** and for filter #6 before **April 1, 2017**.

Bids are to be submitted for the entire work.

The amount of the bid for comparison purposes will be total amount of bid.

The bidder shall set forth for each unit basis item of work an item price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Total" column shall be the extension of the item price bid on the basis of the estimated quantity for this item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the item price shall prevail, provided, however, if the amount set forth as an item price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the item price.

The following quantities are approximate only, being given as a basis for the comparison of bids, and the City of Fairfield does not expressly or by implication agree that the actual amount of work will correspond therewith and reserves the right to increase or decrease the amount of any portion of the work or to omit portions of the work as may be deemed necessary or advisable by the Engineer. The undersigned further agrees to accept the aforesaid unit bid prices in compensation for any additions or deductions caused by variation in quantity due to more accurate measurement or by any changes or alterations in the plans or specifications of the work.

Bidder acknowledges receipt of the following addenda:

Addendum No.	Ø	Date:	
Addendum No.		Date:	
Addendum No.		Date:	
Addendum No.		Date:	

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

BID SCHEDULE

Item No.	Item of Work	Qty.	Unit	Unit Price	Total Price
Filter #2					
1	Remove and dispose of existing filter media in filter #2.	1	LS	$ 34,493.00	$ 34,493.00
2	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #2.	100	EA	$ 7.00	$ 700.00
3	Furnish new sand media for filter #2.	144	TON	$ 145.59	$ 20,964.96
4	Furnish new GAC media for filter #2.	61	TON	$ 2,460.75	$ 150,105.75
5	Install new sand and GAC media in filter #2.	1	LS	$ 44,835.07	$ 44,698.29
Filter #3					
6	Remove and dispose of existing filter media in filter #3.	1	LS	$ 34,493.00	$ 34,493.00
7	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #3.	100	EA	$ 7.00	$ 700.00
8	Furnish new sand media for filter #3.	144	TON	$ 145.59	$ 20,964.96
9	Furnish new GAC media for filter #3.	61	TON	$ 2,460.75	$ 150,105.75
10	Install new sand and GAC media in filter #3.	1	LS	$ 44,835.07	$ 44,698.29
Filter #6					
11	Remove and dispose of existing filter media in filter #6.	1	LS	$ 34,493.00	$ 34,493.00
12	Replace all damaged filter nozzles with new OWNER furnished nozzles in filter #6.	100	EA	$ 7.00	$ 700.00
13	Furnish new sand media for filter #6.	144	TON	$ 145.59	$ 20,964.96
14	Furnish new GAC media for filter #6.	61	TON	$ 2,460.75	$ 150,105.75
15	Install new sand and GAC media in filter #6.	1	LS	$ 44,835.07	$ 44,698.29
			TOTAL BID PRICE		$ 752,886.00

$ 753,296.34

Bidder shall complete this form legibly and in its entirety. An incomplete form shall be grounds for disqualification of the bid.

Attach to this bid a list of three (3) project completed by the Contractor during the last five (5) years involving work of similar type and complexity. The list shall include the following information as a minimum:

1. Name (agency or firm), address, and telephone number of owner;
2. Name of the project;
3. Location of the project;
4. Brief description of the work involved;
5. Contract amount;
6. Date of completion of contract;
7. Name of owner's project manager.

To be considered for award, the Contractor shall have completed at least three projects of similar type and complexity and comparable value.

This project consists of removing existing sand and granular activated carbon media, removing and replacing any damaged existing filters nozzles (replacement nozzles provided by the City), and replacing new sand and granular activated carbon media at the North Bay Regional Water Treatment Plant, owned by the cities of Fairfield and Vacaville, CA.

Bid No. 10033053-13-C Filter Media for Public Utilities Water

Name of Project

City of San Diego

Agency or Firm Name

1200 Third Ave., Suite 200,	San Diego, CA 92101	(619) 495-8438
Agency or Firm Address	City, State Zip	Telephone

Jim McVeigh (619) 495-8438

Owner's Project Manger

Otay WTP 1500 Wueste Road, Chula Vista, CA 91915

Location of Project

Supply 6,858 cubic feet of 12X16 Coal Base GAC and replace missing Filter Sand. Remove, Load, and Disposal of Media that was removed.

Brief Description of Work

$572,774.00	09-2013
Contract Amount	Date of Completion

Note: Attach additional sheets to complete references.

C. BON ACTIVATED CORP.
Activated Carbon & Related Services
2250 S. Central Ave, Compton, CA 90220 ♦ Phone: (877) 323-8132, (310) 885-4555
Fax: (310) 763-5126 ♦ E-mail: info@activatedcarbon.com ♦ Website: www.activatedcarbon.com

December 7, 2015

City of Fairfield
1000 Webster Street
Fairfield,

Below is a list of four additional projects that was completed by Carbon Activated Corporation during the last five years involving work that is similar to your project.

1. City of Benicia 100 Water Way, Benicia, CA 94510 phone (707) 746-4225. "Carbon Media Replacement Project Water and Wastewater Treatments Plants". Contact Scott Rovanpera Superintendent/Project Manager (707) 746-4393. Removal a total of 6,000 cubic feet from two Filters, Load a total of 1,900 cubic feet of 8X30 Coal Base Carbon, and Replacement of missing Filter Sand. Contract amount was $ 94,497.60 6 year contract last filter completed in 07-2014.
2. City of Antioch 3rd and H Street, Antioch, CA 94509 phone (925) 779-6994. "Remove and Install Granular Carbon Proposal No. 968-0918-13C" City of Antioch Water Treatment Plant, 401 Putnam Street, Antioch, CA 94509. Superintendent Duane Anderson Superintendent (925) 779-7029. Supplied 14,750 cubic feet of 8X30 Coal Base Carbon for 8 filters. Remove, Load, and Disposal of spent carbon. Contract amount $ 348,406.00 completed 01-2012. Project Manager was Duane Anderson (925) 779-7029.
3. Goleta Water District 4699 Hollister Ave., Goleta, CA 93110 phone (805) 879-4613. "Corona Del Mar Water Treatment Plant – Remove and Replace Filter Media Project # 12-4101". Maryam Albor was the Engineer/Project Manager (805) 879-4613 Corona Del Mar Water Treatment Plant, 1510 Glen Annie Road, Goleta, CA 93117. Removal a total of 16,200 cubic feet of Carbon and 2,430 cubic feet of Filter Sand from six Filters. Load a total of 16,200 cubic feet of 8X20 Coal Base Carbon, 2,430 cubic Feet of and Disposal of spent media. Contract amount was $561,948.00 completed in 09-2014.
4. City of Fairfield, 1000 Webster St., Fairfield, CA 94533 (7047) 428-7476. "Remove and Load Media in Filter #5" North Bay Water Treatment Plant, 5110 Waterworks Lane, Fairfield, CA. 94533. Superintendent Gil Hernandez (707) 428-7680 ext. 105 Supply 4,200 cubic feet of 8X16 Coal Base GAC and 1,880 cubic feet of Filter Sand. Remove, Load, and Disposal of Media that was removed. Contract amount $ 215,000.00 completed 05-2012 Project Manager Jay Swanson (707) 428-7476, 1000 Webster St., Fairfield, CA 94533.

Regards,

Dale Kerr
Operations/Sales

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

DESIGNATION OF SUBCONTRACTORS

In accordance with Section 8 of the General Provisions of the City of Fairfield Standard Specifications and Details for this contract, the following list of subcontractors is submitted with the proposal and made a part thereof. **The bidder shall note that he shall perform with his own organization at least 50% of the work with the remainder of the work performed by subcontractors.**

If the Contractor fails to specify a subcontractor for any portion of the work to be performed under the contract, he shall be deemed to have agreed to perform such portion himself, and he shall not be permitted to subcontract that portion of the work except under the conditions hereinafter set forth.

Subletting or subcontracting of any portion of the work for which no subcontractor was designated in the original bids shall only be permitted in cases of public emergency or necessity, and then only after receiving written approval from the Engineer.

The name, CSLB license number, and location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the project, the portion of the work to be performed by each subcontractor, and the percent of the total contract to be performed by each subcontractor, is set forth below. All columns are to be filled out. However, the information on percent of total contract may be submitted either with the bid, or within twenty-four (24) hours after the deadline for receipt of bids.

Subcontractor's Name and Address	Subcontractor's CSLB License Number	Portion of Work or Items to be Performed	Percent of Total Bid[1]
1) No Subcontractors will be used			
2)			
3)			
4)			
5)			

Note: Attach additional sheets if required

1. Must be submitted within 24-hours of deadline for receipt of bids.

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

LIST OF PROPOSED SUBSTITUTIONS

The Bidder proposes the following substitute or "or equal" products identified below:

Specification Section and Paragraph	Substitute Equipment/Material	Substitute Manufacturer (List Only One for Each Equipment or Material)
11428-2 2.2E	Filter Sand .53-60 meets Specifications and is NSF 61 Certified	Silica Resources Marysville, CA

Carbon Activated Corporation

Name of Firm

2250 S. Central Ace., Compton, CA 90220

Business Address

(310) 885-4555

Phone Number

Signature of Responsible Official

Contractor's License:

a. Class: A

b. Number: 842091

c. Expiration Date: 07-31-2016

FEI Number: 95-4577883

If corporation or partnership, give legal name of corporation, president, secretary, treasurer, or names of all partners.

Carbon Activated Corporation

Lionel Perera President and Chief Financial Officer

Nirmala Perera Vice-President and Secretary

CARBON ACTIVATED CORP.
Activated Carbon & Related Services
2250 S. Central Ave., Compton, CA 90220 ♦ Phone: (877) 323-8132, (310) 885-4555
Fax: (310) 763-5126 ♦ E-mail: info@activatedcarbon.com ♦ Website: www.activatedcarbon.com

December 7, 2015

City of Fairfield
NBR Water Treatment Plant
5110 Water Works Lane
Fairfield, CA 94533

Attn: Whom It May Concern:

CERTIFICATE OF COMPLIANCE

This is certifying that the 8X16 Coal Base Granular Activated Carbon, Sand, Nozzle Replacement, and Disinfection that "**CARBON ACTIVATED CORPORATION**" will supply/preform for your bid titled "North Bay Regional Water Treatment Plant Filters 2, 3, &6 Media Replacement" will meet or exceed the physical properties on pages 01656-1 thru 11428-3.

Regards

Dale Kerr
Operations/Sales

CARBON ACTIVATED CORPORATION

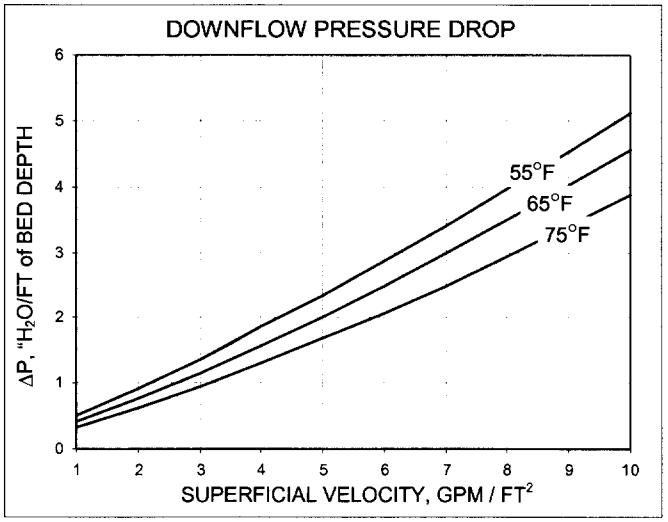
ACTIVATED CARBON & RELATED SERVICES

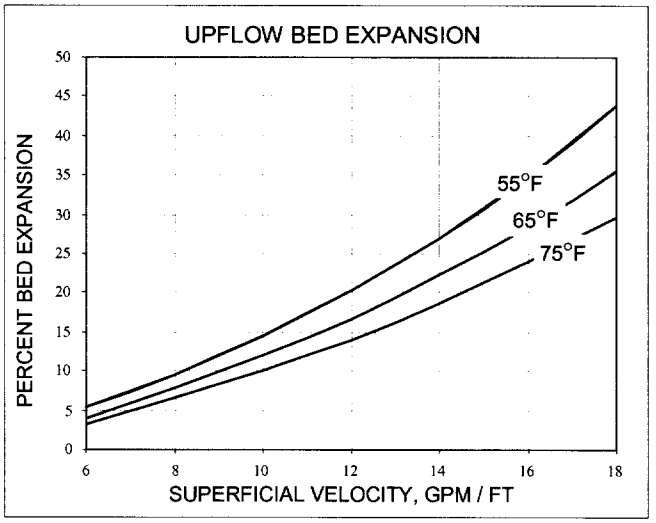
PRODUCT BULLETIN

ACOL-GL60

Liquid Phase Bituminous Coal Base Carbon

ACOL-GL60 is a hard and regenerable Granular Activated Carbon (GAC) manufactured from select grades of Bituminous Coal. A***COL-GL60*** is a high density carbon with a large pore volume and high surface area. Its pore structure has been developed for the adsorption of both high and low molecular weight impurities. A***COL-GL60*** is commonly used for purifying potable water, ground water and waste water, and a wide variety of decolorizing/deodorizing applications. A***COL-GL60*** meets ANSI/NSF Standard 61 and Food Chemicals Codex Standards for drinking water applications.





TYPICAL PHYSICAL PROPERTIES / SPECIFICATIONS

Total Surface Area (BET), m^2/g	950-1050 ✓
Iodine Number per ASTM D4607	950-1050 ✓
Apparent Density (ASTM 2854), lb/ft^3	28 - 29 ✓
Hardness per ASTM D3802 min.	95
Abrasion No., min.	85 ✓
Particle Sizes:	8 x 16 ✓
Particle Size mm:	2.40 max.
Ash Content	8 % ✓
Water Soluble ash	1% max.
Water Extractable per Food Chemical Codex	1% max. ✓
Moisture as packed, max.	2% ✓
Effective Size	1.5 – 1.6mm ✓
Uniformity Coefficient, max.	1.4 max. ✓
Apparent Specific Gravity (wetted)	1.3 – 1.35 ✓
Phosphate Water Soluble	0.10% max. ✓

STANDARD PACKAGING: 55lb or 27.5lb Poly lined Polypropylene Bags and 1100lb Super Sacks

DCC: IA18198 Date: 11/05/2010

NSF/ANSI Standard 61 - Drinking Water System Components - Health Effects

Authorized Registered Formulation

This product may require additional evaluation or testing prior to authorization for Listing. Only products included in NSF's Official Listing are NSF Certified and authorized to bear an NSF Certification Mark.

Reason For Revision: 9101930, added additional mesh sizes.

Customer Name: Carbon Activated Corporation

Customer Number: 53060

Facility Location: China

Facility At: Shanxi Province, China

Facility Number: 53065

Function: Granular Activated Carbon

Size:

Trade Name(s)

Activated Carbon Coal Base Acid Washed

Listing Notes

The carbon source is coal.

Certified for the following mesh sizes: **4 x 6, 4 x 8, 4 x 10, 6 x 12, 6 x 16, 8 x 16, 8 x 20, 8 x 30,** 12 x 20, 12 x 30, 12 x 40, 20 x 40, 20 x 50, 50 x 150 and 50 x 200.

Category: PRMD, SECTION 7 - PROCESS MEDIA

Material Type: Granular Activated Carbon (GAC)

Temperature: Cold (73 F/23 C)

Bracketing

Testing and evaluation of this product is covered by the testing of IA14056.

Sample Notes

None.

DCC: IA18198 **Date:** 11/05/2010

Formulation

Customer Name: Carbon Activated Corporation
Customer Number: 53060

Facility Location: China
Facility At: Shanxi Province, China
Facility Number: 53065

Formulation Description: FORMULATION

Chemical Description	Trade Name	Supplier	% or PPW	DCC	Acceptance Date
GRANULAR ACTIVATED CARBON	CARBON ACTIVATED CORP. COL-AW	ZUOYUN COUNTY XINWANG CARBON CORPORATION	100		
HYDROCHLORIC ACID*	HYDROCHLORIC ACID (HCL)	DATONG CITY RESIN FACTORY	0.01		

Notes

*Wash

Definitions of Terminology used in this Document:

Trade name: The name given to the ingredient, material or assembly by the company that makes the product.

Supplier: The name of the company that provides an ingredient, material or assembly directly to the company that makes the product covered by this registration. The supplier could be a formulator, distributor, fabricator, molder, extruder, mixer, manufacturer or assembler.

Formulator: The name of the company that prepares a material according to a formula. The formulator and the supplier could be the same company. This field may be blank as this information is only reported when the information is not confidential.

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PACS

(724) 457 - 6576

Professional Analytical and Consulting Services, Inc.
409 Meade Drive
Coraopolis PA 15108

Sample Analysis • GC/MS • R & D • Consulting • Training Courses • Activated Carbon Services

To: Dale Kerr
Carbon Activated

From: Henry Nowicki, Ph.D.

Date: March 31, 2014
PACS Sample ID: DD-626

Subject: RUSH Activated Carbon Tests

As requested, RUSH services was provided on sample for standard methods used in the activated carbon industry. Results are below.

Customer Sample ID	PACS Sample ID	Apparent Density g/cc Received	Apparent Density g/cc Dry	Dean-stark Moisture %	Iodine Number mg/g
Carbon Activated	DD-626	0.569	0.566	0.41	910

Total Ash%	Water Soluble Ash %	Water Extractable Phosphate %	Apparent Specific Gravity Wetted	BET Surface Area m^2/g
6.94	0.30	0.02	1.32	955

Bulk Density Backwashed and Drained LB/Ft^3	Total Pore Volume cc/g	Abrasion Number
28.5	0.90	88

Screen Sizing Data - Sieve Analysis

ASTM D5158 Particle Size Distribution Data

Mean Particle Diameter mm	Uniformity Coefficient	Effective Size mm
1.97	1.3	1.6

6	8	12	16	20	30	40	< 40	U.S. sieve number
0.00	5.56	77.06	16.78	0.10	0.05	0.03	0.34	Grams on sieve

PACS holds all samples for at least six months before disposal, after the requested analysis is completed. Should you need additional work on this sample, please refer to PACS sample identification number DD-626.

Please keep PACS in mind for your total activated carbon services: routine and advanced testing services, PAC brokerage services, R&D, waste materials to unique activated carbons, GAED aqueous- and vapor-phase full characterizations, marketing, technical and business consulting, training courses public and at your time and place, and the bi-annual *International Activated Carbon Conference* September 24-25, 2014 in Pittsburgh, PA in conjunction with the Activated Carbon School.

Professional Analytical and Consulting Services, Inc. (dba PACS)
Henry Nowicki, Ph.D. E-mail: henrypacs@aol.com

DCC: IA18198 Date: 11/05/2010

NSF/ANSI Standard 61 - Drinking Water System Components - Health Effects

Authorized Registered Formulation

This product may require additional evaluation or testing prior to authorization for Listing.Only products included in NSF's Official Listing are NSF Certified and authorized to bear an NSF Certification Mark.

Reason For Revision: 9101930, added additional mesh sizes.

Customer Name: Carbon Activated Corporation

Customer Number: 53060

Facility Location: China

Facility At: Shanxi Province, China

Facility Number: 53065

Function: Granular Activated Carbon

Size:

Trade Name(s)

Activated Carbon Coal Base Acid Washed

Listing Notes

The carbon source is coal.

Certified for the following mesh sizes: **4 x 6, 4 x 8, 4 x 10, 6 x 12, 6 x 16, 8 x 16, 8 x 20, 8 x 30, 12 x 20, 12 x 30, 12 x 40, 20 x 40, 20 x 50, 50 x 150 and 50 x 200.**

Category: PRMD, SECTION 7 - PROCESS MEDIA

Material Type: Granular Activated Carbon (GAC)

Temperature: Cold (73 F/23 C)

Bracketing

Testing and evaluation of this product is covered by the testing of IA14056.

Sample Notes

None.

CARBON ACTIVATED CORP.
Activated Carbon & Related Services
2250 S. Central Ave., Compton, CA 90220 ♦ Phone: (877) 323-8132, (310) 885-4555
Fax: (310) 763-5126 ♦ E-mail: info@activatedcarbon.com ♦ Website: www.activatedcarbon.com

FILTER SAND #30 FOR WATER FILTRATION

PRODUCT DATA SHEET

OUR FILTER SAND IS USED IN WATER AND WASTE WATER TREATMENT PLANTS, INDUSTRIAL WASTE FILTERS, AND ORGANIC WATER FILTERS. THESE WOULD INCLUDE PRESSURE FILTERS, RAPID AND SLOW GRAVITY FILTERS. MEETS A.W.W.A. STANDARD B100 AND NSF 61 CERTIFIED FOR USE IN TREATMENT PROCESS OF POTABLE DRINKING WATER AND IS TOTALLY COMPATIBLE WITH ALL MUNICIPAL WATER TREATMENT SYSTEMS. ALSO IT MEETS A.W.W.A. STANDARDS B100 FOR USE IN TREATMENT PROCESS OF WATER WELLS.

