

**DISASTER**



**SOLUTIONS**

DECONTAMINATION • LEGACY WASTE • SAFETY • RECYCLING • RECLAIMING • DISASTER MANAGEMENT

**NUCLEAR  
DISASTERS**



Welcome, and thank you for looking over our materials and solutions for your disaster cleaning solutions and services. PowerPlus Cleaning Solutions has been a long time established company for disaster relief and remediation. PowerPlus was founded in 1987 and has been a part of every major catastrophe in U.S. history and many more disasters that span the world over.

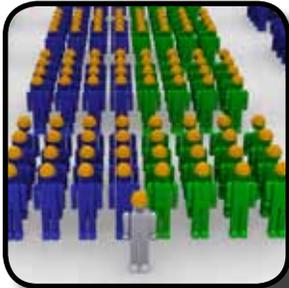
This packet is a basic overview of our capabilities along with informational data-sheets on our equipment. There is a lot of information and we are sure you will have many questions to come, so feel free to contact us with any questions that you may have and will be prompt to answer your questions.

We strive for excellence and we appreciate our customers. It does not matter if you need the worlds largest clean up effort, or if you simply want help deciding how to handle a small spill, we are ready to service your needs. Let us begin your venture to a disaster recovery by explaining some of the choices you will have in how to proceed with our involvement and your options for deployment. PowerPlus offers three different levels of deployment from a full on turn key option to a near do-it-yourself options. Full training is available if so desired.



#### I: FULL TEAM DEPLOYMENT

Full re-remediation / decontamination teams stand ready. We can come in, verify the level of contamination or levels of damage and report back to local government or businesses. PowerPlus can immediately begin the process of reclaiming the lands and produce no landfill waste during the process. Having full support teams also means that no additional support will be required during the process and is all inclusive. A certification of cleanliness is available for all areas that have been decontaminated by our certified teams.



#### II: CROSS TEAM DEPLOYMENT

With our technology and your workers, we can work together to decontaminate your lands and homes. PowerPlus will send training teams and supervisors watch over your workers and train them in the decontamination process, while our specialists and supervisors test to ensure the work is done correctly.



#### III: CONTRACT DEPLOYMENT

Our trainers/specialists can be deployed to watch over your workers and verify that the process is complete along with training them in those techniques. The work is up to the employees to complete in the entire process. Additional purchase of necessary equipment may be obtained through PowerPlus.

From these points, you can now look over the technology and the systems we have available and make a more educated decision on how you wish to proceed. We know there are many companies who claim to be what we are, but we have the technology and the proven results to back up our claims and can deliver our promises. Do not settle for an in-complete solution! Thank you for your time in reviewing our material, and we look forward to servicing your needs soon.



## **Certifications Accredited to PowerPlus**

In any given disaster there are hundreds if not thousands of potential “solutions” to them. People come up with ideas that boggle the mind and sometimes can be dangerous. There are governing bodies that have been set in place to review these ideas and concepts and either approve or deny the usage of any of them at any given point. PowerPlus Cleaning Solutions has had approval from these governing bodies for in-situation-approvals, or InSitsu Certified.

- OSHA
- USDA
- EPA
- NOAA
- Dept. of Navy
- FDA
- Fish and Game
- Homeland Security
- U.S. Coast Gaurd



## Table of Contents

Nuclear Disasters .....	1
Prodigy Bio .....	2
Clean and Capture (Cac).....	3
Contaminate Extraction System (CES) .....	4
Deep Soil Decontamination .....	5
Deep Soil Tracked System .....	7
Water Decontamination .....	9
Water Contamination Prevention.....	10
Heavy Metals Decontamination.....	11
Vessel Decontamination .....	12
Personnel Safety .....	13
Legacy Waste .....	14
Covering a multitude of disasters .....	15
Data Sheets.....	16

[Click on any topic to go there.](#)



## Nuclear Disasters

Are some of the biggest threats to the environment, workers, and societies that use Nuclear power. Though normally stable and safe, outside circumstances can lead to major catastrophe at the cost of money, nature, and lives. None of these results should ever be taken lightly and companies should know how to deal with equipment failures or unforeseen catastrophe.

The problems are sometimes small and easily dealt with on site with local equipment and personnel. But what happens when large ruptures happen and contaminated water, or gas is leaked into the environment? What equipment can decontaminate any surface without destroying it or require scraping the ground and having to somehow contain the contaminated soil which inevitably leaks into the environment land which creates a legacy of waste?

In short, PowerPlus Cleaning Solutions lives up to its name by having those solutions, today. PowerPlus has developed the technology and the methods that you need that will clean up the smallest spill, to the largest disasters. We look at the specific needs of any disaster and write out prescriptions that would facilitate the needs of the client as apposed to a rubber stamp and assembly line approach. In short, this gives you customized solutions that will work for you first time, every time.

PowerPlus has had a hand in nearly every major disaster that the US has had including, BP Oil Spill, Katrina, 9/11, Exxon Valdez, and the Anthrax scare against the Senate. Each disaster brings new innovations and solutions due to specific needs of each event. But, overall the newer technologies and advancements bring better and better solutions and more chances to grow and keep the rest of the remediation industry on their toes.

But what are these technologies? Great question! Let us begin with the first of our technologies, the Prodigy Bio.

# Prodigy Bio



**Prodigy Bio** is the culmination of years of research and development at PowerPlus Cleaning Solutions. Several generations of this machine have seen action in several of the worst catastrophes the US has seen. Each disaster has led to new innovations and has created the finest decontamination and cleaning machine known.

This powerful machine can produce over 4000 PSI of force capable of cutting a 2"x 4" piece of wood in half, yet is gentle enough to clean birds and small animals with the greatest of care. This all stainless steel machine can decontaminate itself as well as any surface.

The addition of **S.O.V.C.** which regulates the suction of the Prodigy Bio, creates a .21 H.G. of vacuum. That translates to 2/3 perfect vacuum. This is a high standard that allows the Prodigy Bio to clean as well as it does utilizing the **Clean and Capture** tools. The ability to create heat up to 90,000 BTU's gives the Prodigy Bio an edge in being able to clean deep into pores that would be otherwise closed off to lower temperatures.

This machine can also run up to 1000 feet of hose in any configuration. In other words, you can run multiple lines from this machine that equal up to 1000 feet and still maintain full pressure to each of the working tools. This increases productivity and increases cleaning times many times over.