FILTER SAND #30

EFFECTIVE SIZE	0.53 TO 0.60 MM ✓
UNIFORMITY COEFFICIENT	<1.5 ✓
SPACIFIC GRAVITY	>2.63 ✓

FILTER SAND #40

EFFECTIVE SIZE	0.60 TO 0.70 MM
UNIFORMITY COEFFICIENT	<1.5
SPACIFIC GRAVITY	>2.63

STANDARD PACKING: 1 CUBIC FOOT (100LB) PAPER BAGS AND 1-1/2-TON (3,000LB) SUPER SACKS.

The Public Health and Safety Organization

NSF Product and Service Listings

These NSF Official Listings are current as of **Thursday, October 24, 2013** at 12:15 a.m. Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: http://info.nsf.org/Certified/PwsComponents/Listings.asp?Company=58670&Standard=061&

NSF/ANSI 61
Drinking Water System Components - Health Effects

NOTE: Unless otherwise indicated for Materials, Certification is only for the Water Contact Material shown in the Listing. Click here for a list of Abbreviations used in these Listings.

Silica Resources, Inc.

3190 Enterprise Court
P.O. Box 167
Loomis, CA 95650
United States
916-652-1704

Facility : Marysville, CA

Process Media

Trade Designation	Size	Water Contact Temp	Water Contact Material

Filtration Media

SRI	60 mesh - 1.5"	CLD 23	SLDOX
SRI Supreme	60 mesh - 1.5"	CLD 23	SLDOX

NOTE: Certified for water treatment plant applications.
This product has not been evaluated for point of use applications.

Number of matching Manufacturers is 1

Number of matching Products is 2

Processing time was 0 seconds

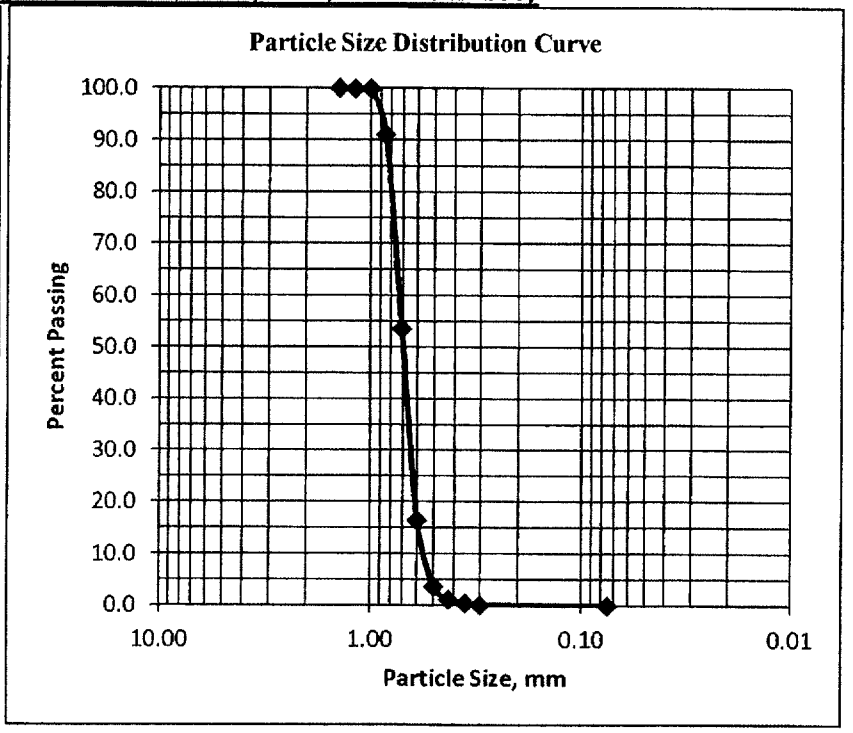
Laboratory Test Report

Project Name: Carbon Activated Corporation
Project No.: 109377
Lab No.: SAC33360
Date Received: February 28, 2014
Sample No.: PO1340
Sample Location: Silica Resources
Material Description: Filter Sand
Report Date: March 7, 2014

Particle Size Analysis (ASTM C 136, modified by AWWA B-100)

U.S. Standard Sieve Size	% Passing
No. 14	100
No. 16	100
No. 18	100
No. 20	91
No. 25	54
No. 30	17
No. 35	4
No. 40	1
No. 45	0
No. 50	0
No. 70	0
No. 200	0

D_{60}, mm	0.73
D_{10}, mm	0.55
Effective Size, mm	0.55 ✓
Uniformity coefficient	1.33 ✓



Acid Solubility (AWWA B-100)

Acid Solubility, %	0.2

Specific Gravity of Fine Aggregate (ASTM C 128)

Apparent Specific Gravity	2.67 ✓
Absorption, %	0.9

Limitations:
As the samples tested were sampled and/or transported to our laboratory by parties other than Kleinfelder staff, this report makes no representation of whether the samples are representative of the material onsite.

Pursuant to applicable building codes, the results presented in this report are for the exclusive use of the client and the registered design professional in responsible charge. The results apply only to the samples tested. If changes to the specifications were made and not communicated to Kleinfelder, Kleinfelder assumes no responsibility for pass/fail statements (meets/did not meet), if provided.

Reviewed By: _____

KLEINFELDER 3077 Fite Circle, Sacramento, CA 95827 (916) 366-1701 Fax (916) 366-7013

CERTIFICATE OF REGISTRATION

This is to certify that

Carbon Activated Corporation

250 E. Manville Street, Compton, California 90220 USA

operates a

Quality Management System

which complies with the requirements of

ISO 9001:2008

for the following scope of registration

The Registration Covers the Quality Management System for the Manufacture and Distribution of Activated Carbon, and the Provision of Related Services for Water/Air Purification and Precious Metal Recovery.

Certificate No.:	CERT-0068190	Original Certification Date:	February 6, 2004
File No.:	1501272	Current Certification Date:	February 5, 2013
Issue Date:	January 22, 2013	Certificate Expiry Date:	February 4, 2016

Chris Jouppi
President,
QMI-SAI Canada Limited

Guillaume Gignac, ing.f
Vice President, Corporate Operations, Accreditation & Quality
QMI-SAI Canada Limited

ISO 9001

STATE OF CALIFORNIA

Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code
and the Rules and Regulations of the Contractors State License Board,
the Registrar of Contractors does hereby issue this license to:

CARBON ACTIVATED CORPORATION

to engage in the business or act in the capacity of a contractor
in the following classification(s):

A - GENERAL ENGINEERING CONTRACTOR

Witness my hand and seal this day,

July 7, 2004

Issued July 6, 2004

SIGNATURE OF LICENSEE

Jason N. Simpson
SIGNATURE OF LICENSE QUALIFIER

This license is the property of the Registrar of Contractors,
is not transferrable, and shall be returned to the Registrar
upon demand when suspended, revoked, or invalidated
for any reason. It becomes void if not renewed.

Stephen P. Sands
Stephen P. Sands
Registrar of Contractors

842091

License Number

13L-24 (REV. 7-01) OSP 01 59448

AUDIT NO: 334071

Division of Labor Standards Enforcement

Public Works Contractor Registration Search

This is a listing of current and active contractor registrations pursuant to Division 2, Part 7, Chapter 1(commencing with section 1720) of the California Labor Code.

Enter at least one search criteria to display active registered public works contractor(s) matching your selections.

Registration Number: ie. 1234567890

Contractor Legal Name: Carbon Activated Corporation Contractor License Lookup

License Number: ie. 606309 (CSLB)

Search | Reset

Public Works Contractor Registration Web Search Results

One Registered Contractor found. **1**

Legal Name	Registration Number	License Type/Number(s)	Registration Date	Expiration Date
CARBON ACTIVATED CORPORATION	1000009862	CSLB:842091	06/26/2015	06/30/2016

Export as: Excel | PDF

1782690

State of California

SECRETARY OF STATE

CORPORATION DIVISION

I, *BILL JONES*, Secretary of State of the State of California, hereby certify:

That the annexed transcript has been compared with the corporate record on file in this office, of which it purports to be a copy, and that same is full, true and correct.

IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this

APR 26 1996

Bill Jones

Secretary of State

Sec/State Form CE 107 (rev 9/95)

1782690
ENDORSED
FILED
In the office of the Secretary of State
of the State of California

APR 2 5 1996

BILL JONES, Secretary of State

ARTICLES OF INCORPORATION

I

The name of this corporation is

CARBON ACTIVATED CORPORATION

II

The purpose of the corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

III

The name and address in the State of California of this corporation's initial agent for service of process is:

Name LIONEL M. PERERA

Street Address 1662 W. 139-TH STREET

City GARDENA State CA Zip 90249

IV

This corporation is authorized to issue only one class of shares of stock; and the total number of shares which this corporation is authorized to issue is

100,000.

(Signature of Incorporator)

LIONEL M. PERERA
(Typed Name of Incorporator)

The temporary Chairman stated that the Incorporator(s) tasks had now been accomplished and upon motion duly made and recorded, said resignation(s) were accepted.

ELECTION OF OFFICERS

The meeting then proceeded to the election of officers. The following were duly elected to the offices indicated after the names of each:

LIONEL PERERA	President
NIRMALA PERERA	Vice-President
	Vice-President
NIRMALA PERERA	Secretary
LIONEL PERERA	Chief Financial Officer
	Other

Each officer so elected being present accepted his office, and thereafter, the president presided at the meeting as chairman, and the Secretary acted as secretary of the meeting.

CORPORATE SEAL

The Secretary presented for approval of the meeting a proposed seal of the corporation consisting of two concentric circles with the name of the corporation in one circle and the words and figures in the form as follows:

(SEAL)

Dale Kerr
Email: dalek@activatedcarbon.com
Compton Office Phone: 310 885-4555
Cell Phone: 310 418-2430
Number of years with firm: 18 years
Number of years of experience: 28 years

Current position: Senior Account Manager, and Technical expert on Carbon and Filter Systems.

Carbon Activated Corporation,
250 E. Manville Street,
Compton, CA

Duties include Project Development, Project Cost analysis, Filter System Design/Procurement and Project Procurement of materials.

1. The Experience in this position is as follows: Supervise and Manage a team of Company personnel, Sub Contractors, and Engineers for the review of project plans to establish costing and if needed Filter System design.
2. Site Superintendent Management: Manage all phase of the project to include all company personnel and Sub Contractors including Customer Service Relations (CSR) with the customer.
3. Developed techniques that increase job site Productivity, Safety, and Plant Operations.

Specific Skills include:

- Team Building
- Project Management to include Budgeting, costing, approvals, and inspections
- Environmental Regulations
- Site Specification Conformations
- Manufacturing of Carbon
- Carbon Quality Control Procedures
- Filter System Design and Trouble Shooting
- Carbon use based on Chemical concentrations
- AWWA and ASTM test methods and procedures
- Carbon Reactivation Operations and Controls

References:

City of Benicia Scott Rovanpera (707) 746-4393
City of San Bernardino Mike (951) 351-6331
City of Fairfield Gil Hernandez (707) 428-7680 ext 105

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December 7, 2015

City of Fairfield
NBR Water Treatment Plant
5110 Water Works Lane
Fairfield, CA 94533

Attn: Whom It May Concern:

Storm Water Provisions

The process we use for the removal is by vacuuming the media out which requires the filter to be completely drained of water. In this process the media is vacuumed into Polypropylene Super Sacks and stored in an area that is not near any storm drains. As a safety measure prior to starting of any work all storm drains in our work or storage area will be covered and sand bagged to ensure no water can enter the storm drain. If during the removal or loading process there is any water dropped on the ground that would go to the storm drain that is covered and sand bagged we will stop and soak up the water using absorbent media which in turn will be immediately swept up and properly disposed of.

Regards

Dale Kerr
Operations/Sales

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Safety Policy Statement

Carbon Activated Corporation has always and shall continue to hold safety as one of our most important responsibilities in the operation of this organization. We firmly believe that production and safety go hand in hand and that a safe working environment leads to improved production. At this time, every employee at this facility must place a comprehensive effort on safety.

The following rules have been prepared for the protection of every employee. All employees will receive a copy of these rules and will practice and abide by them. No rulebook can cover every situation. When in doubt about a situation, condition or procedure, ask your supervisor. Under no circumstance are you to risk injury in carrying out your work. It will not always be easy to comply with these rules; nothing worthwhile is ever easy. With your help, we can make this company a safer place to work.

Mr. Lionel M. Perera
President
Carbon Activated Corporation

NSF CERTIFIED

MEMBER Water Quality ASSOCIATION

AWWA MEMBER

Quality System Quality Endorsed Company ISO 9001:2008 Lic 04-R0241 SAI Global

Safety Plan, Work Practices and Procedures

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Company Safety Rules

Carbon Activated Corporation intends to provide a safe and healthy working environment. To do this, we must constantly be aware of conditions in each individual's work area that can produce injuries. No employee is required to work at a job that is not safe or healthy. Employee cooperation in detecting hazards, and in turn controlling them, is a condition of employment. The following general rules and procedures govern all employees and all company operations.

General Directives:

1. All employees of **Carbon Activated Corporation**, by Law [Sec. 5 (b) Occupational Safety and Health Act of 1970] shall follow these safety rules and practices. Employees must inform their supervisor immediately of any situation beyond their ability or authority to correct.

2. Supervisors shall insist that employees observe and obey every safety rule, regulation, and order as necessary for the safe conduct of the work, and shall take such action as is necessary to obtain compliance.

3. Only qualified and/or licensed employees may operate any piece of equipment.

4. Anyone known to be under the influence of alcohol and/or drugs shall not be allowed on the job while in that condition. Anyone suspected of being under the influence may be required to submit to testing.

5. No one shall knowingly be permitted or required to work while his or her ability or alertness is so impaired by fatigue, illness, or other cause that might necessarily expose the individual or others to injury.

6. Work shall be planned and supervised to prevent injuries in all work processes, particularly when working with equipment and handling heavy materials.

7. Employees shall immediately report any personal injury or damage to property to their supervisor, no matter how trivial, regardless of the amount of damage and irrespective of cause or fault.

Supervisor's Responsibilities;

1. To set examples of safe practices by their own conduct.

2. To investigate and correct, or have corrected promptly, unsafe conditions which have come to their attention.
3. To know, observe and enforce all the general safety rules and such special instructions as are set up for their department.

4. To thoroughly acquaint each employee with safety instructions and practices.

5. To take part in work place safety and health program activities and contribute to their success.

6. To investigate and report all personal injuries and illnesses sustained on the job by the personnel within their area of responsibility.

7. To investigate and report all property damage accidents.

8. To welcome and utilize, as far as practical, the safety suggestions which may be made by the workers.

9. To thoroughly instruct new personnel on safety and carefully observe them at their work.

10. To see that the workers have and use personal protective equipment as determined by the safety director.

11. To see that all tools and equipment are and remain in safe and proper working conditions.

GENERAL SAFETY RULES;

1. Be alert to see that all guards and other protective devices are in their proper places and adjusted. Report all deficiencies promptly to your supervisor

2. Horseplay, scuffling, and other acts which tend to endanger the safety or well being of employees are prohibited.

3. Follow safety rules applicable to their job and use safety devices and personal protective equipment as required and directed.

4. Only authorized employees may operate machines and equipment for which they are qualified.

5. Obey all posted warning and/or instructional signs.

6. Do not use equipment that has been tagged out until repairs have been made and the tags have been removed by authorized personnel.

7. You are responsible for housekeeping in your work areas and must keep the area clean.

8. Do not wear loose frayed clothing, dangling items, finger rings, etc. around conveyers, moving machinery or other sources of entanglement.

9. The access to all fire extinguishers, fire hoses, sprinkler valves, electrical panel box boxes, and exits must be kept clear at all times.

10. Report any blockage to your supervisor.

11. Keep flammable liquids only in the proper designated storage area.

12. Riders are prohibited on lift equipment unless the equipment is specially designed for this purpose.

13. Guards or safety devices are not to be removed, except by authorized personnel, for purpose of making repairs or cleaning and must be replaced immediately thereafter.

14. Empty pallets must be accumulated, stacked not to exceed eight (8) feet on dock areas and not to be left standing in an upright position. Empty pallets in other areas should not exceed four (4) feet.

15. Broken pallets should not be used for storage of merchandise. Any broken pallets should be disposed of.

16. Do not walk on, climb over, or crawl under conveyers.

17. Pallet jack handles must be in the upright position when not in use.

18. The throwing of objects, such as merchandise, rolls of shrink-wrap or tape, tools, etc., is forbidden.

19. Smoking is prohibited in all buildings.

20. Adequate fire protection equipment, such as hoses, extinguishers, etc. is located at designated points in the plant. This equipment is provided for employee's protection as well as for the protection of property and equipment. All employees should help take care of this equipment.

21. Employees should report any defective, damaged or missing fire protection equipment to their supervisor.

22. All aisles must be kept clear and open for traffic.

23. Never walk under an up-raised load.

These rules are not meant to be all-inclusive since in many departments rules that are more specific are necessary for a smooth and safe operation. Additions to, and deletions from, or modification of these rules will be made anytime it is determined necessary for the safety and well being of all personnel.

LIFT TRUCK SAFETY RULES;

1. At the beginning of each shift, check brakes, steering, controls, forks, hoist, warning devices and lights. Turn in your checklist first thing daily. Report any defects to the maintenance department. If defects exist, do not use until repaired.

2. Always face the direction of travel.

3. Before you start driving, look to see that no person or object is in your path. Always look before backing up.

4. Do not drive over objects lying on the floor such as trash, boards and shrink-wrap. These could damage the lift truck, shift or topple the load or flip out and strike another employee.

5. Use low gear when going down ramps or steep grades. On upgrades, keep the load in front. On downgrades, keep the load in back.

6. Under normal traffic conditions, keep to the right.

7. Avoid quick starts or turns, and jerky stops; always come to a complete stop before reversing the direction of travel.

8. Keep a safe distance between vehicles at all times (three truck lengths).

9. Make a complete stop at all doors, corners and exits, sound horn and continue slowly.

10. No horseplay at any time!

11. Keep alert - concentrate on the job at hand.

12. Remember that pedestrians have the right of way at all times. Look out for them.

13. Never drive with wet or greasy hands. If necessary, keep a towel or rag handy at all times.

14. Reduce speed on wet or slippery floors, and avoid if possible.

15. Whether loaded or empty, carry forks on lift trucks as low as possible. This lowers the center of gravity and reduces the possibility of over turning the lift truck or dumping the load.

16. Check the clearance of any overhead objects before raising forks or tie ring.

17. Never use your lift truck as an elevator for other employees (for example, to service light fixtures or stock material).

18. Never use your lift truck to move a freight car, or open or close a trailer, freight car or other doors.

19. When leaving the lift truck at anytime, shift into neutral, set the parking brake, shut off the power and put the forks in the down position.

20. Never leave a lift truck in an aisle. Park the lift truck to one side, so traffic will not be blocked.

21. All trailers at docks shall have the wheels properly chocked before they are entered with a lift truck. It is the responsibility of the lift truck operator to assure that this is done.

22. Before driving the lift truck into a trailer or freight car, always secure the dock plate with pins so that it cannot move when the power wheels of the lift truck pass over it. Moreover, before moving the lift truck onto the plate or into the carrier, walk into the trailer, truck or freight care and check the floor for holes or weak spots (the weight of your lift truck might break the floor)

23. Keep your feet and legs inside the guard, which is there to protect you.

24. Drive with extreme care, especially during shift changes.

25. Never load a lift truck or permit it to be loaded so that your view is obstructed. If a load cannot be lowered enough to prevent obstructing your view, you should drive the lift truck backward.
26. Push the forks all the way under the load, and if possible centre every load.

27. Avoid carrying unstable loads. If material of irregular shape must be carried, it should be placed so that it cannot fall off, shift or become unbalance. If necessary, such a load should be cross-tied, as well as neatly stacked.

28. Run a lift truck with the forks or pallet about 4 inches from the floor.

29. Loads should be raised or lowered at the point of loading or unloading - not during travel.

30. When lifting, lowering or carrying loads, have the mast tilted back slightly.

31. Lift and lower loads slowly; stop gradually.

32. Do not permit anyone to stand under or too close to a load that is being raised or lowered.

33. Never attempt to straighten pallets or stacks by butting with forks or the end of your lift.

34. Lift operator should give proper warning when moving in and out of racks to people working in the immediate vicinity.

35. Horns are to be used while operating equipment at all corners and main intersections. Never try to frighten pedestrians who must share aisles with you. All traffic lanes are to be kept open at all times.

36. Do not attempt to lift double stacked or tiered loads.

37. Never drive close to the edge of an open dock or rail siding.

38. Only authorized employees may operate the lift truck equipment.

39. Lift trucks may never run side by side in the same direction.

40. Never pass another lift truck at an intersection, blind spot or other dangerous location.

41. When passing through an access or fire door proceed with caution and only one lift truck at a time.

42. When traveling, all reach assemblies must be retracted.

43. When pulling carts with a lift truck maintain a slower speed.

44. All lift trucks are to be left in your work areas at all breaks.

45. Pallets are never to be pushed along the floor without being lifted.

46. When loading carts only place 2 pallets per cart and never double stacked.

47. Never attempt to pick up or push a cart with a lift truck.

MAINTENANCE SAFETY RULES

1. Do not use electrical tools or equipment that is not properly grounded or double insulated. All electrical extension cords used must also be equipped with a proper third wire ground.

2. Do not use gasoline for cleaning purposes. Only approved safety solvents can be used for this purpose.

3. You are responsible for the condition and proper use of all hand tools used in the performance of your job duties.

4. Lockout and tag out all energy sources on machinery before cleaning, repairing, or adjusting.

5. Guards or safety devices are not to be removed except for the purpose of making repairs or cleaning and must be replaced immediately thereafter.

6. Safety belts and a lanyard must be worn with the lanyard attached to the cage/basket of the elevated equipment you would be working from.

7. Cylinders of compressed gas, such as oxygen, acetylene, and propane shall be chained or otherwise secured in an upright position, and valve caps must be securely in place. Oxygen **and** fuel gas cylinders shall not be stored together. They shall be separated by at least 20 feet or a 5-foot wall with at least a 1/2-hour fire resistance rating.

8. Ladders shall be maintained in good condition.

9. Approved power activated tools shall be used only by trained authorized personnel only.

10. When servicing electrical storage batteries, wear protective clothing to guard against chemical splashes and burns - rubber boots, a rubber apron, chemical goggles, a face shield and rubber gloves.

11. Propane powered trucks shall be refueled in the open where ventilation will carry vapors away. Tanks shall not be replaced or removed in doors.

12. Never use compressed gas for blowing off your body or clothing. To use compressed air for blowing off anything else, you must have an approved nozzle that reduces air pressure to 30 PSI.

13. Defective slings shall not be used, nylon web, chain or wire rope.

14. Only company approved ladders or stands in good condition shall be used for overhead work.

15. When cutting or welding a fire extinguisher must be present, and fire watches, if necessary, are instructed and positioned. Flash shields or curtains must be set up to protect the workers in the surrounding area.

16. When gas cylinders are in use, they must be secured to a cart with a chain. Regulators must be installed between the cylinder and hose. A check valve shall be installed between the hose and the torch.

17. Keep flammable liquids in the original or a proper container designed for this purpose. Open containers of flammables are prohibited. Storage must be in a proper designated area.

18. When doing any grinding, face shields are required along with safety glasses.

19. Extension cords may not be tied up or used as permanent wiring.

20. When working on electrical boxes all covers must be replaced when work is completed or when it is to be left for a long period of time.

SAFETY VIOLATION PROCEDURES

There is a four (4) step corrective action procedure;

First Occurrence: Verbal Warning, Documented In File

Second Occurrence: Written Warning, Documented In File

Third Occurrence: Three-Day Suspension, Documented In File

Fourth Occurrence: Termination

These four steps will be followed at all times with exception of the most serious violations. Serious violations will be handled on a case by case basis depending on their severity. They may result in expedited occurrences and/or immediate discharge on a first occurrence, pending an investigation.

Safety Violations Occurrences will be active for a twelve (12) month period. After twelve (12) months, they will be removed from your file.

Four occurrences in a twelve (12) month period will be grounds for termination.

Any manager and/or supervisor are authorized to issue safety violation notices, regardless of the employee's department.

Violations will be recorded in the employee's personnel file.

CARBON ACTIVATED CORPORATION

Acknowledgment of Safety & Health

Compliance Requirements
This will acknowledge that my employer has informed me of my rights under the OSHA Act of 1970 and has given me a copy of the rules and regulations which are applicable to me on my job and as an employee in this plant. I understand and realize that my compliance with such rules and regulations is a condition of my employment and that
My failure to comply may result in my discharge.

Print Name: _____

Signature: _____

Date: _____

COPY TO BE RETAINED IN EMPLOYEE'S PERSONNEL FILE

First Aid Plan

SCOPE - Carbon Activated Corporation shall provide First aid training when the facility is not in near proximity to medical assistance (First aid responders may require additional training under the Blood borne Pathogen Standard; see Cross Referencing for more detail).

AUTHORITY/REFERENCE - OSHA 29 CFR 1910.151 OSHA 29 CFR 1910.1030

ACCOUNTABILITY - Carbon Activated Corporation shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health. If the workplace is not in near proximity to an infirmary, clinic or hospital that is used for the treatment of all injured employees then a person or persons shall be adequately trained to render first aid. First aid supplies approved by the consulting physician shall be readily available. A careful record should be kept of each administration of first aid and an injury investigation report sent to the injured person's supervisor at the time first aid is administered.

PROGRAM ELEMENTS - Carbon Activated Corporation should require that all employees report for treatment immediately upon being injured, regardless of the extent of the injury. The first aid program should include:

1. Properly trained and designated first aid responders on every shift (train enough responders to cover for vacation, sick leave or other absences).
2. A first aid unit and supplies, or first aid kit.
3. A first aid manual.
4. Posted instructions for calling a physician and notifying the hospital that a patient is en route.
5. Posted methods for transporting ill or injured employees and instructions for calling an ambulance or rescue squad.
6. An Adequate First Aid Record System- It is advisable to set aside a room, if possible, in a convenient location for the sole purpose of administering first aid.

The room should be equipped with the following items:

1. Examination table
2. Cot, for emergency cases, enclosed by a movable curtain
3. Dustproof cabinet for supplies
4. Waste receptacle
5. Small table
7. Two chairs, one with and one without arms

TRAINING – The American Red Cross first aid textbook and the United States Bureau of Mines manual of first aid instructions are recommended for the teaching of first aid.

The majority of states have medical practice acts under which a person is limited to a certain definite procedure when attending anyone who is sick or injured except under the direct supervision of a physician. It is necessary that anyone responsible for first aid have a full understanding of the limits, which restrict the work. Since improper treatment may involve the company in legal problems, the first aid responder should be duly qualified and certified by the Bureau of Mines or the American Red Cross. These certificates must be renewed at specific intervals.

DEFINITIONS:

First aid – The immediate, temporary treatment given in the case of accident or sudden illness before the services of a physician can be secured. Further, other types of first aid includes prompt attention to minor injuries, such as cuts, scratches, bruises and burns which usually do not require extensive medical attention.

Blood borne Pathogens – Pathogenic micro organisms present in human blood that can cause disease in humans. These include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

CROSS-REFERENCING – Other programs which may be involved in the development of this program include Record keeping/Accident Investigation and Emergency Action.

RESPONSIBILITY – Person who is going to see that the program is developed and implemented including creating and conducting the training. This series has been designed to provide the basic information necessary to develop written programs and appropriate training as required by the Occupational Safety and Health Administration. They are not intended to be or become a written program. They are a guideline for the creation of a program specific to a company

INJURY AND ILLNESS PREVENTION PROGRAM (IIPP)

Carbon Activated Corporation

This injury and illness prevention program is part of **Carbon Activated Corporation's** commitment to provide a safe and healthful workplace for all of its employees.

Components of the program are as follows:
1) Program Coordinator
2) Employee Compliance with Safe and Healthy Work Practices
3) Communication
4) Corrections of Unsafe or Unhealthful Conditions
5) Employee Training
6) Identification and Evaluation of Workplace Hazards
7) Investigation of Injuries and Illnesses
8) Record Keeping

Questions regarding this program can be directed to the Program Coordinator, Dale Kerr, at 310-885-4555 email: info@carbonactivatedcorp.com

1) PROGRAM COORDINATOR:
Effective with the official implementation of the Injury and Illness Prevention Program, the Operations Manager has been assigned the responsibility for coordinating the program, and is given the appropriate authority in order to fulfill this responsibility.

2) EMPLOYEE COMPLIANCE WITH SAFE AND HEALTHY WORK PRACTICES:
The Injury and Illness Prevention Program provides safe and healthy work practices for employees through training provided by **Carbon Activated Corporation**, directions and information given by immediate supervisors, and obligations defined in the collective bargaining contracts for both certificated and classified personnel.
Copies of the contract articles on Safety are included in the Appendix.

3) COMMUNICATION:
The Injury and Illness Prevention Program provides for a continuing exchange of information between **Carbon Activated Corporation** and its employees regarding health and safety matters. Among the methods used are in-service meetings, training programs, distribution of publications, regular posting of safety materials, and reporting of unsafe conditions.

CORRECTIONS OF UNSAFE OR UNHEALTHFUL CONDITIONS:
Carbon Activated Corporation's injury and Illness Prevention Program is designed to identify unsafe and unhealthful conditions, procedures, and work practices through the use of:

a) Employee safety and health training
b) Workplace inspections
c) Systems of communication

Each identified unsafe or unhealthful condition, procedure, or work practice will be addressed in a timely manner. The Program Coordinator and, if necessary, the site manager, the Director of Maintenance/Operations, and the Deputy Superintendent of Business Services & Governmental Relations shall determine the appropriate corrective action. All work orders generated to correct unsafe or unhealthful conditions are given the highest priority.

4) EMPLOYEE TRAINING:

One of the components of the Injury and Illness Prevention Program is a training program for all employees. It is intended to train and instruct employees in general safety and healthy work practices and to provide instruction concerning hazards specific or unique to each employee's job. The Program Coordinator ensures that all supervisors are knowledgeable of the safety and health hazards to which employees under their immediate direction and control may be exposed. To ensure that all employees receive adequate training, the program includes the following elements:

a. All employees receive training and instruction when the Injury and Illness Prevention Program is first established.
b. All new employees receive appropriate training prior to assignment to jobs having hazards covered under the training program.
c. All employees given new job assignments receive training applicable to jobs new exposures for which training has not been previously provided.
d. All employees exposed to new hazards due to the introduction of new substances, processes, procedures, or equipment to the workplace receives training and instruction applicable to the new hazards.
e. Employees receive refresher training whenever the District Program Coordinator or Safety Committee is made aware of new or previously unrecognized hazards and/or when the District feels it is appropriate.

Training and instruction is provided in any format or media approved by the Program Coordinator and which is readily understandable to all employees.

Training formats and/or media may include but not be limited to:

1) Seminars / Workshops / Meetings
2) Manuals / Booklets / Newsletters
3) Video / Film / Other Audio/Visual Media

5) IDENTIFICATION AND EVALUATION OF WORKPLACE HAZARDS:

Regular inspections are performed as follows:

a) The Fire Department inspects **Carbon Activated Corporation** each year, and makes follow-up inspections to insure that any necessary actions have been taken.
b) A professional safety expert conducts a safety inspection on a bi-annual basis.
a) For specific concerns and as appropriate, an industrial hygienist from the Los Angeles County Health Department will inspect, test, and report on problems reported by employees and/or identified by the District Safety Committee.

6) INVESTIGATION OF INJURIES AND ILLNESSES:

The Program Coordinator reviews by the employee's immediate supervisor and reports of accidents resulting in injuries or illnesses. The purpose of the Program Coordinator's investigation is to determine:

a) The cause of the accident/illness
b) How to avoid a repeat occurrence
c) If there is an unsafe condition or work practice which must be corrected
d) The type if frequency of incidents and the job classifications where they occur

7) RECORD KEEPING:

The Injury and Prevention Program requires detailed record keeping, which is mandatory for the following:

a) Workplace inspections
b) Employee training
c) Occupational injuries and illnesses

Workplace inspection reports shall include:

a) Date of inspection
b) Areas inspected
c) Name of person(s) conducting the inspection
d) The unsafe conditions and work practices which have been identified
e) Action taken to correct the identified unsafe conditions

Safety and health training records for each employee shall include:

a) Employee name
b) Employee social security number
c) Date of training
d) Type of training provided
e) Training provider(s)

Appendix
ARTICLE VI
CERTIFICATED CONTRACT / SAFETY

Section 1 – Unsafe Conditions: **Carbon Activated Corporation** will neither require employees to work under unsafe conditions nor require them to perform tasks that may endanger their health or safety.

Section 2 – Noise: Noise level at any workstation shall not be such that the health or safety of an employee might be adversely affected.

Section 3 – Temperature and Smog: When the smog level reaches .20 of a part of oxidants per million parts of air, or when the temperature exceed 90° Fahrenheit, employees shall be notified and will not be required to engage in strenuous activities. Employees shall not be required to work at an indoor workstation for more than one additional hour after reporting temperatures below 60° Fahrenheit, one-half hour below 50° Fahrenheit, or ten minutes below 40° Fahrenheit.

Section 4 – Safety Inspection: There shall be an annual inspection by a qualified inspector of each work location at **Carbon Activated Corporation** to identify safety hazards. Copies of inspection reports shall be made available to the employees upon request. Among safety factors to be considered are those relating to equipment operation and building structure. The fire marshal shall inspect for fire safety periodically, and reports shall be kept on file in the office.

At the time portable structures are installed or relocated, a state-licensed inspector shall inspect them. Within 90 days after this Agreement becomes effective, each portable classroom shall be inspected for safety by a state-licensed inspector.

Should any inspector's report state that a safety hazard exists or will exist; **Carbon Activated Corporation** shall take appropriate action. If an immediate, severe hazard is present, the employee, exposed to this hazard, will be assigned to a different workstation until the condition has been corrected.

Section 5 – Reporting Hazards: Employees have the right and the obligation to refer unsafe or unhealthful conditions or hazardous assigned tasks in writing to the management, if remedial action is not taken within a reasonable time after a verbal referral has been made to the site administrator. An appropriate investigation shall take place as soon as possible. Any unsafe or unhealthful condition or any hazardous assignment shall be corrected.

Carbon Activated Corporation
Report of Possible Health or Safety Hazard

Date: Location: Name/Phone Number (Optional):
(Site or Department)

Site Administrator: Also Reported To: Date:

Circle: This is my 1st, 2nd, 3rd, __th, report for this hazard Circle:

The hazard is: Same Worse Better Not Sure

Description of Possible Hazard(s):

Suggestions for Possible Remedy:

Program Coordinator and/or Safety Committee section below:

Analysis:

Date:

Recommendations:

Date:

Actions Taken:

Response to Reporter (If name provided):

By Whom: Date:

Copy: – Program Coordinator, Reporter's Supervisor, Reporter (originator)

INJURY / ILLNESS RECORDKEEPING

SCOPE – Federal regulations provide for recording and reporting of certain occupational injuries and illnesses by employer. This record keeping can be used to display the occurrence, extent, and outcome of cases recorded during the year.

AUTHORITY/REFERENCE – OSHA 29 CFR 1904

ACCOUNTABILITY – **Carbon Activated Corporation** shall maintain a log, supplementary record, and summary of all recordable cases. Each recordable injury or illness shall be entered within seven (7) calendar days after receiving notification of the occurrence. For this purpose the OSHA 300 log and the 301 forms (or equivalent) shall be used. This is required only for employers with more than ten full or part-time employees at any one time in the previous calendar year, and who have a certain standard industrial classification (SIC). There are certain SIC codes in the retail sales and service industries that are exempt.

PROGRAM ELEMENTS – The following requirements are necessary to maintain and retain the occupational injury and illness log and supplementary report:

1. Maintain a copy of the log and report for each place of employment.
2. Update the log within seven days after being informed of the injury or illness.
3. Conduct accident/illness (incident) investigations.
4. Post the annual summary (300 A) from February 1 to April 30 each year.
5. Keep the records for five years plus the current calendar year.
6. Make the log and reports available to every employee.
7. Report any catastrophic incident within 8 hours orally to OSHA.
8. Develop a procedure for employees to report all accidents and illnesses and train them on that procedure.

TRAINING – Instructions for the completion of the OSHA 300 Log, 300-A Summary, and 301 forms can be found on OSHA's web page at
www.osha.gov.

DEFINITIONS:

First Aid – any one time treatment, and any follow-up visit for the purpose of observation, of minor scratches, cuts, burns, splinters and so forth, which do not ordinarily require medical care.
Lost Work Days – the number of calendar days (consecutive or not) after, but not including, the day of injury or illness that the employee was not able to work.
Medical Treatment – the management and care of a patient to combat disease or disorder.

PROGRAM PROFILE SERIES NUMBER ONE

Recordable Occupational Injury or Illness – Incidents which result in fatalities, regardless of the time between the injury and death, or the length of the illness; days away from work, restricted work or transfer to another job; medical treatment beyond first aid, loss of consciousness, or significant injury or illness diagnosed by a physician or other licensed health care professional. This also applies to any diagnosed occupational illness, which is reported to **Carbon Activated Corporation** that requires medical treatment, days away from work or days of restricted activity.

CROSS-REFERENCING - Another program which may be involved in the development of this program is Incident Investigation.

RESPONSIBILITY - Who is going to see that the program is developed and implemented including creating and conducting the training? A **Carbon Activated Corporation** executive must certify that he or she has examined the OSHA 300 Log and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.

This series has been designed to provide the basic information necessary to develop written programs and appropriate training as required by the Occupational Safety and Health Administration (OSHA). They are not intended to be or become a written program. They are a guideline for the creation of a program specific to a company

EMPLOYEE EXPOSURE AND MEDICAL RECORDS

SCOPE – This is to provide employees and their representative's access to relevant exposure and medical records for improved detection, treatment, and prevention of occupational disease.

AUTHORITY/REFERENCE – OSHA 29 CFR 1910.20

ACCOUNTABILITY – **Carbon Activated Corporation** shall maintain and preserve employee exposure and medical records and provide employees and their representatives' access to these records. Employees must be given information and training upon first entering into employment, and at least annually thereafter, on their right of access to exposure and medical records; the existence, location, and availability of such records; the person responsible for maintaining and providing access to such records. A copy of the standard (OSHA 29 CFR 1910.20) shall be kept at the workplace and, upon request; copies shall be made available to employees.

PROGRAM ELEMENTS – The following elements are requirements of the standard:

1. Preservation of records - Unless another OSHA standard requires a different time period, records shall be retained as follows:

    a. Employee medical records - retained for length of employment plus thirty (30) years. Records of employees who have worked less than one year for the employer do not need to be retained if they are provided to the employee at the end of employment.
    b. Employee exposure records and analyses using exposure and medical records – retained for thirty (30) years. Biological monitoring results designated as exposure records by specific OSHA standards shall be retained as required by that standard.

2. Access to records - Upon receiving a request for access from an employee or their designated representative, **Carbon Activated Corporation** must provide access within fifteen working days. If there is a delay in allowing access, **Carbon Activated Corporation** must communicate the reason for the delay and the earliest date the records will be available within fifteen working days of receiving the request. If a copy of the record is requested **Carbon Activated Corporation** will either provide the initial copy at no cost, allow the employee or representative to copy the record using **Carbon Activated Corporation's** equipment, or loan the record to the employee or representative for a reasonable time to copy. **Carbon Activated Corporation** may charge reasonable costs for subsequent or additional copies of the record. If the record is an x-ray, the employer may limit access to on-site examination or make other suitable arrangements for the temporary loan of the x-ray.

3. Employee information – Upon first entering employment, and at least annually thereafter, employees shall be informed of the following:

    a. The existence, location, and availability of any medical and exposure records.
    b. The person responsible for maintaining and providing access to the records.
    c. Each employee's rights of access to the records.

NOTE: A copy of this standard must be kept at the workplace and copies made available to employees upon request.

4. Transfer of records – When **Carbon Activated Corporation** ceases business, these records shall be transferred to the successor employer. If there is no successor employer, the employees shall be informed of their rights to the records at least three months prior to ceasing business. If required by a specific OSHA standard, the records must be transferred to the Director of the National Institute for Occupational Safety and Health (NIOSH).

5. Trade secrets – **Carbon Activated Corporation** may delete any trade secret data that discloses manufacturing processes, or the percentage of a chemical substance in mixture, as long as the person requesting the records is notified. However, **Carbon Activated Corporation** may be required to provide alternative information that is sufficient to identify where and when an exposure occurred.