Being made of stainless steel, gives longevity and durability. The design of this machine makes it robust and strong. It is user friendly and with the right training becomes second nature to use. Prodigy Bio is also meant to be powerful yet mobile enough that it can be mounted on nearly any kind of vessel and not disturb the functions of that vessel. During the BP Oil Spill, many of these machines were placed on conventional boats and set out to sea to decontaminate large vessels, while others were mounted in trucks and vans to do remote flood, asbestos, and mold abatement during Katrina.

Stainless Steel holding tanks and fittings also means that you can run any industrial chemical through it and not worry about deteriorating the interior of your tanks. This well built machine is tough and can go the distance with the power and stability you need.



## Clean and Capture (Cac)



**Clean and Capture** was developed with the concept of being able to clean any given surface at any angle including surfaces that are underwater. The concept seemed simple enough, but the actual engineering and designs took years to get right. But, today we stand proudly behind the capabilities of our tools and we are excited to how they can work for you.

Clean and Capture is defined as "The process by which high pressure agitation and immediate extraction occurs within a closed tool head. This creates superior cleaning results with no run-off, over-spray, or cross-contamination."

It works by creating a sealed environment within a cleaning tool's head wherein chemicals, water, or solutions are injected into the surface at a controlled heat level. As the agitated water breaks up particles and reaches deep into the pores of a surface, a near perfect suction pulls the contaminates and dirt particles out of the surface. Other times special chemicals are needed to deal with specific contaminates such as radiation, oil, etc. In these cases, the tools allow for these special chemicals to be used without harming the tool and actually attracts the contaminates out of impossible crevices, making them accessible to the agitated solution and again is caught up by the powerful suction and then captured by the tool where it can be stored in a remote location and processed. This method also avoids cross contamination by containing the entire process within the tool head taking all the contaminates out of the environment while leaving the rest in tact. The containment within the tool head prevents these contaminants from finding their way back to the workers cleaning any given surface. This provides the workers a safe tool to decontaminate with and adds to their own safety in a crisis situation.



Gentle enough for small animals



Tough enough to clean asphalt

The ability to remove contaminants from the soil and other surfaces goes a long way in the decontamination process. But what happens when you do not want to move the soil from its location or are unable. Many times you will want to process the land in place and keep the environment in-tact. In the cases of areas like marshes, swamps, and other water logged areas you will need solutions that can be made mobile and can be moved over water. For sand, grasses, crops, and forested areas you will need solutions that can mobile but leave the cleaned objects in tact. For whatever your particular needs are, we have solutions for all of it.



## Contaminate Extraction System (CES)

CES allows for C.a.C. to clean any soil or grass in place without disturbing it. Specially designed tools such as the screen mesh (show left) that hold the ground in place while the Clean and Capture tools glide over it pulling the contaminants right out of the soil. The technique works well and can go several inches deep into the soil depending on the density. As seen in Fukushima Japan, CES was used to decontaminate radioactive material from tennis courts, grass, and orchards, with fantastic results.

Utilizing specially prepared tarps and cleaning methods, CES can clean crops, trees, bushes, and other hard to clean areas. In the case of a tree, the special tarp is placed under the tree to collect any contaminants. A CES spraying wand is used to apply any solution or chemical needed for the particular contaminate (if needed) and allowed a pre-defined dwell time. After that time is up, the crew can come in and continue the spray-down of the tree all the while a worker below is collecting the runoff with the C.a.C. tools. This facilitates avoiding further contamination of the ground while decontaminating these hard to clean objects. The tarps can be then moved to new locations and the whole process can begin again. Larger tarps that can handle several trees at a time are available to you or to our teams. Imagine getting your crops, or forests back without having to bulldoze and creating large landfills. Imagine enjoying those same trees today and your children enjoying them tomorrow.

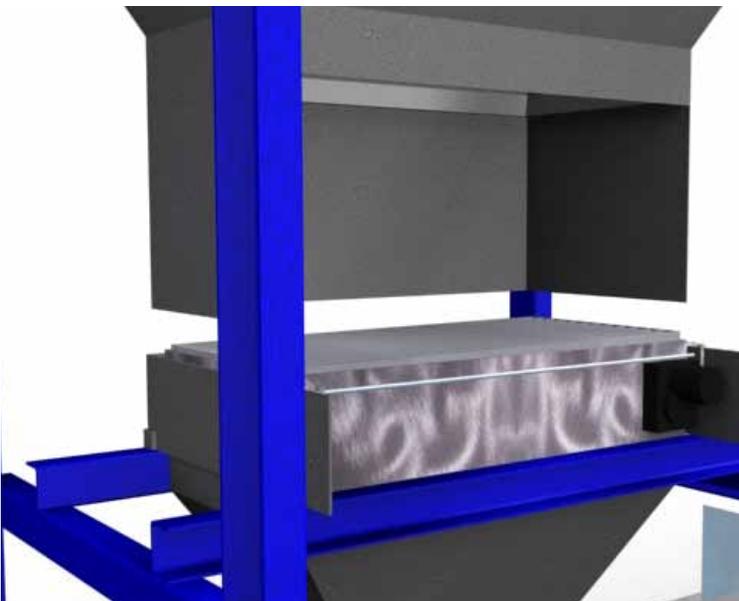




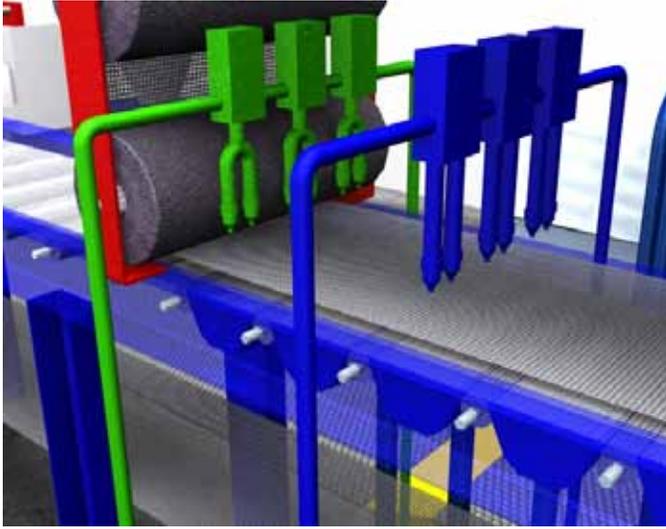
## Deep Soil Decontamination



Contamination does not always happen within a few inches of the surface. Rain, moisture, porous materials, pressure and other forces send much of the contamination deep under the surface. So, how can you clean so deep, yet still keep the soil in relatively the same location? Well, PowerPlus has a solution for that as well. **C.E.S.** includes machines that can clean soil both on location or a larger processing plant that can be established to decontaminate soil from any location. Either way it will decontaminate any soil or organic material you can throw at it.