This section also contains provisions that allow an employer to withhold the specific chemical identity of a toxic substance provided that:

1. The claim that the information withheld is a trade secret can be supported.
2. All other information about the substance is disclosed.
3. The party requesting the information is informed that the information being withheld is a trade secret.
4. The specific chemical identity is disclosed to medical personnel when the information is necessary for the treatment of a medical emergency.
5. The specific chemical identity is disclosed when an employee, employee's representative, or health professional makes a written request for the information for the purposes of:
    a. Assessing the hazards of exposure;
    b. Conducting or assessing sampling of the workplace atmosphere to determine exposure levels;
    c. Pre-assignment or periodic medical surveillance of exposed employees;
    d. Providing medical treatment to exposed employees;
    e. Selecting or assessing appropriate personal protective equipment for exposed employees;
    f. Designing or assessing engineering controls or other protective measures for exposed employees;
    g. Conducting studies to determine the health effects of exposure.

This series has been designed to provide the basic information necessary to develop written programs and appropriate training as required by the Occupational Safety and Health Administration. They are not intended to be or become a written program. They are a guideline for the creation of a program specific to a company

PERSONAL PROTECTIVE EQUIPMENT

SCOPE – **Carbon Activated Corporation** is required to assess the workplace to determine if hazards are present, or is likely to be present, which necessitate the use of personal protective equipment.

AUTHORITY/REFERENCE – OSHA 29 CFR 1910.132

ACCOUNTABILITY – **Carbon Activated Corporation** are responsible for identifying the workplace hazards and selecting the appropriate PPE for the identified hazard. Such assessments shall be done in the form of a written certification. NOTE: PPE should only be used after all engineering controls, substitution methods, and administrative controls have been exhausted.

PROGRAM ELEMENTS – These elements need to be addressed to ensure safety in the workplace.

1. Hazard assessment - Survey the workplace to determine the hazards that may exist.
2. Equipment selection - Select and have each affected employee use the types of PPE that will protect him or her from the hazards identified in the hazard assessment. Communicate the selection decisions to each affected employee and select PPE that properly fits them.
3. Verify the hazard assessment has been done through a written certification that contains the following:
    i. Workplace(s) evaluated
    ii. Name of person certifying that the evaluation has been done
    iii. Date(s) of the hazard assessment
    iv. Identification as the written certification of hazard assessment

TRAINING – Training shall be provided to each employee who is required to use PPE.
Each employee shall be trained to know the following as a minimum:

1. When PPE is necessary
2. What PPE is necessary
3. How to properly don, doff, adjust, and wear PPE
4. Limitations of the PPE
5. Proper care, maintenance, useful life and disposal of the PPE.

Employees must demonstrate an understanding of the training before being allowed to perform work requiring the use of PPE. Retraining shall be done when:

i. Changes in workplace render the previous training obsolete
ii. Changes in the types of PPE
iii. Employer believes the employee's knowledge is lacking demonstrated by improper use of the available PPE.

Carbon Activated Corporation shall verify that each affected employee has received and understood the required training through a written certification that contains:

i. Name of employee trained
ii. Date(s) of training
iii. Identified as certification of training

Program Profile Series
Number Nineteen

CROSS-REFERENCING – Other programs, which may be involved in the development of this program, are

1. Respirator Program
2. Hazard Communication Program
3. Laboratory Chemical Program
4. Spill Response
5. Program
6. Hearing Conservation Program
7. Confined Space Program

RESPONSIBILITY – The Operations Manager will see that the program is developed and implemented including creating and conducting the training. This series has been designed to provide the basic information necessary to develop written programs and appropriate training as required by the Occupational Safety and Health Administration. They are not intended to be or become a written program. They are a guideline for the creation of a program specific to a company.

HEARING CONSERVATION PROGRAM

SCOPE - High noise levels in the site should be evaluated to determine the degree of hazard and the appropriate protection. If noise levels exceed established OSHA minimum standards then a formal hearing conservation program must be established.

AUTHORITY/REFERENCE - OSHA 29 CFR 1910.95

ACCOUNTABILITY - Protection against the effects of noise exposure shall be provided by **Carbon Activated Corporation** when sound levels equal or exceed a minimum exposure of an 8-hour time-weighted average sound level of 90 decibels measured on the A scale (slow response) or an equivalent 100% dose. See table G-16 for permissible exposure times for sound levels greater than 90 dBA. **Carbon Activated Corporation** shall maintain an accurate record of all employee exposure measurements. The employer shall also retain all employee audiometric test records obtained as a result of this standard. Noise exposure records shall be kept for two years. Audiometric records shall be retained for the duration of the affected employee's employment.

PROGRAM ELEMENTS - The required hearing conservation program contains the following five elements:

1. Monitoring - When STET results indicate that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 dBA, the employer shall develop and implement a noise monitoring program.

2. Audiometric Testing - The employer shall establish an audiometric testing program making the testing available at no cost to all employees whose exposures equal or exceed an 8-hour time weighted average of 85 dBA.

3. Hearing Protectors - Employers shall make hearing protectors available to all employees exposed to an 8-hour time-weighted average of 85dBA or greater at no cost to the employee. A variety of types and sizes of hearing protection shall be available. Hearing protectors shall be replaced as necessary. Employers shall ensure that hearing protection is worn.

4. Employee Notification - The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 dBA of the results of the monitoring. The employer shall make available to affected employees or their representative's copies of the standard and shall post a copy in the workplace.

5. Record Keeping - The employer shall keep accurate records of the noise monitoring (retaining them for a minimum of two years) and the audiometric tests (maintaining them, minimally, for as long as the employee is employed by the company).

TRAINING - The employer shall institute a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 dBA and shall ensure employee participation in the program. The training shall include the effects of noise on hearing, advantages and disadvantages of different types of hearing Protection. How to select, fit, use and care for hearing protection and the purpose of the audiometric testing and explanation of the testing procedures.

DEFINITIONS - dBA -- decibels measured on the A scale of the sound level meter (the A scale most closely matches the response of the human ear).

Time Weighted Average -- also written TWA

CROSS REFERENCING - Table G-16 from OSHA 29 CFR 1910.95

Duration/day	Sound level hours dBA slow
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
½	110
¼ or Less	115

RESPONSIBILITY – The Operations Manager will see that the program is developed and implemented including creating and conducting the training. This series has been designed to provide the basic information necessary to develop written programs and appropriate training as required by the Occupational Safety and Health Administration. They are not intended to be or become a written program. They are a guideline for the creation of a program specific to a company.

Carbon activated Corp.

CONFINED SPACE SAFETY

CS-19

POLICY

AND

PROGRAM

NBR Treatment Plant Media Replacement

Primary Emergency Phone # 911
Secondary Emergency on Site Phone **# (310) 418-2430**
Company Emergency Phone **# (310) 885-4555**

Carbon Activated Corporation

Equipment List:

Site Equipment:

Extension Ladders
Atmosphere Monitor (4 gas)
Forklift
Gear Truck
Vector Vacuum Unit
Hose's 5"
Hose's 4"
Hose adapters for 4" and 5" Hose's

Personnel Protection Equipment Policy:

All the below PPE will be used at all site's, when entering filter that are more than 6' deep you will wear Safety Harness with Lanyard connected to the Fall Protection Unit, on Systems that are over 6' high you will wear Safety Harness and connect the Lanyard to a load bearing pipe or Lift rings on Filter System, and when loading Filter Systems a Respirator will be used.

Ear Plugs
Long Sleeve Shirt and Pants
Hard Hats
Safety Glasses
Respirator's Nosh Approval TC-84A-1337
Safety Harness with Lanyard
Fall Protection Unit

Confined Space

1.0 Purpose

1.1 This procedure has been developed to detail the methods, controls, activities, and practices for employee's entry and work in confined spaces.

2.0 Scope

2.1 This procedure applies to all Carbon Activated Corporation and sub-contractor personnel.

3.0 Responsibility

3.1 A copy of this procedure will be on file at every job site during confined space entry/work. Copies will be available from the Confined Space Entry Supervisor/Company Safety Representative for employees, their designated representatives, sub-contractors and representatives of Federal/State OSHA.

3.2 The confined space entry supervisor is responsible for implementation of this procedure to include:

3.2.1 Evaluating potential spaces for confined space status and knows the hazards that may be faced during entry including information on the mode, signs or symptoms, and consequences of the exposure.

3.2.2 Contracting the Safety Department for review and approval of all planned permit confined space entries prior to authorization of confined space permits.

3.2.3 Reviewing and ensuring all permit conditions are complied with and that acceptable conditions are in place prior to release for entry and are maintained during the entry.

3.2.4 Terminate the entry and cancel the entry permit when the entry operations covered by the entry permit have been completed or a condition that is not allowed under the entry permit arises in or near the permit space.

3.2.5 Removes unauthorized individuals who enter or attempt to enter a permit space during entry operations.

3.2.6 Conduct a Tailgate meeting with all attendants and entrants prior to the entry of permit spaces to review permit conditions, hazards, personal protective equipment, rescue/emergency notification and protocol.

3.2.7 Ensuring that the confined space is isolated prior to entry.

3.2.8 Conduct or ensuring that all required atmospheric testing is completed and documented on the entry permit prior to a permit space entry.

3.2.9 Ensuring that the required ventilation is properly placed and maintained prior to and during the permit space entry.

3.2.10 When subcontractors are utilized to perform work that involves permit space entry, the entry supervisor shall

- Inform the subcontractor that the workplace contains permit spaces and entry is only permitted utilizing a permit space program meeting the requirements of Title 29 CFR 1910.146.
- Inform the subcontractor of characteristics of the permit space.
- Apprise the subcontractor of any precautions or procedures implemented for the protection of employees working in the proximity of the permit space
- Coordinate entry operations with the subcontractor when subcontractor employees will be working with company employees in or near permit spaces.
- Debrief subcontractor at the conclusion of the entry operations regarding the permit space program followed and any hazards confronted or created in permit spaces during entry operations.

3.3 The Manager of Environmental, Safety and Health/Divisional Safety Representative is responsible for:

3.3.1 Maintenance and revisions of this procedure.

3.3.2 Training of entry supervisors/foremen and employees.

3.3.3 Review and approval of planned confined space entry prior to authorization of entry into a permit required confined space.

3.3.4 Conducting job site audits of confined space entry procedures compliance.

3.3.5 Evaluating IDLH (Immediately Dangerous to Life and Health) entries

3.3.6 Assist entry supervisors/foremen with the evaluation of confined spaces and preparation of confined space entry permits.

3.3.7 Retain entry permits for a minimum period of one year.

3.3.8 Annually review canceled entry permits to determine required corrective action for confined space entry procedures.

3.3.9 Review and approve qualification records for Confined Space Supervisor.

4.0 Definitions

4.1 Acceptable entry conditions – The conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit required confined space entry can safely enter into and work within the space.

4.2 Attendant – An Individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant duties assigned in the employer's permit space program

4.3 Authorized Entrant – An employee who is authorized by the employer to enter a permit space.

4.4 Blanking or Binding – The absolute closure of a pipe, line, or dust by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

4.5 Confined Space – A space that is large enough and so configured that an employee can physically enter and perform work. That has limited or restricted means for entry or exit i.e.... tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry and is not designed for continuous employee occupancy.

4.6 Lockout/Tag out – The closure of a line, duct or pipe by closing, locking, and tagging one or more independent in-line valves and by opening and locking or tagging a drain or vent in the line between the two closed valves.

4.7 Emergency – Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

4.8 Engulfment – The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

4.9 Entry – The action to which a person passes through an opening into a permit required confined space. Entry includes ensuring work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the place of an opening into the space.

4.10 Entry Permit – The written or printed document that is provided by the employer to allow and control entry into a permit space that contains the required information.

4.11 Hazardous Atmosphere – An atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to self-rescue (that is escape unaided from a permit space), injury or acute illness from one or more of the following causes.

4.11.1 Flammable gas, vapor or mist in excess of 10% of its lower flammable limit (LFL).

4.11.2 Airborne combustible dust at a concentration that meets or exceeds its LFL

4.11.3 Atmospheric oxygen concentration below 19.5% or above 23.5%.

4.11.4 Atmospheric concentration of any substance for which a Permissible Exposure Limit (PEL) is published in Federal or State OSHA regulations and which could result in employee exposure of its permissible limit.

4.11.5 Any other atmospheric condition that is immediately dangerous to life or death.

4.12 Hot Work Permit – The employer's written authorization to perform operations (i.e. riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

4.13 Immediately dangerous to life or health (IDLH) - Any condition that poses as an immediate or delayed threat to life or that could cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

4.14 Inerting – The displacement of the atmosphere in a permit space by non-combustible gas to such an extent that the resulting atmosphere is non-combustible. **NOTE:** All inerted spaces are IDLH.

4.15 Isolation – The Process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as; Blanking or binding; maligning or removing section of lines; pipes; or ducts; a double block and bleed systems' lockout/tag out of all sources of energy or blocking or disconnecting all mechanical linkages.

4.16 Line Breaking – The intentional opening of a pipe, line or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume pressure or temperature capable of causing injury.

4.17 Non-Permit Confined Space – A confined space that does not contain or with respect to atmospheric hazards have the potential to contain any hazard capable of causing death or a serious physical harm.

4.18 Oxygen Deficient Atmosphere – An atmosphere containing less than 19.5% of oxygen by volume.

4.19 Oxygen Enriched Atmosphere – An atmosphere containing more than 23.5% of oxygen by volume.

4.20 Permit Required Confined Space (permit space) – A confined space that has one or more of the following characteristics:

4.20.1 Contains or has a potential to contain a hazardous atmosphere.

4.20.2 Contains a material that has the potential for engulfing an entrant.

4.20.3 Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converting walls or by a floor, which slopes downward and tapers to a smaller cross section.

4.20.4 Contains any other recognized serious safety or health hazard.

4.21 Permit Space, Class 1 – A permit space whose only hazard is posed by an actual or potential hazardous atmosphere and continuous forced air ventilation alone is sufficient to maintain the space safe for entry. **NOTE:** Title 29 CFR 1910.146 allows work to proceed with "alternate" reduced requirements in a permit space which only requires ventilation to eliminate hazards.

4.22 Permit Space Class 2 – A permit space with hazards that cannot be eliminated by ventilation alone.

4.23 Prohibited condition – Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

4.24 Rescue Service – The personnel designated to rescue employees from permit spaces.

4.25 Retrieval Systems – The equipment (including a retrieval line, chest or full body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of person(s) from permit spaces.

5.0 Client Required Information

5.1 When employees are required to enter a confined space, the entry supervisor shall request the following from the client:

5.1.1 Status of confined space as either permit or non-permit required.

5.1.2 Any available information regarding permit space hazards and entry operations from the client.

5.1.3 Procedures to coordinate entry operations with the client when both client personnel and company personnel will be working in or near permit spaces.

5.2 The entry supervisor shall inform the client of the confined space entry program to be used by our employees and will advise the client of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

6.0 Permits

6.1 No employee is to enter any Class 1 or Class 2 Permit Space without a written confined space permit having been executed.

6.2 Review and approval by the company Safety Department of every permit required confined space entry is required prior to permit authorization for entry

6.3 All entry permits will be numbered and completed by the entry supervisor or qualified designee.

6.4 On the entry permit the following information will be recorded:

6.4.1 Description of the confined space.

6.4.2 Results of the atmospheric test.

6.4.3 Dates and times the permit is valid and when the permit expires.

6.4.4 Scope and Description of work to be performed

6.4.5 Confined Space isolation and lockout/tag out verification.

6.4.6 Personnel protective equipment requirements.

6.4.7 Name of the entry supervisor.

6.4.8 Names of authorized attendants.

6.4.9 Names of authorized entrants.

6.4.10 Specifications for additional atmospheric test (if any) and test results.

6.4.11 Communication procedures and equipment required (if any).

6.4.12 Additional permits required.

6.4.13 Rescue and Emergency on site or that can be summoned and the means for summoning those services.

6.4.14 Existing and work activity hazard identification.

6.5 The entry permit shall be posted at the space for the duration of the confined space entry.

6.6 As permits are removed from the confined space, they will be returned to the entry supervisor. At the end of the project, permits will be forward to the Corporate Safety Department. The Corporate Safety Department will retain the permits for a minimum period of one year.

6.7 The entry release for entry shall be valid for a single shift only. Reverification of acceptable entry conditions is required at the beginning of each shift.

6.8 It will be the responsibility of the entry supervisor to see that all permit requirements and safety precautions are complied with before, during and after entry.

6.9 Minimum qualifications for confined entry supervisors include:

- Completed Supervisory Level Confined Space Training.
- Confined space training, including all other requirements of CS-19 Confined Space Entry.
- Actual confined space field experience.

- Demonstrated ability to complete Carbon Activated Corporation Confined Space Entry Permits.
- Demonstrate the technical leadership, maturity and judgment skills necessary to supervise confined space entry.

6.10 When the Owner has an existing confined space entry permit procedure established and requires Carbon Activated Corp. employees to work under that procedure. A parallel permits utilizing the owners and Carbon Activated Corp. Confined Space Entry Permit system is required unless either company waives the parallel permit requirement. The parallel permit requirement may be waived if the Owners Confined Space Entry program has been review and accepted by Carbon Activated Corp. Company Safety Department.

7.0 Non-Permit Required Confined Space Entry.

7.1 The confined space shall be considered a Non-Permit Required Confined Space if:

- The space does not pose the minimum risk included in the definition of a Permit Required Confined Space or
- The space has been reclassified as a Non-Permit Space after all hazards within the space have been eliminated and there are no actual or potential atmospheric hazards within the space.
- If it is necessary to enter the space to eliminate hazards, such entry shall be performed under the requirements of a Permit-Required Space. If the hazards within the space have been eliminated, the space may be reclassified as a Non-Permit Confined Space for as long as the hazards remain eliminated.
- Control of atmospheric hazards through forced ventilation does not constitute elimination of the hazards. Such spaces shall be classified as a Class 1 or Class 2 permit space.

- For example: A Non-Permit Confined Space is a confined space with no significant safety hazards and sufficient natural ventilation to ensure an adequate supply of oxygen and disperse flammable gases, vapors, or toxic air contaminants that might accidentally be introduce into the space.

7.2 Non-Permit spaces do not require either attendants or permits. **NOTE:** Non-Permit Spaces are not included within the scope of Title 29 CFR 1910.146, Permit Required Confined Space.

8.0 Class 1 Permit Confined Space Entry.

8.1 The confined space shall be considered a Class 1 Permit Confined Space if:

- It is demonstrated that the only hazard posed by the permit is an actual or potential hazardous atmosphere.
- It is demonstrated that continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry.

- Monitoring and inspection data are developed to support the demonstrations required above.
- If an initial entry of the space is necessary to obtain the data required, the confined space shall be treated as a Class 2 Permit Space until certified as a Class 1 Permit Space.
- The determination and supporting data required shall be documented on the Confined Space Entry Permit and made available to each employee who enters the permit space.

8.2 Entry into the permit space under the alternate procedure requirements of a Class 1 Permit Space is preformed in accordance with the following requirements.

8.2.1 Any condition making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.

8.2.2 When entrance covers are removed, a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space shall promptly guard the opening.

8.2.3 Before an employee enters the space, the internal atmosphere shall be tested with a calibrated direct reading instrument for the following conditions in the order given:

- Oxygen content,
- Flammable gases and vapors, and
- Potential toxic air contaminants.

8.3 Continuous forced air ventilation shall be used as fellows:

8.3.1 An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.

8.3.2 The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space.

8.3.3 The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.

8.3.4 The atmosphere within the space shall be tested every 30 minutes or as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of as hazardous atmosphere.

8.3.5 If a hazardous atmosphere is detected during entry:

- Each employee shall leave the space immediately.
- The space shall be evaluated to determine how the hazardous atmosphere developed, and
- Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

8.4 The entry supervisor shall verify that the space is safe for reentry and that the Pre-Entry Measures have been taken through a written verification on the Confined Space Entry Permit. The verification shall be made before reentry and shall be made available to each employee entering the space.

8.5 When there are changes in the use or configuration of a Class 1 Permit Space that might increase the hazards to entrants the employer shall reevaluate that space and if necessary reclassify it as a Class 2 Permit Required Confined Space.

8.6 All entrants into a Class 1 Permit Space must be trained in accordance with this procedure.

8.7 Class 1 Permit Spaces do not require attendants.

9.0 Class 2 Permits Required Confined Space Entry.

9.1 Pre-Entry – The following conditions must be met for release of the permit space for entry.

9.1.1 Lines which may convey flammable corrosive or toxic materials or materials that may create a hazard if released will be isolated from the confined space by means of blinding disconnecting or blocked off by other means. The disconnection or blind shall be so located or done in such a manner that the inadvertent reconnection of the line or removal of the blind is effectively prevented.

9.1.2 All electrical hydraulic or pneumatic stored energy thermal appliances and or equipment within the confined space shall be neutralized and locked out.

9.1.3 The space shall be emptied flushed or otherwise purged of hazardous materials to the extent that is feasible and also barricaded to prevent unauthorized entry.

9.1.4 The atmosphere within the confined space shall be tested with an appropriate device or method to determine whether dangerous air contamination and or oxygen deficiency exists and a written record of such testing results shall be made and kept at the work site for the duration of the work. Effected employees and or their representative shall be afforded the opportunity to review and record the testing results. Trained and qualified personnel will conduct testing.

9.1.5 Testing will be conducted every 30 minutes or as frequently as conditions warrant but no less then:

- Prior to entry
- Changes of crews to work inside the vessel.
- Anytime the vessel has been vacated for one hour.
- Anytime a change of conditions inside the space indicates the need for additional monitoring.
- Specific site requirements of the client
- Continual monitoring will be conducted in high hazard spaces during IDLH entries in spaces, which cannot be fully isolated, or per site requirements.

9.1.6 Instruments shall be calibrated per the manufacturer's instructions. The instruments shall be labeled with current status. Instruments shall be used in accordance with the manufacturer's instructions.

9.1.7 Testing shall be conducted in the following order:

- Oxygen content.
- Flammable gas and vapors, and
- Potential toxic air contaminants.

9.1.8 Employees shall not enter Confined Spaces where test results indicate:

- Oxygen below 19.5% or above 23.5%
- Flammable gas or vapor above 10% of LFL
- Toxic air contaminants above 50% of their published LDLH levels.

9.1.9 The entry supervisor shall conduct a pre-entry (tailgate) briefing for all attendants and entrants covering the material included in the Permit Space Pre-Entry Briefing Agenda (Attachment B).

9.2 Class 2 Permit Space Entry Supervisors are responsible for:

9.3.1 Verification prior to release for entry rescue services are available and that the means to summon additional help are available and operable.

9.3.2 Pre-Entry briefing of all attendants and entrants prior to the entry of permit spaces to review permit conditions hazards, personal, protective, equipment, rescue/emergency notification and protocol.

9.3.3 Develop procedures to summon rescue and emergency services.

9.3.4 Develop plans for the rescue of entrants from permit spaces.

9.3.5 Closing, securing, identification, and turn over of permit spaces after entry operations are complete.

9.3.6 Completion and approval of Class 2 Confined Space Entry Permits and release of Class 2 Permit Spaces for entry after all entry conditions have been met.

9.3.7 Shall notify the rescue of hazards they may encounter when called to perform permit space rescue.

9.3.8 Shall provide access to the permit space as necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.

9.3.9 Shall cancel the Confined Space Permit whenever the planned scope of work is complete or conditions in or near the space significantly change.

9.4 Class 2 Permit Space authorized entrants are responsible for:

9.4.1 Knowing the hazards that may be faced during entry including information on the mode, signs/symptoms, and consequences of hazard exposures including possible behavioral effects of hazard exposure.

9.4.2 Properly use all equipment noted on the entry permit.

9.4.3 Communication with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.

9.4.4 Recognizes any signs or symptom(s) of hazard exposure or a prohibited condition and alerts the attendant.

9.4.5 Exit the permit space as quickly as possible whenever:

- A prohibited condition is detected
- Any sign or symptom of exposure to a hazard is recognized.
- An order to evacuate is given.
- An evacuation alarm is activated.

9.5 Class 2 Permit Space attendants are responsible for:

9.5.1 Knowing the hazards that may be faced during entry including information on the mode, signs/symptoms, and consequences of hazard exposures including possible behavioral effects of hazard exposure.

9.5.2 Verification of the identity of confined space entrants and maintenance of a current count of entrants in the confined space.

9.5.3 Remain on station outside of the permit space during entry operations until relieved by another attendant.

9.5.4 Communication with the entrant(s) to monitor entrant(s) status and alert entrant(s) of the need to evacuate the space.

9.5.5 Monitoring of activities inside and outside of the confined space and order the entrant(s) to immediately evacuate when:

- A prohibited condition is detected.
- Look for any sign or symptom of exposure to a hazard is recognized.
- A situation is detected outside of the confined space, which could endanger the entrant(s).
- The attendant cannot fully perform all his or her assigned duties.

9.5.6 Summon rescue and emergency services as soon as the attendant determines that entrant(s) may need assistance to escape from the confined space.

9.5.7 Take the following actions when unauthorized persons approach or enter a permit space:

- Warn the unauthorized persons to stay away from the permit space.
- Advise unauthorized entrants to immediately exit the permit space.
- Inform the authorized entrants and entry supervisor of any unauthorized entrant(s).

9.5.8 Perform non entry rescues

9.5.9 Perform no duties conflicting with their primary duties as attendant.

9.5.10 Attendant shall advise personnel not properly trained in rescue services not to enter a permit space to attempt a rescue.

9.6 Operations:

9.6.1 No source of ignition shall be introduced into the confined space until tests and isolation have ensured that dangerous air contamination due to flammable and/or explosive substance are made and found to be within acceptable ranges (less than 10% of LFL).

9.6.2 When ever oxygen-consuming equipment such as salamanders, plumbing torches, furnaces. Etc. is used within the confined space, measures shall be taken to ensure adequate combustion air and exhaust gas venting is accomplished. The confined space shall be continuously monitored for oxygen and carbon monoxide when such equipment is in use.

9.6.3 Provisions shall be made to permit ready for entry into and exit from the confined space.

9.6.4 Confined spaces with side and top openings shall be entered from the side opening where practical. When entry must be made through the top opening (vertical axis) and is more than five feet deep the following requirements also apply:

- An approved hoisting device or other effective means shall be provided for lifting employee(s) out of this space.
- The Harness shall be of a type that suspends a person in the upright position.

9.6.5 Only approved lighting shall be used in confined spaces subject to potential hazardous atmospheres due to flammable dusts, vapors, and/or gases. Approved lighting will met the requirements of NFPA 70, NEC for hazardous locations. For example lighting in confined spaces where paint fumes are present should be explosion proof and shall usually be required to meet the requirements of Class 1, Division 1 Group D.

9.6.6 Electrical equipment should be connected to a Ground Fault Interrupted Circuit. All electrical equipment shall be inspected [prior to use in the confined space.

9.6.7 Appropriate approved respiratory protection shall be used when identified on the entry permit and worn as required in the confined space. See Respiratory Protection Procedure, RPP-20 for respirator selection criteria.

9.6.8 All who enter a Class 2 Permit Space except when the use of a harness and lifeline would increase the risk to the entrant(s) shall use an approved safety harness and lifelines. The free end of the line shall be secured outside the entry opening. The line shall be at least ½ inch in diameter and 2,000 pounds tested. This line and harness shall be inspected prior to use in the confined space. The requirements for a safety harness and lifeline may be waived and noted on the permit it the use of such devices would increase the hazard to workers.

9.6.9 Employees working in confined space, which had last contained substance corrosive to the skin, or which can be absorbed through the skin shall be provided and shall wear appropriate personal protective clothing.

9.6.10 For Class 2 Permit Spaces at least one employee shall be designated the attendant and shall remain on watch at the outside entry of the confined space ready to give assistance in case of an emergency without entering into space.

9.6.11 The attendant shall have the appropriate communication rescue safety and personal protective equipment available for immediate use.

9.6.12 Employees working inside the Confined Space must be under constant observation by the attendant or if visual contact cannot be maintained verbal communication or equivalent communication system must be implemented.

9.6.13 Permit space access points will be posted with a sign reading "Danger Confined Space – Enter by Permit Only".

9.7 Rescue

9.7.1 Prior to entry the emergency response protocol will be reviewed with all employees. This protocol includes:

- Confined space identification and location (what and where is the confined space)
- Site emergency notification i.e. phone number, radio frequency and location of the nearest phone/radio.
- Emergency evacuation signal for the area.
- Evacuation routes and assembly area.

9.7.2 If the workers inside the confined space become ill injured or do not respond to outside communication the attendant will make an emergency notification to the supervisor. The supervisor will make an emergency notification to the designated on site or off site rescue group.

9.7.3 Notifications shall be by on site radio, cell phone or regular telephone service. In the event no radio, cell phone service, or telephone is available on the site then an additional employee will be on site within sight and call and that employee will be dispatched to a pre-determined location to make notification of an emergency.

9.7.4 When making emergency notification speak clearly and give details about what has happened and where the emergency is. Be sure the information is repeated back correctly and let the emergency operator hang up.

9.7.5 The attendant may attempt to affect a rescue from outside the confined space and/or begin to prepare to enter the space **BUT THE ATTENDANT SHALL NOT ENTER THE CONFINED SPACE UNTIL ADDITIONAL ASSISTANCE FROM THE RESCUE TEAM IS PRESENT AND DIRECTED TO DO SO.**

9.7.6 In the event of an emergency outside the confined space that requires employee from inside the confined space to evacuate the space the attendant will immediately notify the entrants with the pre-agreed evacuation signal.

10.0 Training

10.1 Every employee assigned to permit space duties shall receive training:

10.1.1 Prior to assignment to permit space duties.

10.1.2 After a change in the employees permit space assigned duties.

10.1.3 After a change in permit space operations which expose the employee to hazards about which an employee has not been previously trained.

10.1.4 When ever deviation or changes in permit space procedures are implemented.

10.1.5 When there are inadequacies in the employee's knowledge or use of the permit space entry procedures.

10.2 Employees assigned to permit space duties shall be trained in:

10.2.1 The company Confined Space Procedure

10.2.2 Pre-Entry and operating procedures.

10.2.3 Hazards they encounter including information on the mode signs or symptoms and consequences of exposure.

10.2.4 Emergency notification and rescue protocol.

10.3 Training to this procedure shall be documented on the Safety Training /Meeting Documentation Form, Appendix B of the IIPP (TMD-3).

10.4 Prior to entering a permit space or whenever there is a change in a permit required confined space operations the Confined Space Entry Supervisor shall conduct a documented pre-entry briefing to include:

10.4.1 A review of atmospheric test results.

10.4.2 Reviews of permit conditions.

10.4.3 A review of required personal protective equipment.

10.4.4 A review of emergency notification and rescue duties.

10.4.5 A review of relevant Confined Space work practices.

11.0 Attachments

11.1 Attached to this procedure and as an appendix of this procedure are forms and documentation for:

11.1.1 Attachment A – Confined Space Entry Permit

11.1.2 Attachment B – Permit Space Pre-Entry Briefing Agenda.

11.1.3 Attachment C – Permit Space Entry Log

11.1.4 Attachment D – Confined Space Sign In/Out

11.1.5 Attachment E – Confined Space Entry Supervisor Qualification

Confined Space Permit Instruction Sheet

1.0 The following data shall be recorded using black or blue ink.

2.0 Confined space permits are available through the Corporate Safety Department.

3.0 The supervisor shall complete sections I through X. Supervisor shall fill out section X however the attendant will give the information.

TOP OF FORM:

- Enter Company Name at site,
- Job number if assigned one,
- Date the job started, and
- Assigned Permit number for job site.

I. IDENTIFICATION OF SPACE:

- Enter the City, State, Customer or Client Site,
- Duration of Work; how many days,
- Permit Expires On; date and time,
- Description of Work to be Done; i.e. Vacuum and Refill, Vacuum only, Refill only, Vacuum Check Netting and Refill

II. EXISTING AND WORK ACTIVITY HAZARD IDENTIFICATION:

- Initial A through I in either yes, no or n/a (not applicable) box,
- If any items were answered **yes** the **Hazard Detail Information** shall be filled out,
- If any **yes** were initialed then remainder of this form will be filled out per Class 1 and Class 2.
- If only **no or n/a** was initial on all questions in this section then go to Section X Authorization of a Non-Permit Space.

III. ISOLATION AND CONTROL OF SPACE:

- Initial(s) any additional Measures taken to make the space ready for entry.
- Enter any additional testing required and either continual or periodic testing in other box.
- Enter name of person conducting test, instrument used, model number, serial number and date last calibration.

IV. COMMUNICATION PROCEDURES:

- Initial all methods being used for communicating.

V. SAFETY, RESCUE AND PPE REQIRIED:

- Initial yes, no, or N/A and check appropriate box for all yes initials.
- If answered yes on ventilation indicate type used.

VI. AUTHORIZED ATTENDANTS/ENTRANTS:

- Under name enter all persons that will be assigned said duties.
- Under A/E indicate A for Attendant and E for Entrant.
- Under Date Trained enter date trained.
- Under Init the supervisor initials.

VII. RESCUE AND EMERGENCY SERVICES:

- Enter phone numbers for Fire, Medial, off site Rescue and Site/Customer.

VIII. OTHER INFORMATION:

- Any additional information i.e. other permits required, safety concerns, and project work restrictions.

IX. AUTHORIZATON:

- Check type of entry permit used.

X. ATMOSPHERIC TEST RESULTS:

- Under Required Pre-Entry indicate a yes for testing being done,
- Frequency Required indicate how often testing by attendant will be done, and
- Time of Test the time of day the test was done.
- Tester Name person doing the testing.
- Under Instrument(s) Used enter type of instrument
- Under Model and/or type # enter model and/or type number.
- Serial and/or Unit# enter serial or unit number.
- Calibration Exp Date the date the instrument will need to be re-calibrated.

XI RELEASE FOR ENTRY:

- Supervisor fills out Approved for Entry information and upon completion Release Canceled.

ATTACHMENT A

CARBON ACTIVATED CORP.
CONFINED SPACE ENTRY PERMIT

Company:_____ Job #:_____ Date:_____ Permit #:_____

I. IDENTIFICATION OF SPACE

Location (City, State, Jobsite)_____

Duration of Work_____ Permit Expires On:_____

Description of Work to be done:_____

_____

II. EXISTING AND WOR ACTIVITY HAZARD IDENTIFICATION

HAZARD	YES	NO	N/A	HAZARD DETAIL INFORMATION
A. Lack of Oxygen				
B. Combustible Gases, Vapors, Dust				
C. Toxic Gases and Vapors				
D. Chemical Contact				
E. Electrical Hazards/Mechanical Exposure				
F. Temperature				
G. Engulfment/Entrapment				
H. Fall/Trip Hazards				
I. Other				

III. ISOLATION AND CONTROL OF SPACE Provide detailed information in Section VIII

	A. Purge-Flush and Vent		E. External Barricades
	B. Ventilation		F. Confined Space Identification Tags
	C. Lockout/Tag out		G. Blanking, Blocking, Bleeding
	D. Inerting		

IV. COMMUNICATION PROCEDURES Place an X by the communication procedures to be used

	A. Buddy System		E. Two-Way Radios
	B. Lifeline/harness (Required for Class II Permit if possible)		F. Entry/Exit Log
	C. Dedicated Safety watch (Required for Class II Permit)		G. Air Horn (Signaling System)
	D. Other		

V. SAFETY, COMMUNICATION, RESCUE, AND PPE EQUIPMENT REQUIRED:

Yes	No	N/A	Equipment	Description
			A. Ventilation	Other:
			B. Personal Protective Equipment Respirator to be used: Protective Clothing:	Fall Protection: Eye Protection: Hearing Protection: Other PPE:
			C. Lighting	Explosion Proof ☐ Other:
			D. Barriers/Shields	Pedestrian ☐ Vehicle ☐ Other:
			E. Safe Ingress/Egress	Ladder ☐ Other:
			F. Rescue and Emergency	Lifelines Harness ☐ Hoists ☐ Other:
			G. Other Safety Equipment	GFCI Power Supply ☐ Fire Extinguisher

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VI. AUTHORIZED ATTENDANTS/ENTRANTS (Entry supervisor must initial to verify training)

Name	A/E	Date Trained	Init.	Name	A/E	Date Trained	Init.

Indicate A for Attendant and E for entrant — Attach Additional Sheets as Necessary

VII. RESCUE AND EMERGENCY SERVICES – INDICATE PHONE NUMBERS

FIRE	MEDICAL	RESCUE	

VIII. OTHER INFORMATION:_____

IX. AUTHORIZATION

	Entry is Authorized as a Non-Permit Space. (Completion of Sections I and II is required)
	Entry is Authorized as a Class I Permit Space. (Completion of Sections I, II, IV, Ventilation Requirements, Atmospheric Tests and Frequency Required [Below], and verification of Attendant and Entrant training.)
	Entry is Authorized as a Class II Permit Space. (Completion of this entire permit is required, including Atmospheric Tests and Frequency Required [Below], and verification of Attendant and Entrant Training.)

Note: *If <u>any</u> condition in or near the space changes significantly, the status of the space shall be re-assessed.*

Authorized Signature – Entry Supervisor Date

Permit Canceled

Signature Date

X. ATMOSPHERIC TEST RESULTS

TEST TO BE TAKEN	REQUIRED PRE-ENTRY (YES/NO)	PERMISSIBLE NTRY LEVEL	FREQUENCY REQUIRED	PRE-ENTRY	1	2	3	4	5
Percent of Oxygen		19.5% to 23.5%							
Lower Flammable Limit		Under 10%							
Carbon Monoxide		<+35 PPM							
Hydrogen Sulfide		<+10 PPM <*35 PPM							
Other:									

*= Short-term exposure limit – Employee can work in the area up to 15 minutes.
+= 8 Hour Time Weighted Average – Employee can work in the area 8 hours.

Tester Name	Instruments (s) Used	Model and/or Type #	Serial and/or Unit #	Calibration Exp. Date

XI. RELEASE FOR ENTRY. PERMIT VALID FOR ONE SHIFT ONLY. ALL OF THE ABOVE CONDITIONS HAVE BEEN SATISFIED

APPROVED FOR ENTRY				RELEASE CANCELED		
Entry Supervisor	Date	Time	Expires	Date	Time	Initials

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ATTACHMENT B

Permit Space Pre-Entry Briefing Agenda

Review the following; Use of this form will assure that all vital information will be reviewed with employees.

1. Work activity to be performed.
2. Confined Space Hazards
   - Limited access
   - Limited egress
   - Toxic atmosphere
   - Hot environment
   - Slippery conditions
   - High noise level
   - Tight work space
3. Space Isolated.
   - Blinds
   - Lockout/Tag out
4. PPE required
   - Hard Hat
   - Safety glasses/goggles
   - Face shield
   - Respirator
   - Gloves
   - Harness/lifeline
   - Body Protection
   - Foot Protection
5. Method of Communication
   - Visual
   - Radio
   - List
6. Notification Method
   - Radio
   - Cell Phone
   - On site phone
7. Emergency Equipment
   - SCBA
   - Harness/Lifeline
   - Air Horn
   - Lifting Device
8. Toxic Contaminants/Test Results
   - Oxygen deficiency/enrichment
   - Flammable gas/vapor
   - Hydrogen sulfide
   - Benzene
   - Carbon Monoxide
   - Fall Hazard

ATTACHMENT C

Confined Space Attendee Log

Date: _____

Attendee Name: _____ Start: _____ Relieved: _____

Attendee Name: _____ Start: _____ Relieved: _____

Attendee Name: _____ Start: _____ Relieved: _____

Attendee Name: _____ Start: _____ Relieved: _____

Prior to Entry Reading	Time	CO	LEL	H2S	Air	Entrants Name(s)
Upper						
Middle						
Lower						

Time	CO	LEL	H2S	Air	New Entrant (N) and Outgoing Entrant (O)

ATTACHMENT D
CONFINED SPACE SIGN

HAZARD ASSESSMENT

Hazard Assessment, Equipment Selection, Training and Use Requirements

Personal Protective Equipment
1910.132 - General requirements

(a) Application.
Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

(b) Employee-owned equipment.
Where employees provide their own protective equipment, **Carbon Activated Corporation** shall be responsible to assure its adequacy, including proper maintenance and sanitation.

(c) Design.
All personal protective equipment shall be of safe design and construction for the work to be performed.

(d) Hazard assessment and equipment selection.

(1) **Carbon Activated Corporation** shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall:
   (i) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;
   (ii) Communicate selection decisions to each affected employee; and,
   (iii) Select PPE that properly fits each affected employee.

Note: Non-mandatory Appendix B contains an example of procedures that would comply with the requirement for a hazard assessment.