As the material is dumped into the system a sorter will remove any large debris from the machine to be pulverized via a large mulcher and then resorted back into line with the rest of the material. The material is condensed onto a steel mesh conveyor belt (much like the **C.E.S. Mesh**) and scanned with the appropriate scanners. Radiation, oil, chemicals, etc, scanners can be added to this machine to detect whatever the situation calls for. As the material passes under the scanners, the exact location and section of material is recorded into the machine and the machine matches the speed to whatever setting would best to suit the needs of that particular section.



The material is moved down the conveyor where it is sandwiched between another layer and computer controlled nozzles spray chemicals and water as needed to the specific areas thus eliminating unnecessary usage. This also helps minimize the costs of maintaining these machines. The saturated material also has powerful vacuums underneath pulling out unwanted moisture and contaminants.

Scanners down the line verify that the procedure has completed its task. This process is repeated as much as needed until the material is cleaned and the brought back to the original location from where it was dug up and then replaced. Any material that does not meet the required levels is automatically brought back for reprocessing and, if necessary, flags any material that will need special handling can

be done by personnel. Example: Radiation core material that may have been ejected and found elsewhere could be found in the soil being cleaned. This would require that the source material be removed and contained by special procedures.

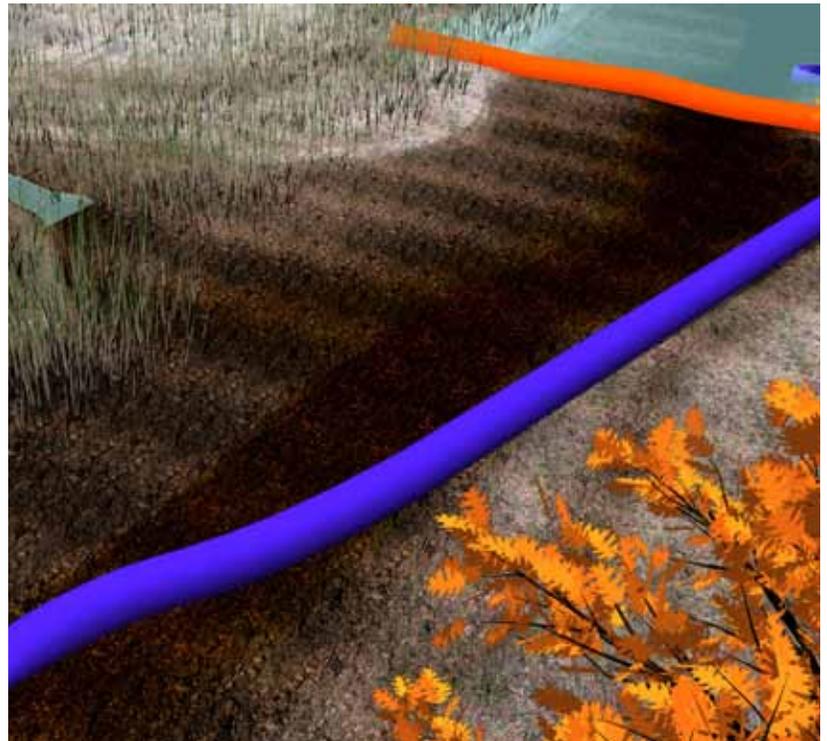
The versatility of this machine brings much value to the table. It has the ability to match whatever size you may need. From small plants that can be more mobile to larger facilities that handle tons of materials per day, the **D.C.U. Earth Decontamination Machine** can match your needs.



## Deep Soil Tracked System

The **D.C.U. Earth Decontamination Machine** works wonders with large amounts of soil but is not always practical when it comes to terrain or locations that are deep within jungle areas or river ways. So, **C.E.S.** has condensed this machine into a trailer that can be mounted on tracks, delivered to a location, and then easily moved to new locations on its own tracks that it carries with it.

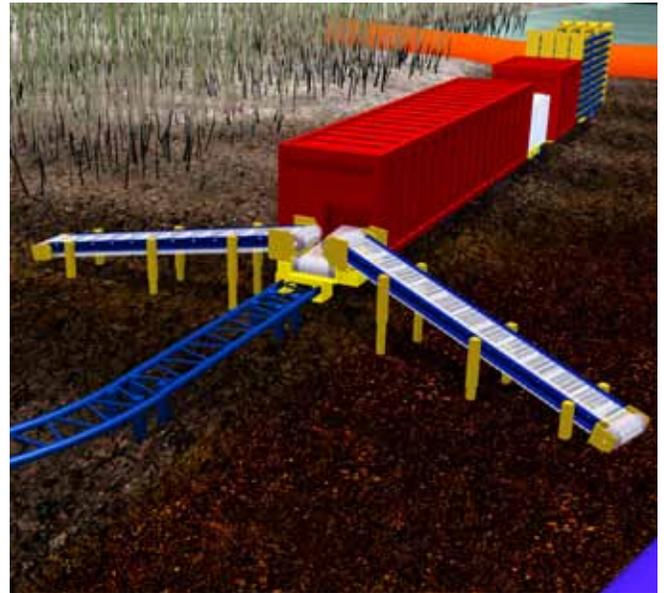
In the event of river way, a boom would be placed at the head of the area that is to be cleaned, thus diverting the water through a tube that would allow the river to flow while workers could then begin laying the mobile track and mounting the trailers.



As the tracks are laid and the facilities are assembled, workers then start feeding soil on to the conveyors located on the sides of the tracks that feed the machine. Workers can go as deep as the contamination and this machine will process all that it is given.

Special **D.C.U. Deep Soil Foggers** are available to promote environmental health with special “Indigenous Enzymes” for deep soil treatments for heavily contaminated areas.

When the area is cleaned the workers can build a track that will match the grade and curve of the terrain and the entire assembly is moved down those tracks to begin the entire process over.



The machines are carried on specially designed carts that hold on to the track much like a roller coaster. This prevents toppling and damage to the machines as they are transported down the tracks. In hard to reach narrow channels that have oil slicks, the PowerPlus hand Weirs are available to clean those areas as well. As the machines and equipment grow dirty, the **Prodigy Bio** and **Clean and Capture** tools are used to clean those surfaces maintaining the utmost efficiency and service adding long life to your equipment.