(2) **Carbon Activated Corporation** shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

(e) Defective and damaged equipment.
Defective or damaged personal protective equipment shall not be used.

(f) Training.

(1) **Carbon Activated Corporation** shall provide training to each employee who is required by this section to use PPE. Each such employee shall be trained to know at least the following:

(i) When PPE is necessary;
(ii) What PPE is necessary;
(iii) How to properly don, doff, adjust, and wear PPE;
(iv) The limitations of the PPE; and,
(v) The proper care, maintenance, useful life and disposal of the PPE.

(2) Each affected employee shall demonstrate an understanding of the training specified in paragraph (f) (1) of this section, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

(3) When **Carbon Activated Corporation** has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (f)(2) of this section, the employer shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

(i) Changes in the workplace render previous training obsolete; or
(ii) Changes in the types of PPE to be used render previous training obsolete; or
(iii) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

(4) **Carbon Activated Corporation** shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained, the date(s) of training, and that identifies the subject of the certification.

(g) Paragraphs (d) and (f) of this section apply only to 1910.133, 1910.135, 1910.136, and 1910.138. Paragraphs (d) and (f) of this section do not apply to 1910.134 and 1910.137.

PERSONAL PROTECTIVE EQUIPMENT
HAZARD ASSESSMENT DATA

Auditor: _____ Department: _____

Date: _____

Process or Source Hazard Risk Level Affected Body

Parts
Required PPE

Use the following items to assist you with the assessment.
1. The OSHA 200 Log 2. Material Safety Data Sheets

HAZARD COMMUNICATION

PURPOSE – The following written hazard communication program has been established to protect employees of (name of company) against exposure to hazardous chemicals in the workplace. Copies of this program, as well as a listing of hazardous chemicals and material safety data sheets (MSDS), will be available at (location) for review by all employees.

SCOPE – Education and training will be provided for all (name of company) employees who could be exposed to hazardous chemicals. The training will be conducted prior to first exposure to the chemical (during orientation and training) and whenever a new hazardous chemical is introduced into the workplace. All employees will be informed of the location of the written hazard communication program, chemical listing, and MSDS.

CONTAINER LABELING – The Operations Manager will verify that all containers received and used by this company are clearly labeled to identify the contents and the appropriate hazard warnings. No containers will be approved for use until such data is verified. Existing labels on incoming containers of hazardous chemicals will not be removed or defaced, unless the container is immediately marked with the required information. DOT shipping labels on containers will not be removed until all residues have been removed from the container. All employees who transfer hazardous chemicals into portable containers (such as bottles, spray bottles, parts cleaning cans, etc) will ensure the containers are appropriately labeled and the contents identified.

LIST OF HAZARDOUS CHEMICALS – **Carbon Activated Corporation** will maintain a list identifying current hazardous chemicals present in the workplace; and this list will be periodically reviewed and updated. The list is cross-referenced to the MSDS and is kept with this program and MSDS, to serve as an index to help employees identify and locate necessary information.

MATERIAL SAFETY DATA SHEETS – It is the responsibility of the Operations Manager to obtain the necessary MSDS for all hazardous materials, so a comprehensive MSDS file can be maintained. MSDS will be maintained in current status. Copies of the MSDS for all hazardous chemicals to which employees may be exposed will be kept at the site, and made available to employees on all shifts that wish to review them. Subcontractors working on the job site are required to bring copies of MSDS for all hazardous materials they are bringing on to the site. These will be kept in (location) so the information is accessible to all employees. Each subcontractor should bring its specific hazardous communication program and MSDS in a binder labeled with the contractor's name and identified as a hazardous communication program. Upon leaving the jobsite and the removal of all hazardous materials, they may take their information with them. Employees who require emergency medical treatment after exposure to a chemical should take a copy of the MSDS to the medical facility.

INFORMATION AND TRAINING – **Carbon Activated Corporation** will provide employees with information on Hazard Communication training requirements, any operations in their work area where hazardous chemicals are present, and the location of the written hazard communication program, chemical listing, and material safety data sheets. Training may be provided either on the job or in a classroom setting, prior to first exposure to the hazardous material, and will cover categories of hazards (flammability) and specific chemicals. Chemical-specific information must always be available through labels and MSDS. Attendance must be documented.

Employee training will include:

- Methods for detecting the presence or release of a hazardous chemical in the work area;
- Physical and health hazards of chemicals used in the work area;
- Measures employees can take to protect themselves from the hazards, such as work practices, emergency procedures, and personal protective equipment;
- Details of the hazard communication program, including the labeling system.
- Material safety data sheets and how employees can obtain and use the appropriate hazard information.

If an employee is instructed to use a hazardous material for which he or she has not been trained, it is the employee's responsibility to inform the employer so that proper training can be given.

NON-ROUTINE HAZARDOUS TASKS – Tasks not done on a routine basis (for example, boiler cleanout or replacing hazardous chemical piping) will be handled through specific pre-task actions and training. Before performing no routine tasks, the supervisor in charge will review applicable MSDS; instruct employees in the associated hazards and recommended first aid treatment; and assure all essential personal protective and emergency equipment is available and operational. He or she will notify all other employees working in this area that no routine tasks are scheduled or being performed.

SUBCONTRACTORS AND OTHER EMPLOYEES – Any contractors working at the jobsite will be informed of the written hazardous material program, and where to locate MSDS. It will be the responsibility of that employer to properly train his employees in the avoidance or emergency procedures for these materials.

FIRE PREVENTION

PURPOSE – To protect our employees and the site from the dangers of fire, **Carbon Activated Corporation** has developed a fire prevention plan to reduce the risk of potential injuries, death and property damage. This plan's purpose is to identify and control fire hazards.

RESPONSIBILITIES – The **Operations Manager** is responsible for seeing that fire-prevention procedures are established and enforced; Fire suppression systems are inspected regularly and maintained; supervisors are trained to use fire extinguishers for incipient fires; and employees are trained to use evacuation routes and procedures.

Supervisors is responsible for monitoring the use of flammable materials; training employees in safe storage, use and handling of flammables; and ensuring that storage areas for flammables are maintained properly.

Employees are responsible for following company procedures for the safe storage, use and handling of flammable materials, and reporting violations of the **Carbon Activated Corporation** fire prevention plan.

DEFINITIONS – Fires are classified according to the type of fuel or material:

- Class A — wood, paper and cloth
- Class B — flammable gases, liquids and greases;
- Class C — fires in live electrical equipment, or involving materials near electrically powered equipment.
- Class D — combustible metals such as magnesium, zirconium, potassium and sodium.

IGNITION SOURCES

Eliminate all non-essential ignition sources where flammable materials are used or stored. For example:

- Keep sources of open flame (such as welding and cutting torches, furnaces, matches and heaters) away from operations involving flammable liquids or items.
- Do not cut or weld equipment containing flammable liquids unless the equipment has been emptied and purged with a neutral gas such as nitrogen.
- Prohibit chemical ignition sources (such as DC motors, switches and circuit breakers) in areas where flammable materials are stored or handled.
- Use only non-sparking tools in areas where flammables are stored or handled.
- Eliminate the possibility of static sparks—caused by electron transfer between two contacting surfaces—in flammable storage or handling areas.

INCOMPATIBLE MATERIALS – Store materials such as oxidizers and organic peroxides, which produce large amounts of oxygen when they decompose, in an area separate from flammable materials.

FIRE EXTINGUISHERS – Portable fire extinguishers can be very effective for fighting fires in their incipient stages. A person who is well trained in fire-extinguisher use can save both lives and property. Portable fire extinguishers must be available even when other fire fighting measures are available. For extinguishers to be effective in a fire situation, proper selection, inspection and maintenance are essential. Make sure all fire extinguishers are placed in conspicuous locations, clearly visible and easily accessible. Keep all fire extinguishers fully charged and operable, and in their proper locations at all times.

FIRE SAFETY INSPECTIONS AND HOUSEKEEPING – Supervisors are responsible for work site inspections to ensure compliance with the company Fire Safety Program. These inspections should address housekeeping issues, proper storage of chemicals, access to fire extinguishers and emergency evacuation routes.

EMERGENCY EXITS – Every exit must be clearly visible, or the path to it conspicuously identified in such a manner that every occupant of the building will know the best way to get out of the building in a fire or other emergency. Exits must never be obstructed. Any door or passageway that is not an exit or path to an exit must be identified with a sign that reads 'Not an Exit' or a sign that indicates its actual use, such as storage. All exit signs must either be self-illuminating, or illuminated by a reliable external light source.

EMERGENCY PLAN FOR PERSONS WITH DISABILITIES – First line supervisors are responsible for assisting persons with disabilities under their supervision, and must choose an alternate to assume responsibility in the supervisor's absence. The supervisor, alternate and worker with the disability will be trained on available escape routes. A list of persons with disabilities must be kept on file in the (personnel, safety directors) office. **Carbon Activated Corporation** visitors with disabilities will be assisted in the same manner as employees.

FIRE EMERGENCY PROCEDURES – The person who discovers a fire should activate the nearest alarm, and notify his or her supervisor and other building occupants. You should only fight a fire if the fire department has been notified; if the fire is small and confined to its point of origin; if you have an escape route available and can fight the fire with your back to the exit. Be sure you have a proper, fully functioning fire extinguisher, and are trained to use it. Leave your work area if you hear a fire alarm. Close all windows and doors, and turn off any gas jets when you leave; evacuate the building and move away from exits, and assemble in an area designated in the company evacuation plan. Remain outside until a competent authority says it is safe to re-enter the site.

HANDLING DRUMS AND CONTAINERS

Heavy drums should always be moved with proper drum handling equipment. Use a Drum Dolly, special Forklift attachment, or other equipment specifically designed for drum handling.

A full 55-gallon steel drum can weigh over 2,000 pounds, with typical weights of 400 to 800 Lb. When being moved, the contents of your drum may shift inside, making the drum difficult to control or even dangerous. There are also special considerations when handling a plastic drum or a fiber drum. Conditions such as restricted spaces and slippery or uneven floors can entail greater risks.

Mishandling a heavy drum can cause serious injury, damage the drum, waste valuable contents or contaminate the environment. Common injuries include a strained back, crushed fingers or hands, and foot trauma. Incidents of dropped drums, or drums rolling out of control, can also cause spills and damage.

Drum handling safety requires a systematic approach to eliminate all possible causes of injury. Always use appropriate protective clothing such as gloves, steel-toed shoes and eye protection. Environmental factors should be considered, such as adequate lighting and sufficient space to safely handle drums. Of course, cluttered, sloped or slippery floor surfaces increase the risks. Eliminate these conditions as much as possible, and clean up any spills. Replace any missing bungs or lids.

Only use proper equipment designed for the task when handling heavy drums. Below is the only company approved method of moving Drums empty, full or partially full.

Move Drums Full or Partially Full:
Drum Dolly are used to safely move heavy steel, fiber and plastic drums. When moving partially filled drum care will be taken due to it may not seem heavy, but due to the shifting of the contents can make it difficult to handle. It can roll unpredictably off the Drum Dolly if it is not properly locked down using the bar that attaches to the top of the drum. During the use of a Drum Dolly at all time will the locking bar shall have the hook attached to the drum.

Moving drums with bare forks is not allowed.

Move Empty Drums

Support the leaning drum with your thigh, and face it the way you will travel. Then roll the drum on its lower rim by rotating the upper rim hand over hand.

To lift an empty drum, squat, then straighten your legs. Do NOT bend your back. Correct posture and placement of hands and feet is essential when handling drums. Specially designed Drum Dolly is a much safer alternative for moving drums.

When rolling an empty drum on its side controls it all the way, using your gloved hands. Never roll a drum out of a truck or past a blind corner without posting a guard.

Be alert for burred edges, lock rings and bungs that may catch your gloves or clothing and throw you off balance

SPILL RESPONSE / INCIDENT CONTROL

A. *MATERIALS* PRESENT ON SITE.
MSDS for all materials on-site shall be provided. Specifically MSDS for Coal Base Granular Activated Carbon and Filter Sand is the only materials that will be on-site. If these materials are spilled, then they will be vacuumed up and Disposed of. Coal Base Granular Activated Carbon and Filter Sand and are non-hazardous substances, used for drinking water filtration.

B. Only one compound could pose a hazard, which is gasoline used to power our equipment. If we spill gasoline on the concrete, then we will clean with gasoline absorbent material.

C. Storage and use area map of all chemicals in the area will be provided.

D. Spill response incident control contingency plan is only for gasoline as described in Section B.

E. All water that drains out of the Super Sacks during the removal process or in the Super Sack Storage areas will be contained so the water will not get into the Storm Drain or out of designated areas.

EMERGENCY ACTION PLAN

SCOPE – The Emergency Action Plan shall provide for emergency escape procedures, operation of critical plant equipment, accounting for all employees and rescue duties. The fire prevention plan shall list all major workplace fire hazards and the name of the personnel responsible for maintenance of fire control and prevention equipment.

AUTHORITY/REFERENCE - OSHA 29 CFR 1910.38

ACCOUNTABILITY - Both the emergency action and fire prevention plans shall be in writing unless **Carbon Activated Corporation** employs less than eleven people. Then the plans may be communicated verbally. The employer must develop the plans and ensure that they are maintained. The plans must be kept at the workplace and made available for employee review. It is the responsibility of the employer to make contact with the local authorities, such as the police and fire departments and the Local Emergency Response Team.

PROGRAM ELEMENTS – The following, at a minimum, shall be included in the plans: *Emergency Action* (also see attached checklist)

1. Emergency escape procedures and escape route assignments
2. Procedures to be followed by employees who remain to operate critical plant operations before they evacuate
3. Procedures to account for all employees following evacuation
4. Rescue and medical duties
5. The preferred method of reporting emergencies
6. Names or regular job duties of persons or departments who can be contacted for further information or explanation of duties under the plan
7. Plan the types of evacuation to be used in emergency circumstances

Fire Prevention

1. A list of the major fire hazards and their proper handling and storage procedures, potential ignition sources and their control procedures and the type of fire protection equipment or systems which can control a fire involving them
2. Names or regular job titles of those persons responsible for maintenance of equipment and system installed to prevent or control ignitions or fires.
3. Names or regular job titles of those persons responsible for control of fuel source hazards
4. Housekeeping requirements to prevent the accumulation of flammable and combustible waste materials

TRAINING – Carbon Activated Corporation shall designate and train a sufficient number of persons (suggested one marshal to every 20 employees) to assist in a safe and orderly evacuation. **Carbon Activated Corporation** shall review the plan with each employee when the plan is developed, when the employee's responsibilities or designated actions change and when the plan is changed. **Carbon Activated Corporation** shall apprise each employee of the fire hazards of the materials and processes to which they are exposed. Training also requires a review with each employee upon initial assignment those parts of the fire prevention plan which the employee must know to protect that employee in the event of an emergency. Regular announced and unannounced practice alerts should be conducted to maintain a high level of preparedness.

CROSS-REFERENCING – Other programs, which may be involved in the development of this plan, might include Hazard Communication, Respiratory Protection, Confined Space and First Aid Training.

EMERGENCY RESPONSE PROCEDURES

PURPOSE – The goals of this emergency response plan are, in order of priority, to protect the lives and health of **Carbon Activated Corporation** employees, and protect and minimize damage to company property in the event of an emergency.

PRIORITIES –The objectives of this plan are, in order of importance:

- *To evacuate and account for all employees and visitors;*
- *To contact local emergency service organizations;*
- *To assemble the company's Emergency Response Team (ERT) for implementation of the response plan;*
- *Contact pertinent regulatory agencies;*
- *Conduct search-and-rescue operations, turnoff utilities, control any hazardous chemical spills or releases;*
- Prevent further property damage through protective measures or by removing property;
- Perform cleanup and salvage as needed; Conduct post-incident critique and evaluation;
- File any applicable reports with regulatory agencies.

RESPONSIBILITIES –

Facility Management

A. Evaluate the number and types of hazards expected based on past experience and general knowledge to plan and develop Emergency Response Plan specifics;
B. Provide training to all employees for their roles in all emergency plans;
C. Conduct drills to practice response to emergency situations;
D. Conduct an annual drill to practice confined-space rescue;
E. All other activities necessary to the development and implementation of an effective Emergency Response Plan;
F. Make emergency response team assignments.

Maintenance Manager

A. Maintain sufficient inventory of emergency response equipment;
B. Ensure maintenance and inspection of emergency response equipment;
C. Help train emergency response team members.

40-Hour HAZMAT-Trained Personnel

A. Assist in the training of emergency response teams;
B. Assume active positions on the response teams.

Safety manager

A. Provides assistance in developing and carrying out emergency response plans.

TRAINING

Carbon Activated Corporation will train all employees on the procedures contained in this plan. New employees will be trained upon hiring, and re-trained any time the employees responsibilities under the plan change or whenever the plan changes. The company will provide a copy of all emergency response plans to be kept in employee handbooks and operation manuals, and will post copies on employee bulletin boards. The company also will designate and train a sufficient number of employees to assist in the safe and orderly evacuation of employees and visitors. These employees will be trained and re-trained as needed.

Training will cover:

- Emergency reporting;
- Evacuation routes;
- Alarm systems;
- Specific assigned duties.

Periodic drills will be held to ensure that all employees know the appropriate action to take in case of an emergency. The company will provide additional training and frequent drills for employees with specific emergency-response duties; and invite local emergency service units to participate in training whenever possible.

EMERGENCY RESPONSE PROCEDURES INCIDENT REPORTING –

Management Notification

If an emergency, or situation that could become an emergency, occurs, inform management immediately. Dale Kerr, Operations Manager, will maintain an up-to-date emergency notification list.

Employee Notification

The alarm system, public address system, or direct supervisory contact can be used to notify employees of emergency situations in the facility.

External Notification

Call **(911 or equivalent)** to contact the local fire or police department, emergency medical service or other emergency-response units.

Corporate Notification

Contact the **Carbon Activated Corporation** public relations department if media coverage of the situation is expected. Also, contact the corporate office as soon as possible of property damages, theft, or cargo losses.

The following corporate officials are to be contacted:

Lionel Perera – President – 310 885 4555
Dharshan Jinasena – Office Manager – 310 885 4555

EVACUATION PROCEDURES – After the senior manager on the scene determines that evacuation is necessary, the evacuation alarm will be sounded, with instructions issued over the public address system. Specific responsibilities are as follows:

Production Supervisors

A. Lead employees from work areas when the evacuation alarm sounds;
B. Assist any employees with disabilities;
C. Escort employees to (Designated Assembly Area);
D. Account for all employees upon reaching the designated assembly area;
E. Notify human resources of any employee not accounted for;
F. Ensure that employees stay in the assembly area.

FIRE FIGHTING – No employee shall fight a fire that is beyond the incipient stage (able to be put out with a fire extinguisher), enter if the building is on fire to conduct search and rescue, or provide advanced medical care and treatment. These situations must be left to emergency services professionals, who have the necessary training, equipment and experience.

***NOTE**: In accordance with the provisions of OSHA Standard 1910.120, **Carbon Activated Corporation** will not attempt any hazardous waste operations as its employees have not been trained for a HAZ WASTE operation. Without this training, the only option open to **Carbon Activated Corporation** is evacuation and notification of appropriate agencies capable of handling this type of situation.*

SITE CHARACTERIZATION

I. INTRODUCTION

"Site characterization provides the information needed to identify specific site hazards and to determine the appropriate safety and health procedures needed to protect employees from the identified hazards. The more accurate, detailed, and comprehensive the information available about a site, the more the protective measures can be tailored to the actual hazards that workers may encounter.

The person with primary responsibility for site characterization and assessment is the Project Team Leader. In addition, outside experts, such as chemists, health physicists, industrial hygienists, and toxicologists, may be needed to accurately and fully interpret all the available information on site conditions. Site characterization is a continuous process. At each phase of site characterization, information should be obtained and evaluated to define the hazards that the site may pose. This assessment can then be used to develop a safety and health plan for the next phase of work. In addition to the formal information gathering that takes place during the phases of site characterization described here, all site personnel should le constantly alert for new information about site conditions. (See Figure 1).

II. OFFSITE SURVEY:

Before the team enters the site, as much information as possible should be collected, concerning the type of hazards, degree of hazard(s), and risks which may exist. Based upon available information (MSDS, shipping manifests, transportation placards, existing records, container labels, maps, etc.), the team assesses the hazards, determines the need to go on site, and identifies initial safety requirements.

III. ONSITE SURVEY:

Following the initial data gathering and review phase the goal of the Onsite Survey is to determine the presence of potentially hazardous conditions The main effort is to rapidly identify the immediate hazards that may affect the public, personnel, and the environment, Of major concern are the real or potential dangers from:

- Fire, explosion;
- Oxygen deficient atmospheres;
- Airborne contaminants (inhalation & dermal);
- Radiation; as discussed in Chapter 2 "Hazard awareness'.

Whenever possible, atmospheric hazards in the areas adjacent to the on-site zone should be monitored with direct-reading instruments, and air samples should be taken before the initial entry for on-site investigations. Negative instrument readings off-site should not be construed as definite indications of on-site conditions, but only another piece of information to assist in the preliminary evaluation.

A. PRIORITY FOR INITIAL ENTRY MONITOR LNG

1. Of immediate concern to initial entry personnel are atmospheric conditions, which could affect their immediate safety. These conditions are airborne toxic substances, combustible gases or vapors, lack of oxygen, and to a lesser extent, ionizing radiation. Priorities for monitoring these potential hazards should be established after a careful evaluation of conditions.

2. When the type of material involved in an incident is identified and it is released into the environment suspected or known, the material's chemical/physical properties and the prevailing weather conditions may help determine the order of monitoring. An unknown substance or situation presents a mc re difficult monitoring problem.

3. In general, for poorly-ventilated spaces - buildings, ships' holds, boxcars, or bulk tanks - which must be entered, combustible vapors/gases and oxygen-deficient atmospheres should be monitored first with team members wearing, as a minimum, Level B protective equipment. Toxic gases/vapors and radiation, unless known not to be present, should be measured next.

4. For open, well-ventilated areas, combustible gases and oxygen deficiency are lesser hazards, and require lower priority. However areas of lower elevation on-site (such as ditches and gullies) and downwind areas may have combustible gas mixtures, in addition to toxic vapors or gases, and lack sufficient oxygen to sustain life. Entry teams should approach and monitor whenever possible from the upwind area.

B. PERIODIC MONITORING

The monitoring surveys made during the initial site entry phase are for a preliminary evaluation of atmospheric hazards. In some situations, the information obtained may be sufficient to preclude additional monitoring - for example, a chlorine tank determined to be releasing no chlorine. Materials detected during the initial site survey call for a more comprehensive evaluation of hazards and analyses for specific components. A program must be established for monitoring, sampling, and evaluating hazards for the duration of site operations. Since site activities and weather conditions change, a continuous program to monitor atmospheric changes must be implemented utilizing a combination of stationary sampling equipment, personal monitoring devices, and periodic area monitoring with direct-reading instruments.

C. ORGANTC VAPORS AND GASSES

1. If the type of organic substance involved in an incident is known and the material is volatile or can become airborne, air measurements for organic should be made with one or more appropriate, properly calibrated survey instruments.
2. When the presence or types of organic vapors/gases are unknown, direct reading instruments such as a photo or flame ionizer may be used to detect organic vapors.
3. Until specific constituents can be identified, the direct reading instrument only indicates total airborne substances.
4. Sufficient data should be obtained during the initial entry to map or screen the site for various levels of organic vapors. These gross measurements may be used on a preliminary basis to:
    a. Determine levels of personnel protection
    b. Establish site work zones.
    c. Select candidate areas for more thorough qualitative and quantitative studies.

5. Very high readings on the direct reading instrument may also indicate the displacement of oxygen or the presence of combustible vapors.

D. INORGANIC VAPORS AND GASES

1. The number of direct reading instruments with the capability to detect and quantify nonspecific inorganic vapors and gases is extremely limited. Presently, a photo ionizer has very limited detection capability while the flame ionization detector has none. If specific inorganic are known or suspected to be present, measurements should be made with appropriate instruments, if available. Colorimetric tubes are only practical if substances present are known or can be narrowed to a few,

E. OXYGEN DEFICIENCY

1. Normal air contains about 20.9% by volume c oxygen, at or below 19.5% oxygen air-supplied respiratory protective equipment is needed. Oxygen measurements are of particular importance for work in enclosed spaces, low-lying areas, or in the vicinity of accidents that have produced heavier-than-air vapors, which could displace ambient air. These oxygen deficient areas are also prime locations for taking further organic vapor and combustible gas measurements, since the air has been displaced by other substances. Oxygen-enriched atmospheres increase the potential for fires.

F. COMBUSTIBLE GASES

1. The presence or absence of combustible vapors or gases must be determined; if readings approach or exceed 10% of the lower explosive limit (LEL), risk of potential explosive environments must be addressed. Before resuming any on-site activities, project personnel in consultation with experts in fire or explosion prevention must develop procedures for continuing operation.

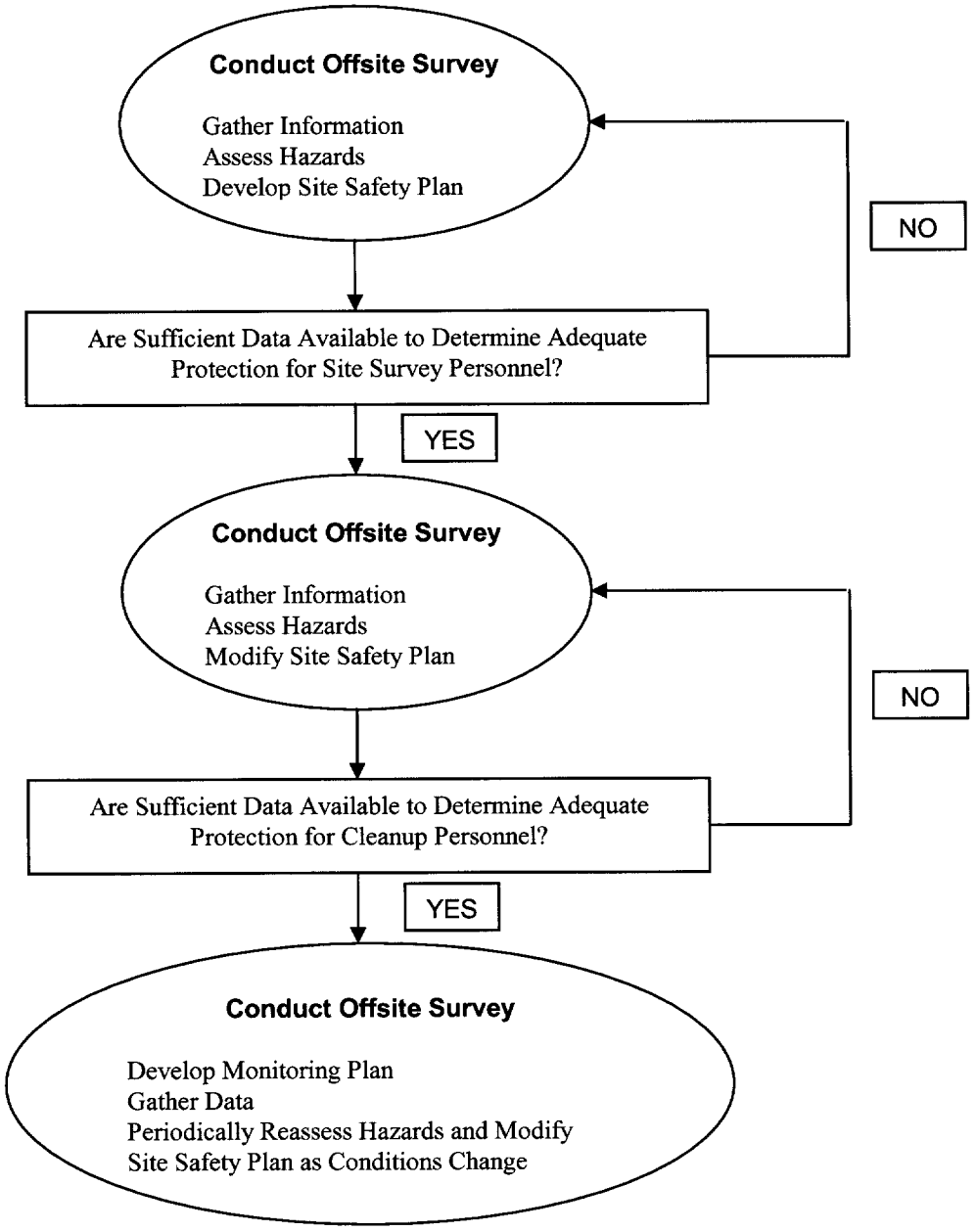
G. RADIATION

1. Although radiation monitoring is not necessary for all responses, it should be incorporated in the initial survey where radioactive materials may be present - for example, fires at warehouses or hazardous material storage facilities transportation incidents involving unknown materials, or abandoned waste sites.

2. Normal background exposure-rate for gamma radiation is approximately 0.01 to 0.02 milliroentgen per hour (mR/hr) on a gamma survey instrument. If the exposure-rate increases to above gamma background, a qualified health physicist should be consulted. Radioactive materials emitting low energy gamma, alpha, or beta radiation my be present, but for a number of reasons may not cause a response on the instrument. If airborne, these radioactive materials, including Alpha and Beta Particulate may pose inhalation hazards.

FIGURE 1.0

Major Phases of Site Characterization



IV. HAZZARD ASSESMENT:

Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances must be identified. Employees who will be working on the project site must be informed of any risks that have been identified.

V. SURVEY AND RECONNAISSANCE

A. THE TEAM INITIALLY ENTERING THE SITE IS TO ACCOMPLISH ONE OR MORE OF THE FOLLOWING OBJECTIVES

I. Determine the hazards that exist or could potentially affecting public health, the environment, and response personnel.
2. Verify existing information and/or obtain information about the incident
3. Evaluate the need for prompt mitigation.
4. Collect supplemental information to determine the safety requirements for personnel initially and subsequently entering the site.

a. Before the team enters the site, as much information as possible should be collected, depending on the time available, concerning the type of hazards, degree of hazard(s), and risks which may exist. Based upon available information (shipping manifests, transportation placards, existing records, container labels, etc.) Or off-site studies, the team assess the hazards, determine the need to go on site, and identify initial safety requirements.

VI. PRELIMINARY ON-SITE EVALUATION

The initial on-site survey is to determine, on a preliminary basis, hazardous or potentially hazardous conditions. The main effort is to rapidly identify the immediate hazards that may affect the public, response personnel, and the environment. Of major concern are the real or potential dangers from, fire, explosion, and airborne contaminants and to a lesser degree radiation and oxygen deficient atmospheres.

A. ORGANIC VAPORS AND GASSES

1. If the type of organic substance involved in an incident is known and the material is volatile or can become airborne, air measurements for organics should be made with one or more appropriate, properly calibrated survey instruments.

2. When the presence or types of organic vapors/gasses are unknown, instruments such as photoionizer (HNU System*) and/or a portable gas chromatograph (Foxboro Systems OVA*), operated in the total readout mode, should be used to detect organic vapors. *(The use of any trade names does not imply their endorsement)

3. Until specific constituents can be identified, the readout indicates total airborne substances to which the instrument is responding. Identification of the individual vapor/gas constituents may permit the instruments to be calibrated to these substances and used for more specific and accurate analysis.

4. Sufficient data should be obtained during the initial entry to map or screen the site for various levels of organic vapors. These gross measurements may be used on a preliminary basis to:
   a. Determine levels of personnel protection
   b. Establish site work zones.
   c. Select candidate areas for more thorough qualitative and quantitative studies.

5. Very high readings on the HNU or OVA may also indicate the displacement of oxygen or the presence of combustible vapors.

B. INORGAMC VAPORS AND GASES

The number of direct reading instruments with the capability to detect and quantify nonspecific inorganic vapors and gases is extremely limited. Presently, the HNU photoionizer has very limited detection capability while the Foxboro OVA has none. If specific inorganic's are known or suspected to be present, measurements should be made with appropriate instruments, if available. Colorimetric tubes are only practical if substances present are known or can be narrowed to a few.

C. RADIATION

1. Although radiation monitoring is not necessary for all responses, it should be incorporated in the initial survey where radioactive materials may be present - for example, fires at warehouses or hazardous material storage facilities, transportation incidents involving unknown materials, or abandoned waste sites.
2. Normal background exposure-rate for gamma radiation is approximately 0.01 to 0.02 milliroentgens per hour (mR/hr) on a gamma survey instrument. Work can continue with elevated radiation-exposure rates; however if the exposure-rate increases to 3-5 times above gamma background, a qualified health physicist should be consulted. At no time should work continue with an exposure rate of 10mR/hr or above without the advice of a health physicist. EPA's Office of Air, Noise and Radiation has radiation specialists in each region, as well as at Headquarters, Montgomery, Alabama, and Los Vegas, Nevada, to assist. The absence of gamma readings above background should not be interpreted as the complete absence of radioactivity. Radioactive materials emitting low-energy gamma, alpha, or beta radiation may be present, but for a number of reasons may not cause a response on the instrument. Unless airborne, these radioactive materials should present minimal hazard, but more thorough surveys should be conducts at site operations continue to complete rule out the presence of any radioactive material.

D. OXYGEN DEFICIENCY

Normal air contains about 20.9% by volume of oxygen. At or below 19.5% oxygen air supplied respiratory protective equipment is needed. Oxygen measurements are of particular importance for work in enclosed spaces, low-lying areas, or in the vicinity of accidents that have produced heavier-than-air vapors, which could displace ambient air. These oxygen deficient areas are also prime locations for taking further organic vapor and combustible gas measurements, since the air has been displaced by other substances. Oxygen-enriched atmospheres increase the potential for fires

E. COMBUSTIBLE GASES

The presence or absence of combustible vapors or gasses must be determined. If readings approach or exceed 10% of the lower explosive limit (LEL), extreme caution should be exercised in continuing the investigation. If readings approach or exceed *25%* LEL, personnel should be withdrawn immediately. Before resuming any onsite activities, project personnel in consultation with experts in fire or explosion prevention must develop procedures for continuing operations.

F. VISUAL OBSERVATIONS

While on-site, the initial entry team should make visual observations which would help in evaluating site hazards, for example, dead fish or other animals; land features; wind direction; labels on containers indicating explosive, flammable, toxic, or corrosive materials; conditions conductive to splash or contact with unconfined liquids, sludge's, or solids; and other general conditions.

G. DIRECT-READING INSTRUMENTS

1. A variety of toxic air pollutants, (including organic and inorganic vapors, gasses, or particulates) can be produced at, for example, abandoned waste sites; fires at chemical manufacturing, storage, reprocessing, or formulating facilities; or fires involving pesticides. Direct-reading field instruments will not detect or measure all of these substances. Thus, negative readings should not be interpreted as the complete absence of airborne toxic substances. Verification of negative results can only be done by collecting air samples and analyzing them in a laboratory.

VII. INITIAL SURVEYS

In general, the initial entry is considered a relatively rapid screening process for collecting preliminary data on site hazards. The time needed to conduct the initial survey depends on the urgency of the situation, type of incident, information needed, size of the site, availability of resources, and Level of Protection required for initial entry personnel. Consequently, initial surveys may need hours or days to complete and consist of more than one entry.

A. PRIORITY FOR INITIAL ENTRY MONITORING

I. Of immediate concern to initial entry personnel are atmospheric conditions, which could affect their immediate safety. These conditions are airborne toxic substances, combustible gases or vapors, lack of oxygen, and to a lesser extent, ionizing radiation, Priorities for monitoring these potential hazards should be established after a careful evaluation of conditions,

2. When the type of material involved in an incident is identified and it's released into the environment suspected or known, the material's chemical/physical properties and the prevailing weather conditions may help determine the order of monitoring, an unknown substance or situation presents a more difficult monitoring problem.

3. In general, for poorly ventilated spaces - buildings, ships' holds, boxcars, or bulk tanks - which must be entered, combustible vapors/gases and oxygen-deficient atmospheres should be monitored first with earn members wearing, as a minimum, Level B protective equipment. Toxic gases/vapors and radiation, unless known not to be present, should be measured next.

4. For open, well-ventilated areas, combustible gasses and oxygen deficiency are lesser hazards, and require lower priority. However, areas of lower elevation on-site (such as ditches and gullies) and downwind areas may have combustible gas mixtures, in addition to toxic vapors or gases, and lack sufficient oxygen to sustain life. Entry teams should approach and monitor whenever possible from the upwind area.

B. PERIODIC MONITORING

1 The monitoring surveys made during the initial site entry phase are for a preliminary evaluation of atmospheric hazards. In some situations, the information obtained may be sufficient to preclude additional monitoring - for example, a chlorine tank determined to be releasing no chlorine. Materials detected during the initial site survey call for a more comprehensive evaluation of hazards and analyses for specific components. A program must be established for monitoring, sampling, and evaluating hazards for the duration of site operations. Since site activities and weather conditions change, a continuous program to monitor atmospheric changes must be implemented utilizing a combination of stationary sampling equipment, personal monitoring devices, and periodic area monitoring with direct-reading instruments.

C. OFF-SITE MONITORING AND SAMPLING

Whenever possible, atmospheric hazards in the areas adjacent to the on-site zone should be monitored with direct-reading instruments, and air samples should be taken before the initial entry for on-site investigations. Negative instrument readings off-site should not be construed as definite indications of on-site conditions, but only another piece of information to assist in the preliminary evaluation.

SITE CONTROL WORK ZONES (HAZARDOUS)

Requirement: If working with any HAZARDOUS MATERIAL on site.

I. INTRODUCTION

Activities involving hazardous substances may contribute to the unwanted movements of contaminants from the site to uncontaminated areas. Personnel and equipment may become contaminated and transfer the material into clean areas. Material may become airborne due to its volatility of the disturbance of contaminated soil and may cause it to become windblown.

II. PURPOSE AND METHOD

To minimize the transfer of hazardous substances from the site and/or to and from contaminated work areas; establish work zones and decontaminate site people and equipment

A. WHY IS A SITE CONTROL PROGRAM NEEDED?

1. To control access to the site and to contaminated work areas.
2. To prevent the spread of contamination from sources on site.
3. Personnel are properly protected against the hazards present where they are working.
4. Personnel can he located and evacuated in an emergency.

B. WHO MIGHT POTENTIALLY BECOME CONTAMINATED?

1. Workers on site, in "hot" work areas.
2. Workers in adjacent "clean" work areas.
3. Residents in surrounding communities.
4. Workers' families or other immediate contacts
5. Other persons who may enter the site.

C. ELEMENTS OF A SITE CONTROL PROGRAI II

1. Site security to prevent:
   a. Unauthorized entry
   b. Vandalism and theft
   c. Illegal dumping

This can be accomplished via fences, poster warnings and signs (in the appropriate languages), security personnel at access points, and a check-in system for all personnel at access points, among procedures.

2. Minimizing the number of personnel and equipment on-site consistent with operations.

3. Establishment of site work zones:

Note: access control points would limit Movement of personnel and equipment between zones.

Zone 1: Exclusion Zone - "hot", contaminated work area
(1) Area where contamination does or could occur.

Zone 2: Contaminations Reduction Zone - is an area of minimum contamination in which decontamination procedures is carried out.
(1) Transition area between the contaminated area and the clean area.

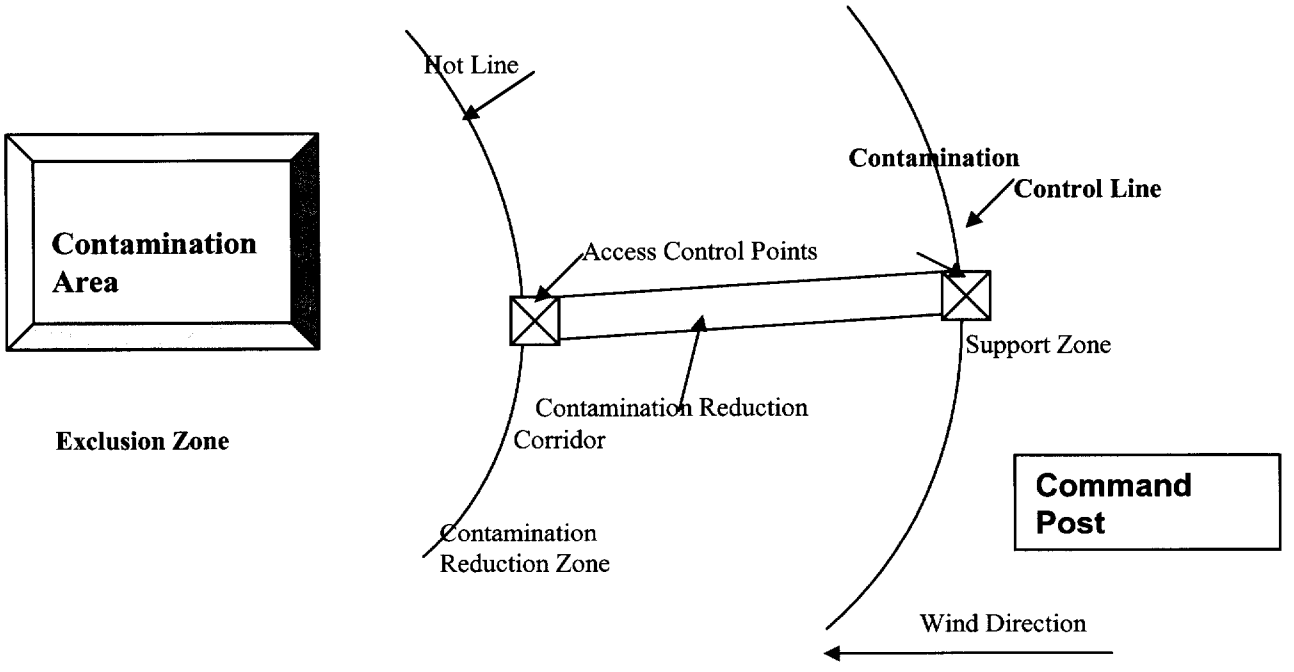
Zone 3: Support Zone - "clean", uncontaminated work area, area contains support base or command post.
(1) Any function that need not or cannot be performed in a hazardous or potentially hazardous area is performed here.