## Water Decontamination

Water, is by far one of the most valuable natural resources we have. It is vital to protect it and keep it clean for all forms of life across our Earth. Yet, it is also one of the most easily violated and damaged commodities that we have. Radiation, oil, chemical dumping, and all other forms of pollutants threaten to destroy our water and at times it seems there is no way to clean the contaminants that already exist. PowerPlus Cleaning Solutions is here with the answer.

Our **D.C.U. Filters** can handle thousands of gallons per hour and can capture any contaminants to produce drinkable water from the most polluted sources. The five stage process moves from removing large debris and objects from the water down ever progressive filters followed by a special chemical based filter (PowerPlus RadCap) for radiated waters.

The filters are “Hot-swap” capable in that, when they are full they can be replaced with empty filters without stopping the process or loosing productivity. Each filter has a special set of instructions for how to deal with the materials left inside. They can be cleaned and reused over and over while the collected material can be safely stored and is, most of the time, has cash value to industries.

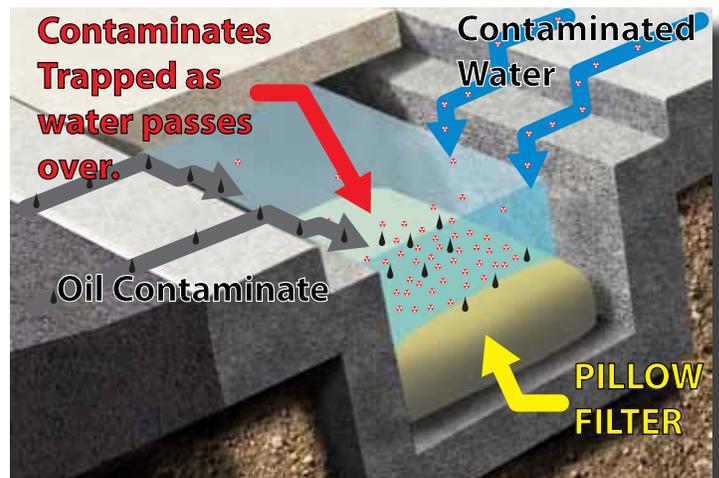
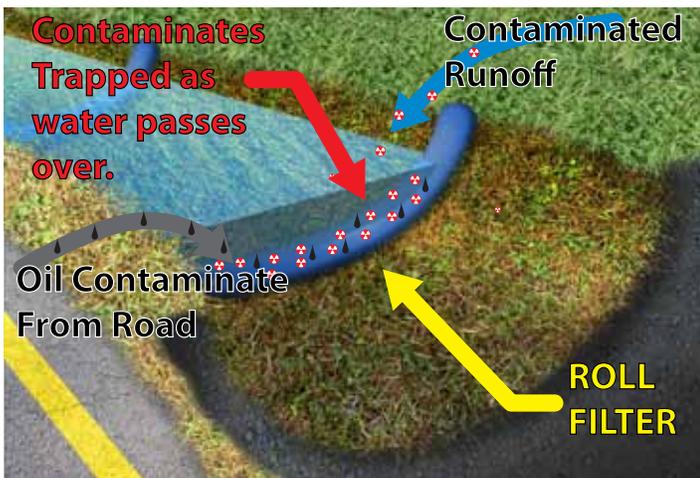
With large nuclear disasters and the like, our technology goes further by having a built in water / contaminate separator already built into our machines like the **Prodigy Bio**. This means you can, collect, clean, contain, and redistribute clean water and source material back into the production line all with the same solutions. At the end of the day when BP Oil pulled in its miles of Boom to be stored, PowerPlus machines were there with the **C.a.C.** and **C.E.S.** technologies to clean those booms so they could be re-used for any further disaster. It also was able to store the collected material and return it to the refineries for later processing. That is money back in their pockets.



# Water Contamination Prevention

Another consideration is the runoff created by contaminants from long term exposure, and or improper cleaning approaches. As contaminants are washed off surfaces by rain or improper cleaning, that contaminated water goes down into drains or into water ways which soak into the ground and eventually come back into the drinking water or water that is then used by crops to grow. This can contaminate entire crops of food making it unsafe for consumption. Farmers can be wiped out by threats like this, not to mention the millions of lives who could. Unknowingly, eat contaminated food. Again, this all points to the importance of maintaining a clean water source.

One way to mitigate the continued introduction of contamination into your sewage and waterways is through the use of our specially treated **D.C.U. Collection System** which blocks the waterways from debris and contaminants, but allows the water to flow in. This helps reduce new contaminants from entering your system and start the process of reclaiming the contaminated water supplies. In Oil and Chemical disasters, these devices can be wrung out and re-enstated quickly continuing to prevent solid waste.



These illustration shows the Pillow and Roll Filters being utilized in a gutter situation. The contaminants are attracted to it due to special chemical agents that the pillow is soaked in thus attracting the contaminants. As the filter is slowly engorged with these contaminants, it can be re-cleaned and recycled to be used over and over again. Other filters would be placed in front of gutters, in open water streams, or wherever water would travel.



## Heavy Metals Decontamination

All different types of material can be cleaned using the Clean and Capture (CaC) and Contaminant Extraction Systems (CES). PowerPlus DCU has made huge improvements on decontamination tools and methodology that allow them to clean heavy metals that reside in surfaces and in deep pores.

Lead, Cadmium, Selenium can also be cleaned out of contaminated areas, along with a host of other heavy metals. In special cases Normally Occurring Radiated Materials or NORM materials contain things like Barium, Calcium, Strontium, Radium sulfates, and other radiating materials, our RadOut, Refresh chemical line are specifically engineered to match whatever contaminants you have and the Clean and Capture tools allow us to utilize them at specific temperatures and pressures to assure a clean surface when we are done.

From large ships to ground soil, we can capture, clean, and restore your precious resources back to their full use. No metal or contaminant is too tough for PowerPlus DCU solutions!

# Vessel Decontamination

**Clean and Capture** tools have been servicing large naval vessels for years. Among the most recent large scale decontaminations to occur was the BP Oil Spill in Gulf of Mexico. Literally hundreds of ships lay out at sea unable to come into port because they were covered in layers of oil from the spill. PowerPlus **Clean and Capture** tools were mounted on small boats that went along side their larger cousins and cleaned every square inch of the hull surface. From small boats, tankers, cargo ships, and even cruise ships can all be serviced with the **Clean and Capture** tools from PowerPlus.



Cleaning on ground

Prodigy Bio on board





## Personnel Safety

Your workers are your most important asset on any job site. They do the work you need to have done, and they are the ones who operate the machinery that gets the job done. They have the skills that take a lot of time to develop and years more to apply that knowledge to gain full efficiency.

You need to make sure you protect your workers / investments as well as possible. No matter what the catastrophe is or where, PowerPlus stands by ready to deliver the worlds best protective gear to keep them safe. In Fukushima we sent our crew in with RST shielded radiation suits. The only suits in the world that can block alpha, beta and gamma radiation particles.

We also have mobile command centers at your disposal to oversee the projects and keep coordinate sites from all around the area moving cohesively as one unit. These centers come equipped with:

- Mobile Communications
- MSDS, Personnel Safety Logs, Safety Procedures
- Mobile Laptops Containing All Safety Data
- Large Screen Monitors For Training On Site
- Tool Storage
- Personnel Sleeping Racks
- HEPA Positive Flow Air System
- Cooling And Heating Systems
- Indoor And Outdoor Lighting Systems
- Decontamination Pits
- Generator
- PASS Proprietary Software



# Legacy Waste

Waste is always the concern when any disaster strikes. Waste of resources, waste of manpower and money, and of course, waste that lasts into the future. The last one can affect everything from economy, health, environment, to the little kids who have to place to roam freely because of the landfills that take up the space where forests and usable land once was.

The PowerPlus technologies are all designed around minimizing or eliminating waste all-together. The machines are designed to collect and separate contaminants from the natural materials and allow the materials to be returned into the environment free of the harm. And the harmful material is designed to be re-usable and or recyclable. **Either way means, no landfills.** This means no wasted land, no costs of burying the waste, no costs of maintaining that waste, and no future threat of contaminants leaking and polluting ground water and soil that we use to grow crops and live with.

Why would you want a dump where trees once stood? You would not. But when all other solutions give you that as a choice, your choice becomes clear.



# Covering a multitude of disasters



Bio / Chemical



Mud slides



Bio Pandemic



Tornado



Earthquake



Hurricane



Fire



Volcano



Oil



Flood



Nuclear

PowerPlus Cleaning Solutions has the experience and expertise to clean any major disaster known to man today. They pride themselves on their twenty four years of disaster remediation including many of the U.S. largest disasters to date. PowerPlus has had to ramp up quickly and overcome many obstacles that come with breaking ground in the decontamination processes. But they also constantly set the bar higher and higher in an ever growing field.

There are many different types of disasters, and each of them require their own methods and approaches. PowerPlus realizes this and can write prescription methods to customize each incident which increases the effectiveness of the technologies they use. Having no limit on what they can clean, here are some examples of how their equipment can serve in disasters and clean up efforts.

While we are decontaminating and cleaning up after these disasters, we also wind up addressing

- Upholstery
- Carpets
- People decontamination
- Animal decontamination
- Vehicle decontamination
  - Large Naval Vessels
  - Cruise Ships
  - Airliners
  - Cargo Planes
  - Cars
  - Trucks
  - Trains
- Crops, trees, shrubs, grass, vegetation or surfaces of any kind can be addressed at the time of decontamination.



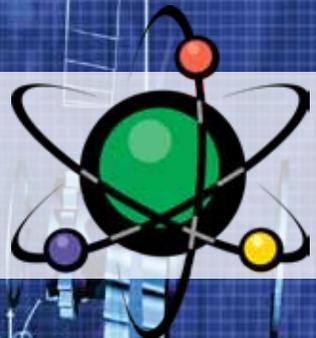
# POWERPLUS

C L E A N I N G S O L U T I O N S

# DATA SHEETS



PowerPlus Disaster Clean Up  
1525 Endeavor Pl. Site O, Anaheim, CA 92801  
(714) 635-9264 - FAX (714) 635-9442  
E-mail: [info@powerplusonline.com](mailto:info@powerplusonline.com)  
<http://www.nuclear-dcu.com>





# PRODIGYBIO

## Why do I need a Prodigy Bio?

The Prodigy Bio cleans and decontaminates any surface while capturing all runoff and contaminants. It can even work upside down.

The Prodigy Bio specializes in Nuclear, Flood, Fire, Bio, Hazmat, and Abatement. Biological waste is cleaned four different ways, then filtered allowing for standard discharge. Nuclear waste, is filtered up to nine times through a Stainless filter and all other debris through filtration as small as .03 micron.

The Prodigy Bio also allows additives such as RAdOut, Boric Acid, Iodine, Strong Bases, Boron Carbide, or virtually any other compounds to be sprayed in the Clean and Capture process.

## Capabilities

- The Chemical Injection System allows for virtually any chemical to be applied hot and with pressure, such as Quaternary Disinfectants, Phoenals, RAdOut, Bleach, Acids, Caustic Soda, Refresh, etc. with fresh or salt water
- **80% more vacuum** than most large truck mounted machines
- **Four times the airflow** and 21 inches H.G. of vacuum.
- **Four times the capacity** of most pressure washer water pumps
- **Twice the heat** to assist in sterilization and cleaning. (Up to 90,000 BTU)
- **4000 PSI of working pressure** at the tools
- **Stainless Steel throughout**, including Holding Tank, Heat Exchangers, Mufflers, Exhaust System, Machine Panels and more to facilitate Cleanliness / Sterilization.
- **A Biomercinator** that purees Biohazard/Hazmat Waste with a disinfectant and heat, sending the waste to a stainless steel holding tank where it is treated with Ozone and UV light prior to disposal. (Usually allowing sanitary sewage disposal)
- **6000 gallon per hour Pump Out** pumps treated waste to a drain or secondary tank allowing unlimited disposal of anything from dirty water to Nuclear Waste.
- **Cleaning / decontamination of itself**, its hoses, and attachments with Clean and Capture technology.
- **Remote operation or under disaster conditions**, The Prodigy Bio can provide its own clean water, 120V. of clean AC. power, and can operate on Gas or Propane Tanks with the flick of a switch.(Diesel available.)



## Specifications

Dimensions	W 34.5", H 40", D 42" (including waste tank)
Weight:	475 lbs. (with tank)
Frame:	Powder-coated high strength steel
Engine:	23 H.P. Vangaurd/Honda overhead valve
Water Pump:	Oil Bath at 6.8gpm at 4000P.S.I.
Heating system:	Stainless steel 3 element exchanger
Recovery tank:	70 Gallon heavy-duty stainless steel tank
Hoses:	1000ft. vacuum +1000ft solution hoses
Instruments:	Rugged marine gauges
Wand:	Two-Jet stainless steel S-bend wand with bypass
S.O.V.C.	Included
Construction:	Stainless steel panels
AC	120volts 20amp True Sign Wave



# PRODIGYBIO

## Chemicals

The PRODIGY BIO special chemical\* that removes radioactive isotopes (atoms) from aqueous solutions that threaten both human health and the environment, including fission byproducts (e.g. Cesium, Stront, Yterium, Cobalt, etc), indicators of failed fuel (e.g. cesium, strontium, and technetium), and effluent release drivers (e.g. nickel, iodine, cobalt, antimony). The inorganic media is radiation resistant mitigating the stability concerns associated with organic ion exchange resin under high radiation applications. Unlike conventional media our chemicals (RadOut, RadCap, and Refresh) have low sensitivity to pH, salt water, and the presence of surfactants (e.g., soap) in wash waters.

## RECORD SHEET • numbers reflect technology prior to recent advancements.

SAMPLE	SURFACE TYPE	GAMMA				BETA		
		BEFORE	AFTER	AFTER	REAL DECON %	BEFORE	AFTER	AFTER BETA
3	ASPHALT ROAD 1ST PASS	135	67	50.4%	151.1%	2150	315	85.3%
3	ASPHALT ROAD 2ND PASS	135	67	50.4%	151.1%	2150	315	85.3%
4	CHERRY TREE	230	128	56%	80%	305	65	78.7%
4	GRASS WITH BIO ABSORBED CONT.	153	62	41.0%	130.0%	1450	275	81.0%
5	BENCH DECK	112	35	68.8%	100.0%	2870	255	91.1%
6	PLAYING FIELD DIRT PAD	84	55	34.5%	91.5%	420	220	47.6%
6	PLAYING FIELD DIRT	200	150	25.0%	45.5%	400	260	35.0%
7	HOT SPOT	7100	320	95.5%	96.7%	4100	500	87.8%
8	TENNIS COURT AVERAGE	240	109	54.6%	87.3%	810	197	75.7%

REAL DECONTAMINATION ACHIEVED. BACKGROUND CORRECTED. ACTUAL DECONTAMINATION MAY BE UP TO 25% BETTER DUE TO CROSS TALK

BACKGROUND CORRECTION	90
VERTICLE CONCRETE CORRECTION	35
PLASTICS BACKGROUND CORRECTION	25

- *These is the actual results from Fukushima Japan. The "Real Decon" reflects the numbers after background levels had been accounted for.*

## Continuing Development

- Powerplus is always pushing the cutting edge of technology in radiation remediation. Our latest field and lab tests have proven radiation removal to be in excess of 75%!

## Features

- 1. Nuclear Waste Pick-Up
- 2. Decontaminates Dirt, Soil, and Sand
- 3. Decontaminates Trees, Bushes, and Crops
- 4. Sterilize / Cleans itself / Prion Reduction
- 5. Allows virtually any chemical to be ran through the machine
- 6. Allows Clean and Capture (multi surface decontamination)
- 7. Pressure wash with chemical and heat up to 4000 P.S.I.
- 8. Stainless Steel Machine and Waste Tank (allows for Decontamination of machine)
- 9. Personnel / Equipment Decontamination

## Optional

- (Clean & Capture is Hot High-Pressure Decontamination and Cleaning inside the confines of a tool head with no over spray or runoff)
- Advanced Filtration System for Nuclear Waste.
- Silencing Packages for ultra quiet operation
- Dual Fuel (Propane or Gas) Diesel available
- Hose Cleaning and Decontamination/Sanitizing tool
- Auto Pump Out 60,000 GPH that handles mud, sewage, and small rocks while filters any larger rocks or debris.
- Drain Hydro-Jetting attachments
- Drain Clean out attachments (Scum Sucker)
- Hard Surface cleaning attachments for (Wood, Tile, Granite, Marble, Concrete, Vct. Ect.)
- Clean and Capture Tools :
- Pressure Washing Guns
- Upholstery and Draperies tools



# S.O.V.C.™



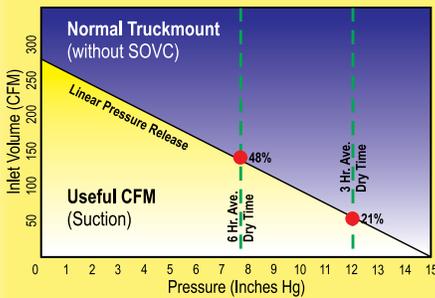
## S.O.V.C.™

(Solenoid Operated Valve Control) is a revolutionary patented product that quadruples the suction power of the Prodigy Bio. This substantial increase in suction power and increases the distance you can work from your base camp. And because S.O.V.C. delivers more CFMs at lower RPMs than would typically be required to achieve the same suction power, S.O.V.C. decreases fuel consumption and increases the life of your Prodigy Bio.

## RUN MULTI-LINES

S.O.V.C. can allow the Prodigy Bio to run multiple hoses at a time up to 1000 feet! With four times the suction coming out of the Prodigy Bio, the cleaning capacity is also quadrupled giving you the best platform for all remediation needs.

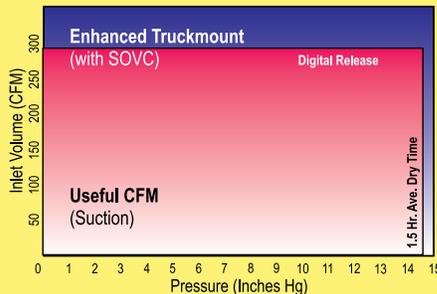
## HOW DOES S.O.V.C. WORK?



As the chart to the left illustrates, the spring and disc pressure relief valve used on most truck mounts begins to open the moment the truck mount is started. The result is an immediate loss of CFMs. As the pressure is increased, CFMs continue to decrease cutting suction by 80% at 12" Hg.

The chart to the right illustrates the effect of replacing the spring and disc valve with an S.O.V.C. digitally controlled valve. PowerPlus calibrates each S.O.V.C. unit to open the pressure relief valve at the customers specified pressure. The result is maximum suction while ensuring maximum safety.

Internationally patented





# Clean & Capture



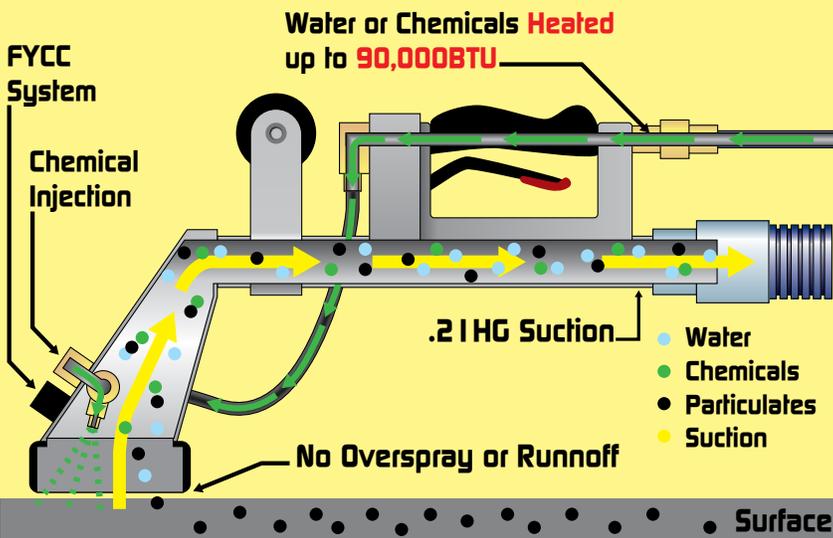
**CLEAN:** Each tool has nozzles that can spray water, RadOut, or any other chemical, while a powerful suction is generated with Prodigy Bio drawing all the particulates out of the surface you are cleaning and capturing them back in a holding tank and then treated.

**CAPTURE:** The waste material is captured with Clean and Capture then cleaned with our filtration system capable of producing a drinkable water solution.

**A Powerful combination:** The Prodigy Bio is a particularly powerful partner for this technology. With over 4000 PSI of pressure available, 21H.G. of suction, a stainless steel construction with a large holding tank, and the ability to run up to 1000 feet of hose, the Prodigy Bio makes the perfect combination for the Clean and Capture tools.



## 10,000 Cycles Per Second!



**WHAT IS CLEAN AND CAPTURE?** Clean and Capture is a proprietary technology of PowerPlus Professional Cleaning Solutions that utilizes heat, suction, pressure, and chemical properties to achieve a decontamination solution second to none. The PRODIGY BIO is completely integrated with this system that can provide a safe, inexpensive, way to reclaim contaminated areas.



# CES System



## CES Components:

- Clean and Capture tools and technology
- Prodigy Bio
- C3 Technology
- S.O.V.C. Technology
- S.E.P. Technology
- CES - Procedures
- CES - P.A.S.S. Software
- FYCC- Technology

**CES (Contamination Extraction System):** is a culmination of technology and procedures. It is what allows **PowerPlus Cleaning Solutions** to clean soil, crops, and trees while maintaining the integrity of the surfaces being cleaned.

**Different:** CES is different in the fact that it is a complete solution and package. The technology ranges from knowing how to remove radiation and contaminants from any surface, it also address environmental issues such as radioactive run-off, maintaining the eco-systems and helps the environment heal itself.

**Effective:** The CES system is all together effective and cost efficient. No scraping of the soil, no cutting trees down, no destroying homes and lives to remove the threat of radiation. With results of 75% removal and, in some cases, up to 95%, CES is the worlds first, and only complete, effective solution.

## CES Value:

- Cost effective
- Environmentally friendly
- Proven technology
- Complete package
- Ground water protection
- High decontamination effectiveness





# Collection System

**NUCLEAR RADIOACTIVE RUNOFF:** is a big concern when it comes to decontamination clean up and a critical issue when it comes to water purification. Contaminants that are left in the water after being in any given environment are enough of a problem under normal conditions. Radiation contamination complicates the cleaning process ten fold.

**STOP RUNOFF:** Our filters are specifically designed for radiation and large water flow. This filter is designed to be able to be dropped into any gutter, or more narrow water way where large or small amounts of contaminants like Radiation, Oil, or Solvents make their way into your water systems. As the low waters travel over, around, and through the filter, the contaminants are trapped inside the filter which can be replaced and reprocessed. This means virtually no additional landfill waste will be created with this system!

The current system is made up of three different filters all geared to maximize your protection.



## FILTER TYPES

### PILLOW FILTER:

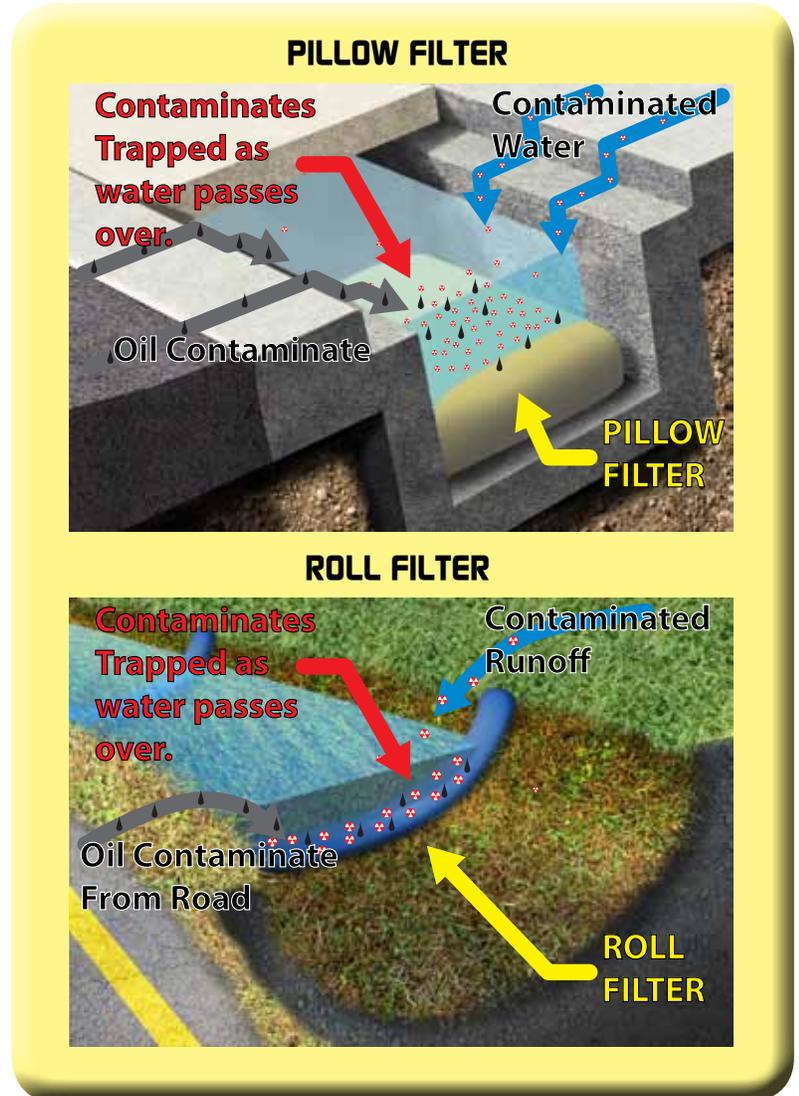
This filter is designed to be able to be dropped into any gutter, or more narrow water way where large or small amounts of contaminants are trapped inside the filter which can be replaced and reprocessed. Simply drop in place and you are done! Size ( 30cm x 30cm x 5cm)

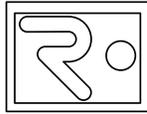
### BARRIER FILTER:

Designed to make a great first defense as they capture radiation, oil, and solvents filtering the water that travels into gutters. Size or (13cm x 2.1m)

### ROLL FILTER:

Sometimes your needs will mean a longer system or even a wider system might be needed and that is where this system fills the gap. We can make long rolled versions of our filter system to better fill ditches or gutters where a longer solution may be more advantageous. Size ( 13cm x 3m)





# RadOut Refresh



**Ultimate one-two combination:**

Developed at PowerPlus Cleaning Solutions, this proprietary chemical blend has been engineered to remove the specific radioactive isotopes found in Japan.

**Proven:**

Proven in D.O.D. labs, and in the field, this combination used with the Prodigy Bio and Clean and Capture, has proven itself with radioactive contaminate removal rates of 60 - 99.99%!

**A bonus:**

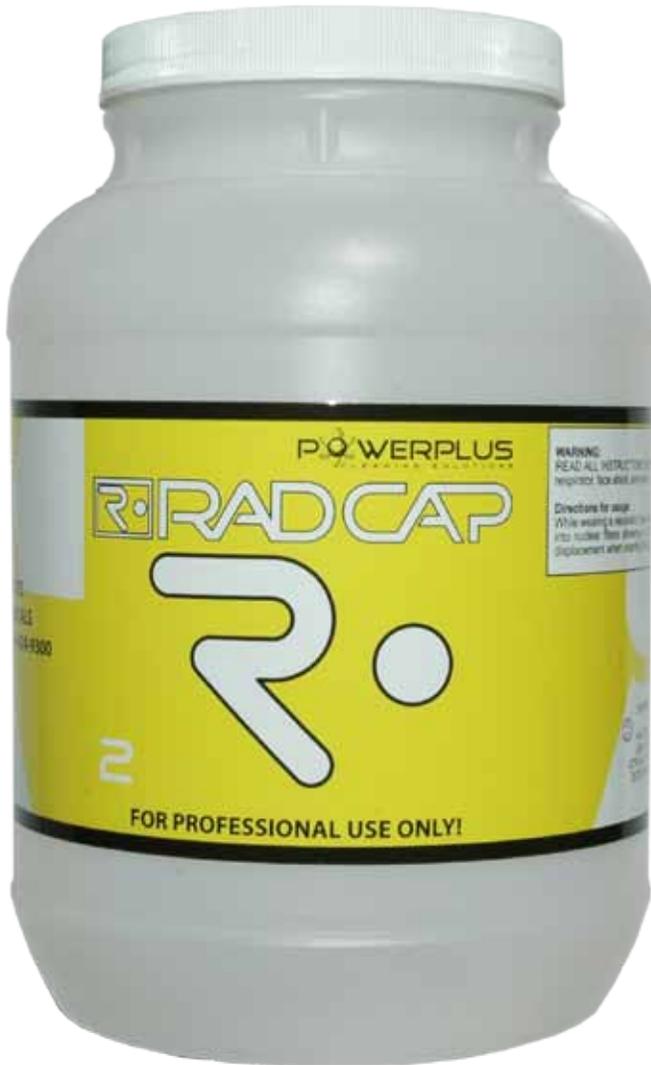
One desirable side effect "Refresh" has is the leveling of P.H. levels found in soil. This will prove useful when you re-plant your crops and have land that is healthier than before it was de-radiated.

**A trusted company:**

PowerPlus cleaning solutions has over 24 years experience with remediation of disasters and has served many people in the process. We stand by ready to serve you and help you through your times of crisis.



# RadCap



### **A powerful decontamination tool:**

Developed at PowerPlus Cleaning Solutions, this chemical blend removes specific radioactive isotopes found in water. It can also prepare them to be removed by our Clean and Capture technologies.

### **Peace of mind:**

Everyone is concerned with drinking water and the ability to water crops without fear of contamination from their water sources. Utilizing this chemical in conjunction with our PowerPlus DCU Collection Systems, Filters, and Prodigy Bio equipment, this chemical can remove the harmful radiation from water and soil and return your farmland and drinking water back to conditions that sometimes are improvements over where they were prior any given nuclear accident.

### **Preventative perscription:**

Use this chemical with our PowerPlus DCU collection system to safeguard your storm drains, water ways, gutters, farmland, and other places where you would have running water. This blocks any more contamination from running into your water systems and minimizes your potential for recontamination.

### **A trusted company:**

PowerPlus cleaning solutions has over 24 years experience with remediation of disasters and has served many people in the process. We stand by ready to serve you and help you through your times of crisis.

# POWERPLUS CLEANING SOLUTIONS

## WE ARE READY TO MOVE.

PowerPlus is standing by with equipment and personnel ready to move when you are! Let us put our years of expertise and know how to work for your country and remove the contaminants that keep you from enjoying your lands freely.



PowerPlus Disaster Clean Up  
1525 Endeavor Pl. Site O, Anaheim, CA 92801  
(714) 635-9264 - FAX (714) 635-9442  
E-mail: [info@powerplusonline.com](mailto:info@powerplusonline.com)  
<http://www.nuclear-dcu.com>