III. REQUIREMENTS

A. THE SITE CONTROL PROGRAM SHALL, AS MINIMUM, INCLUDE:

1. A site map
2. Site work zones
3. Use of the buddy system
4. Site communications including alerting means for emergencies
5. The standard operating procedures or safe work practices
6. Identification of the nearest medical assistance

The Hazard Waste Standard or Hazard Communication Standard 290FR1910.1200 requires that this program be developed before beginning work and periodically updated as new information becomes available.



SITE CONTROL WORK ZONES (NON HAZARDOUS)

I. INTRODUCTION

Activities involving non-hazardous Filter Media Removal and loading may contribute to the unwanted movements of media from the site to undesignated areas. Personnel and equipment may become confused and transfer the material into wrong areas.

II. PURPOSE AND METHOD

To minimize the transfer of non hazardous Filter media from the site and/or to and from work areas; establish work zones and personnel and equipment

A. WHY IS A SITE CONTROL PROGRAM NEEDED?

1. To control access to the storage site and work areas.
2. Personnel are properly protected against known and unknown hazards present where they are working.
3. Personnel can he located and evacuated in an emergency.

B. ELEMENTS OF A SITE CONTROL PROGRAM

1. Site security to prevent:
   d. Unauthorized entry
   e. Vandalism and theft
   f. Storage of both Virgin and Spent Filter Media

This can be accomplished via fences, poster warnings and signs (in the appropriate languages), security personnel at access points, and a check-in system for all personnel at access points, among procedures.

2. Minimizing the number of personnel and equipment on-site consistent with operations.

3. Establishment of site work zones:

Note: access control points would limit Movement of personnel and equipment between zones.

Zone 1: Virgin Filter Media Storage Zone– New Filter Media that has not been used
(1) Set up storage area as to not mix media.
(2) Limit access to area.

Zone 2: Vacuum System Zone – This is the area the trailer mounted vacuum systems are set up for the removal process and temporary storage of media that was removed.
(1) Designate Temporary storage area for Spent Filter Media.
(2) Designate where each Vacuum System is to be set up at.

Zone 3: Filter Zone – This is the area where Attendee personnel and Entrant Vacuum/Loading crews are during the removal and Loading process of the Change out.

(1) Attendee is responsible for control of who enters the Filter System and air monitoring.

(2) Entrants are the only one's who are in the Filter System performing the designated task for removal or loading of Filter Media.

Zone 4: Spent media and Disposal Zone – This area is only designated the temporary storage of media designated for Non Hazardous disposal.

(1) Set up storage area as to not mix media.

(2) Limit access to area.

III. REQUIREMENTS

A. THE SITE CONTROL PROGRAM SHALL, AS MINIMUM, INCLUDE:

1. A site map
2. Site work zones
3. Use of the buddy system
4. Site communications including alerting means for emergencies
7. The standard operating procedures or safe work practices
8. Identification of the nearest medical assistance

pH Disinfection Procedure

Coliform can not live in a solution that has a pH of 12 so it is our goal to increase the pH above 12. Disinfection of this type of Filter you have to increase the pH level in the water to a minimum of 12 and a maximum of 12.4 also after 8 hours have a pH of 12 minimum. If after 8 hours you do not have a pH of 12 residual you have to start all over until you have a pH of 12 minimum. Once you have a pH of 12 minimum then you are to neutralize the pH below 8 or to customers Discharge permit. After neutralizing the Filter System is to be Backwash two to three bed volumes to insure all water has been replaced with system water, once that is done a sample is to be pulled for Bacteriological testing.

PE Equipment Required: Rubber Gloves, Face Shield, Safety Glasses, and Protective Clothing.

Equipment required: 3" Gas Powered Portable Pump with a max flow rate of 360 gpm, 2" Sch 80 Tee with cam locks fittings on the through side male on one end, female on the other, and on the intake side Check Valve with Shut off Valve. Also 1 each 2" Female Cam lock to 4" Male Cam lock Reducing Cam Lock fitting, 1 each 2" Male Cam lock to 4" Female Cam lock Reducing Cam Lock fitting, 4" Female Cam Lock Connector, 2 each 4" Tanker Hoses, Bun Wrench, 1each 2" X 6" Sch 80 Nipple, and 1/2" X 40" Long Suction Tube with elbow and fitting on one end.

Introducing Caustic Soda into Filter

At all time all P.P.E. will be worn during the below steps.

1st Step: Pumps are connected, primed, turned on and ran for 20 minutes as to get the water moving in the Filter system.

2nd Step: Introduce 75% of the estimated Caustic Soda needed using the Chemical feed system to increase the water pH. After all port pH has neutralized add more to get the pH between 12 and 12.5. After the water pH thought all ports reach a pH above 12 but not above 12.5 you should re-circulate for additional four hours, then the pumps are turned off, all valves are closed and the Filter system should soak at that pH level for a min of 8 hours. This is done due to bacteria can not live in a solution that has a ph over 12.

Introducing Murritic Acid into Filter

At all time all P.P.E. will be worn during the below steps.

1st Step: Pumps are connected, primed, turned on and ran for 20 minutes as to get the water moving in the Filter system.

2nd Step: Introduce 75% of the estimated Murritic Acid to naturalize the ph back down to normal ph usually around pH of 7-8. If more is required then add more slowly so the pH does not go down below 7-8 in all ports. After you have reached a pH between 7-8 turn off the pumps, disconnect all hoses, fitting, and wash with fresh system water. The Plant Operator should do a complete backwash then pull a sample for testing and leave the system on a slow down rinse until the test results come back.

Chlorine Disinfection and Neutralization Procedure

AWWA C653 Standard describes methods of disinfecting new treatment facilities before they are placed in service; existing treatment facilities before thy are returned to service after being subject to contamination from construction or inspection; and existing treatment facilities that, under normal operation, continue to demonstrate the presence of Coliform bacteria in the plant effluent. In the standard it also states that this method is not to be used to disinfect Granular Activated Carbon. The proper Disinfection of Filters, Piping, Tanks, and Clear wells is to inject Liquid Chlorine, Sodium Hypochlorite, or Calcium Hypochlorite into the water and have some way of either circulating or mixing the water and chemical mixture. The goal is to get a minimum reading of 25ppm then after a 12 hour soak have a 15ppm minimum residual level. If after 12 hours you do not have a 15ppm residual you have to start all over until you have a 15ppm Chlorine residual. Once you have a 15ppm residual chlorine level then you are to neutralize the remaining chlorine. After neutralizing the remainder chlorine you are to Backwash the filter two to three bed volumes to insure all water has been replaced with system water, once that is done a two or more samples shall be taken not less than 30 minutes apart and tested for the presence of Coliform. After the test results are back if any of the samples show presence of Coliform then you can either repeat pulling samples at least 24 hours apart until consecutive samples do not show presence of Coliform or the other option is to repeat the complete Disinfection procedure.

In section 4.3 "Materials for Disinfection Chlorine Solutions" state the approved chemical for increasing the Chlorine level are Liquid Chlorine, Sodium Hypochlorite, and Calcium Hypochlorite. The type of chemical we use in this section is Sodium Hypochlorite 12.5% solution. In table A.1 give the following chemicals that are approved to neutralize residual chlorine Sulfur Dioxide, Sodium Bisulfite, Sodium Metabisulfite, or Sodium Sulfite.

PE Equipment Required: Rubber Gloves, Safety Glasses, and Protective Clothing.

Chlorination steps:

At all time all P.P.E. will be worn during the below steps.

The below Steps will be preformed by our on site Service Technicians

1. Determine the Square footage of the filter.
2. For tanks multiply the sq ft by how high the water level is when it is in normal operation. For Pressure vessels to determine the sq. ft. or tank volume can be gotten from the Tank drawings or Tank Calculations.
3. Multiply the number from step 2 by 7.48 to get the total gallons in the Filter during operation, if the information is not given.
4. The standards state 25ppm however; due to Weather conditions, algae, and Bacteria that might be in the filter also due to outside contaminations we will get the Sodium Hypochlorite level between 25 to 35ppm. The following calculations are based on 12% Sodium Hypochlorite. Take number of gallons from step 3 divide it by 100 then times that 3.4 ounces of Sodium Hypochlorite divide that by 128 ounces (ounces in a ga

the final number is the number of gallons you will need to get the level between 25 and 35ppm. Total gallons/100X3.4/128= number of gallons required.

5. Have the Plant Operator add System water to the Filter until it is with 1 foot of the bottom of the Troughs. If this is a pressure vessel then have the plant operator add water to the 75% test port.
6. Inject 100% of the Sodium Hypochlorite that was determined in step 4. For tanks or open top tanks after the initial amount has been injected into the tank the Plant Operator needs to run the Air Scour or Surface Wash system for 3 minutes, if one is not available then you will need to use a circulating pump to mix. For Pressure Vessels using a air compressor attach a disinfected Food Grade Hot Washed hose to the Effluent under drain and add air to mix the Sodium Hypochlorite with the water. In either incidence if you are using a circulating pump you need to connect the suction end to the effluent piping and discharge side of the pump to the top, this will allow a more even mixture of the water and Sodium Hypochlorite.
7. Then increase the water level to normal operating level and run the Air Scour system, Surface Wash, or Circulating Pump for an additional 3 minutes as to mix the solution.
8. The Lead Tech using our Color Q High Range Test Kit will then pull a sample of water from the Filter to determine the ppm of Chlorine. If the level is between 25 and 35ppm then it will go into the 12 hour soak, if not we will add 1% more and repeat Step 7 then repeat Step 8, this step will be repeated until the we have achieved the correct ppm.

Chlorine Neutralization of Filter Steps:

During the procedure at no time will the Chlorine be the completely remove. Also at all time all P.P.E. will be worn during the below steps.

1. Lead Tech will pull a sample of the water in the Filter to determine the ppm of Sodium Hypochlorite level to insure it is 15ppm or Higher.
2. Neutralization of the Sodium Hypochlorite will be done using AWWA C653 Table A.1 as a reference. In order to insure that we do not add an excess amount of neutralization chemical we will only use 80% of what is needed per AWWA C653 Table A.1. For tanks or open top tanks after the initial amount has been injected into the tank the Plant Operator needs to run the Air Scour or Surface Wash system for 3 minutes, if one is not available then you will need to use a circulating pump to mix. For Pressure Vessels using a air compressor attach a disinfected Food Grade Hot Washed hose to the Effluent under drain and add air to properly mix in the neutralization chemical. In either incidence if you are using a circulating pump you need to connect the suction end to the effluent piping and discharge side of the pump to the top, this will allow a more even mixture of the water and neutralization chemical.
3. Lead Tech will then pull a sample of water from the Filter to determine the ppm of Chlorine. If the level meets site requirements then we will stop adding the neutralization chemical, if not we will add only 10 to 15% of what was determined that is left over and repeat Step 2. We will add only a little at a time to insure we do not have any residual neutralization chemical left in the water.

4. After the water has been properly neutralized the Plant Operator has to back wash the filter 2 to 3 bed volumes using system water. After properly Back Wash the Filter system samples are to be pulled for presence of Coliform.

NONCOLLUSION DECLARATION TO BE EXECUTED
BY
BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the President of Carbon Activated Corporation, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on Dec 7, 2015 [date], at Compton [city], California [state].

December 7, 2015
(Date)

(Signature)

NOTE: THIS FORM MUST BE NOTARIZED.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Los Angeles)

On December 7 - 2015 before me, Sugathadasa Paththini Kapuge Notary Public
Date *Here Insert Name and Title of the Officer*

personally appeared Lionel Perera
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

SUGATHADASA PATHTHINI KAPUGE
COMM. #2010957
Notary Public - California
Los Angeles County
My Comm. Expires Mar. 10, 2017

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document
Title or Type of Document: Bid - North bay Document Date: 12-07-15
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: Lionel Perera	Signer's Name: _____
☑ Corporate Officer — Title(s): President	☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing: _____	Signer Is Representing: _____

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Fairfield ("City") has issued an invitation for bids for the work described as follows:

NORTH BAY REGIONAL WATER TREATMENT PLANT
FILTERS #2, #3, & #6 MEDIA REPLACEMENT

WHEREAS Carbon Activated Corporation

2250 S. Central Avenue, Compton, CA 90220
(Name and address of Bidder)

("Contractor") desires to submit a bid to City for the work.

WHEREAS, bidders are required under the provisions of the California Public Contract Code to furnish a form of bidder's security with their bid.

NOW, THEREFORE, we, the undersigned Contractor, as Principal, and

Endurance Reinsurance Corporation of America

4 Manhattanville Road, 3rd Floor, Purchase, NY 10577,
(Name and address of Surety)

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto City in the penal sum of Ten Percent of the Total Amount Bid---------

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Dollars ($10%----------), being not less than ten percent (10%) of the total bid price, in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bounded Contractor is awarded a contract for the work by City and, within the time and in the manner required by the bidding specifications, enters into the written form of contract included with bidding specifications, furnishes the required bonds, one to guarantee faithful performance and the other to guarantee payment for labor and materials, and furnishes the required insurance coverages, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

In case suit is brought upon this bond, Surety further agrees to pay all court costs incurred by City in the suit and reasonable attorneys' fees in an amount fixed by the court. Surety hereby waives the provisions of California Civil Code § 2845.

IN WITNESS WHEREOF, this instrument has been duly executed by Contractor and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: December 3, 2015

"Contractor"	"Surety"
Carbon Activated Corporation	Endurance Reinsurance Corporation of America
By: PRESIDENT. Title	By: Kim Luu Title Attorney-in-Fact
By: V. PRESIDENT Title	By: Title
	A : XV
(Seal)	*(Seal)*

Note: This bond must be dated, ***all signatures must be notarized****, and evidence of the authority of any person signing as attorney-in-fact must be attached.*

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On DEC 3 2015 before me, Rhonda C. Abel, Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Kim Luu
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

RHONDA C. ABEL
COMM. # 2051838
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
COMM. EXPIRES DEC. 14, 2017

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

ENDURANCE REINSURANCE CORPORATION OF AMERICA

BIDR371600230

POWER OF ATTORNEY

Know all Men by these Present, that ENDURANCE REINSURANCE CORPORATION OF AMERICA, a Delaware corporation (the "Corporation"), with offices at 4 Manhattanville Road, 3rd Floor, Purchase, NY 10577, has made, constituted and appointed and by these presents, does make, constitute and appoint RHONDA C. ABEL, JERI APODACA, KIM LUU, MICHAEL D. PARIZINO, RACHELLE RHEAULT, HEATHER SALTARELLI, JAMES A. SCHALLER its true and lawful Attorney(s)-in-fact, at NEWPORT BEACH in the State of CA and each of them to have full power to act without the other or others, to make, execute and deliver on its behalf, as surety or co-surety; bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking so made, executed and delivered shall obligate the Corporation for any portion of the penal sum thereof in excess of the sum of SEVEN MILLION FIVE HUNDRED THOUSAND Dollars ($7,500,000).

Such bonds and undertakings for said purposes, when duly executed by said attorney(s)-in-fact, shall be binding upon the Corporation as fully and to the same extent as if signed by the President of the Corporation under its corporate seal attested by its Corporate Secretary.

This appointment is made under and by authority of certain resolutions adopted by the Board of Directors of the Corporation by unanimous written consent on the 9th of January, 2014, a copy of which appears below under the heading entitled "Certificate".

This Power of Attorney is signed and sealed by facsimile under and by authority of the following resolution adopted by the Board of Directors of the Corporation by unanimous written consent on January 9, 2014 and said resolution has not since been revoked, amended or repealed:

RESOLVED, that in granting powers of attorney pursuant to certain resolutions adopted by the Board of Directors of the Corporation by unanimous written consent on January 9, 2014, the signature of such directors and officers and the seal of the Corporation may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature or seal shall be valid and binding upon the Corporation in the future with respect to any bond or undertaking to which it is attached.

This Power of Attorney shall expire and all authority hereunder shall terminate without notice at midnight (Standard Timer where said attorney(s)-in-fact is authorized to act.) November 16, 2016

IN WITNESS WHEREOF, the Corporation has caused these presents to be duly signed and its corporate seal to be hereunto affixed and attested this 17th day of November, 2015 at Purchase, New York.

(Corporate Seal)
ATTEST

MARIANNE L. WILBERT, SENIOR VICE PRESIDENT

ENDURANCE REINSURANCE CORPORATION OF AMERICA
By

SHARON L. SIMS, SENIOR VICE PRESIDENT

STATE OF NEW YORK ss: Purchase
COUNTY OF WESTCHESTER

On the 17th day of November, 2015 before me personally came SHARON L. SIMS, SENIOR VICE PRESIDENT to me known, who being by me duly sworn, did depose and say that (s)he resides in SCOTCH PLAINS, NEW JERSEY that (s)he is a SENIOR VICE PRESIDENT of ENDURANCE REINSURANCE CORPORATION OF AMERICA, the Corporation described in and which executed the above instrument; that (s)he knows the seal of said Corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Corporation, and that (s)he signed his (her) name thereto by like order.

(Notarial Seal)

NO. 01AA6201375
QUALIFIED IN WESTCHESTER COUNTY
COMM. EXP. 02/23/2017
PUBLIC
STATE OF NEW YORK

MARIA ARROYO, Notary Public - My Commission Expires 02/23/2017

CERTIFICATE

STATE OF NEW YORK ss: Purchase
COUNTY OF WESTCHESTER

I, CHRISTOPHER DONELAN the PRESIDENT of ENDURANCE REINSURANCE CORPORATION OF AMERICA, a Delaware Corporation (the "Corporation"), hereby certify:

1. That the original power of attorney of which the foregoing is a copy was duly executed on behalf of the Corporation and has not since been revoked, amended or modified; that the undersigned has compared the foregoing copy thereof with the original power of attorney, and that the same is a true and correct copy of the original power of attorney and of the whole thereof;

2. The following are resolutions which were adopted by the Board of Directors of the Corporation by unanimous written consent on January 9, 2014 and said resolutions have not since been revoked, amended or modified:

"RESOLVED, that each of the individuals named below is authorized to make, execute, seal and deliver for and on behalf of the Corporation any and all bonds, undertakings or obligations in surety or co-surety with others:

CHRISTOPHER DONELAN, SHARON L. SIMS, MARIANNE L. WILBERT

And be it further

RESOLVED, that each of the individuals named above is authorized to appoint attorneys-in-fact for the purpose of making, executing, sealing and delivering bonds, undertakings or obligations in surety or co-surety for and on behalf of the Corporation."

3. The undersigned further certifies that the above resolutions are true and correct copies of the resolutions as so recorded and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal this day of DEC 3 2015, 20

(Corporate Seal)

CHRISTOPHER DONELAN, PRESIDENT

Any reproductions are void

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Los Angeles)

On December 7, 2015 before me, Sugathadasa Paththini Kapuge Notary Public
Date *Here Insert Name and Title of the Officer*

personally appeared Lionel Perera
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

SUGATHADASA PATHTHINI KAPUGE
COMM. #2010957
Notary Public - California
Los Angeles County
My Comm. Expires Mar. 10, 2017

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document
Title or Type of Document: Bid - North Bay Document Date: 12/07/15
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: Lionel Perera	Signer's Name:
☑ Corporate Officer — Title(s): President	☐ Corporate Officer — Title(s):
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other:	☐ Other:
Signer Is Representing:	Signer Is Representing: