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HALON RECOVERY AND RECLAIM TECHNOLOGY
FROM THE VIEW POINT OF THE
INSTALLER/DISTRIBUTOR

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OVER THE PAST FEW YEARS, WITH THE DEMISE OF HALON 1301 PRODUCTION, IT IS BECOMING OBVIOUS THAT THERE IS A CRITICAL NEED TO MAINTAIN A BANK OF HALON 1301 FOR RECHARGE PURPOSES OF EXISTING SYSTEMS UNTIL ALTERNATE AGENTS OR TECHNOLOGY CAN BE PROVIDED. WHEN REVIEWING THE SIZE OF THE EXISTING HALON MARKET, IT WAS OBVIOUS THAT IF A PLAN WAS NOT PUT INTO EFFECT IMMEDIATELY THE FUTURE NEEDS FOR HALON 1301 WOULD NOT BE PROVIDED FOR. SOME PEOPLE MAY ADVERTISE THAT THEY HAVE CAPABILITIES OF RECOVERY AND RECLAIM WHEN IN FACT ALL THAT THEY ARE BASICALLY DOING IS TAKING HALON 1301 FROM CONTAINER "A" AND PUTTING IT INTO CONTAINER "B". THE TECHNOLOGY OF RECOVERY AND RECLAIM MUST INCLUDE THE RECONDITIONING OF THE HALON 1301 TO ITS PURE STATE AS ORIGINALLY MANUFACTURED. IN ORDER TO DO THIS, IT IS NECESSARY TO INSURE THAT THE **HALON** 1301 MEETS THE MIL SPEC. FOR PURE HALON.

MANY METHODS WERE REVIEWED BY OUR COMPANY TO INSURE OUR CUSTOMERS A STEADY SUPPLY OF HALON 1301 AT REASONABLE PRICES FOR THE FORESEEABLE FUTURE. THE SIZE OF OUR LOCAL MARKETPLACE INDICATED THAT THERE WAS INDEED A NEED FOR RECLAIMING AND RECYCLING HALON 1301 TO PROVIDE FOR REPLACEMENT AGENT WHEN SYSTEMS ARE ACTIVATED. ONE OF OUR PRIMARY CONCERNS WAS THE AVAILABILITY OF SUFFICIENT HALON TO OUR EXISTING CUSTOMER BASE AND OTHER DISTRIBUTORS THAT MAY HAVE A REQUIREMENT FOR HALON 1301 IN THE FUTURE. IN REVIEWING THE VARIOUS OPTIONS, IT WAS DECIDED THAT THE MOST PRACTICAL AND ECONOMICAL WAY FOR OUR COMPANY TO PROVIDE THIS SERVICE IS AN IN-HOUSE RECLAIM AND RECYCLING SYSTEM.

ANOTHER OF OUR PRIMARY GOALS IN SETTING UP THE RECLAIM AND RECOVERY SYSTEM IS TO MAINTAIN A STABLE PRICING FOR OUR CUSTOMERS IN THE FUTURE FOR THEIR NEEDS OF RECHARGING THEIR HALON 1301 SYSTEMS. IN DISCUSSING THE NEEDS WITH OUR CUSTOMERS, IT BECAME OBVIOUS THAT MANY OF OUR CUSTOMERS WOULD NOT BE ABLE TO IMMEDIATELY REPLACE ALL THE HALON 1301 SYSTEMS WITH ALTERNATE AGENTS OR ALTERNATE METHODS OF PROTECTION. MANY OF OUR CUSTOMERS ARE PREPARING FOR THE FUTURE INSTALLATIONS WITH ALTERNATIVE AGENTS, HOWEVER, THERE IS A NEED TO MAINTAIN THE EXISTING HALON 1301 SYSTEMS THAT ARE CRITICAL TO THEIR OPERATIONS.

IN PUTTING TOGETHER A PLAN TO ENTER INTO THE HALON RECLAIM AND RECYCLE BUSINESS, MANY THINGS HAD TO BE CONSIDERED. OUR FIRST CONCERN WAS TO INSURE THAT WE WERE ABLE TO VERIFY THAT THE INCOMING CYLINDERS DID INDEED CONTAIN HALON **1301** AND NOT SOME OTHER PRODUCT. THEREFORE, IT WAS NECESSARY FOR US TO SET UP A PROCEDURE IN WHICH WE CAN TEST ALL CYLINDERS COMING INTO OUR FACILITY TO INSURE THAT THEY ARE INDEED FILLED WITH HALON **1301**. AFTER REVIEWING VARIOUS INSTRUMENTS AVAILABLE, WE PURCHASED A UNIT THAT WOULD BE ABLE TO DETERMINE WHETHER THE INCOMING CYLINDERS CONTAINED HALON **1301**, HALON **1211**, HALON 122, OR OTHER AGENTS. BY DRAWING OFF A SMALL SAMPLE AND HAVING IT ANALYZED BY THIS PORTABLE UNIT, WE ARE ABLE TO DETERMINE WHAT THE CYLINDER CONTAINS. ONE ADVANTAGE WE FOUND WITH THIS UNIT IS THAT BEING PORTABLE IT WOULD BE EASY FOR OUR TECHNICIANS TO USE THIS IN THE FIELD AT THE CUSTOMER'S LOCATION IF HE WISHES TO VERIFY THAT HIS CYLINDERS CONTAIN **1301**.

THE NEXT STEP OF THE PROCEDURE, IS TO PROVIDE A HOLDING TANK, OR WHAT IS COMMONLY REFERRED TO AS A BLOW-DOWN TANK, FOR THE INCOMING HALON **1301** SYSTEMS CYLINDERS. WITH THIS THOUGHT IN MIND, WE PROVIDED A 1000-POUND BLOW-DOWN TANK TO RECEIVE THE INCOMING HALON **1301** WHICH IS STILL CONTAMINATED WITH NITROGEN AND OTHER CONTAMINANTS. WE FEEL THAT IN ORDER TO OVERCOME THE HEEL PROBLEM THAT OCCURS WHEN REMOVING HALON FROM ANY SYSTEM CYLINDERS, THAT IT

WOULD BE NECESSARY TO DISCHARGE EACH CYLINDER INTO THE BLOW-DOWN TANK AND FROM THAT POINT, DISCHARGE IT THROUGH OUR RECYCLE SYSTEM.

ONCE THE BLOW-DOWN TANK IS FULL, WE ARE READY TO PROCEED TO RECLAIM AND RECYCLE THE HALON 1301. IN OUR REVIEW OF THE VARIOUS MANUFACTURERS OF THE HALON RECYCLING SYSTEMS, WE WANTED TO INSURE THAT WE RECEIVED A UNIT THAT WOULD MEET THE NECESSARY MIL SPECIFICATIONS FOR THE PURITY OF THE HALON 1301. THIS WOULD MEAN THAT THE SYSTEM MUST RECYCLE AND RECLAIM THE HALON 1301 TO THE MIL SPECIFICATION REQUIREMENTS REMOVING ALL NITROGEN AND OTHER IMPURITIES BEFORE RETURNING THE HALON 1301 FOR SYSTEM USE. OTHER MANUFACTURERS' EQUIPMENT DO NOT REMOVE ALL OF THE NITROGEN AND DO NOT MEET THE MIL SPEC. BUT DO INDEED MEET THE A.S.T.M. SPECIFICATION.

AFTER FINDING SUCH A SYSTEM, WE DECIDED TO INCORPORATE A HOLDING TANK CONCEPT UTILIZING THREE 560 POUND CONTAINERS TO HOLD THE PURE HALON 1301 BEFORE RELEASING IT INTO OUR MINI-BULK TANK. THE THREE TANKS WERE MANIFOLDED AND VALVED IN SUCH AN ARRANGEMENT AS TO BE ABLE TO FILL OR DISCHARGE FROM ANY OF THREE TANKS SEPARATELY OR SIMULTANEOUSLY.

PART OF THE REASON FOR SETTING UP THE HOLDING TANK CONCEPT WAS SO THAT WE COULD HAVE A THIRD-PARTY CERTIFICATION OF ALL THE HALON 1301 WE PROCESS. BY MANIFOLDING THE PIPING AND VALVE ARRANGEMENTS IN SUCH A MANNER THAT WE CAN FILL ONE TANK AND DRAW OFF A SAMPLE TO ANY OF THE OTHER TANKS AT THE SAME TIME FOR A CERTIFICATION TEST, WE ARE ABLE TO VERIFY THAT THE RECYCLING SYSTEM IS OPERATING PROPERLY. BY TAKING THIS EXTRA STEP, WE ARE ABLE TO INSURE BY THIRD-PARTY TESTING THAT THE HALON MEETS THE MIL SPEC. BEFORE DISCHARGING IT INTO OUR 24,000 POUND MINI-BULK TANK. THIS ADDITIONAL STEP INSURES THAT THE MINI-BULK WILL NOT **HAVE** ANY CONTAMINATED HALON 1301.

IT IS OUR INTENTION AND HOPE THAT BY MAINTAINING A SUPPLY OF **HALON** 1301 IN OUR BULK CONTAINER, WE WILL BE ABLE TO MEET THE FUTURE NEEDS OF OUR CUSTOMERS FOR HALON 1301. I FEEL THAT HALON 1301 IS STILL A VIABLE FIRE PROTECTION PRODUCT AND SHOULD BE HANDLED PROPERLY TO INSURE A SUPPLY FOR THE FORESEEABLE FUTURE FOR THE CRITICAL NEEDS THAT CANNOT BE REPLACED IMMEDIATELY WITH NEW TECHNOLOGY OR ALTERNATE AGENTS.

IT IS CRITICAL THAT ALL SAFETY PRECAUTIONS IN HANDLING HALON 1301 SYSTEM CYLINDERS AND THE TRANSFER OF HALON 1301 ARE ADHERED TO. WE HAVE GONE TO GREAT LENGTHS TO MAKE SURE THAT SAFE HANDLING OF HALON 1301 IS A PRIMARY CONCERN AND THAT ALL SAFETY AND O.S.H.A. STANDARDS ARE COMPLIED WITH. ALL SYSTEM CYLINDERS SHOULD BE EQUIPPED WITH SAFETY DISCS, SHIPPING CAPS AND SAFETY PLUGS. WHEN DEALING WITH THE TRANSFER OF HALON 1301, IT IS NECESSARY THAT ALL OPERATORS WEAR THE PROPER SAFETY GLASSES, SAFETY SHOES, AND ADHERE TO ALL SAFETY REGULATIONS.

WHEN SHIPPING HALON 1301, EITHER INTERSTATE OR INTRASTATE, ALL D.O.T. REQUIREMENTS SHOULD BE COMPLIED WITH INCLUDING ANY SAFETY CAPS FOR CONTAINERS AS THIS AGENT IS A COMPRESSED GAS AND SHOULD BE HANDLED ACCORDINGLY. ALL SHIPPING CONTAINERS SHOULD BE MARKED WITH THE PROPER WARNING LABEL WHICH IS A GREEN LABEL FOR COMPRESSED GAS NON-FLAMMABLE AS WELL AS ALL SAFETY PLUGS AND SHIPPING CAPS.

I WOULD LIKE TO EMPHASIZE THAT THE HALON RECOVERY AND RECLAIM TECHNOLOGY USED BY OUR COMPANY IS ONLY TO MAINTAIN A SUPPLY FOR OUR CUSTOMERS FOR RECHARGING OF EXISTING HALON 1301 SYSTEMS. IN REVIEWING FUTURE NEEDS WITH OUR CUSTOMERS, WE ARE CERTAINLY RECOMMENDING THE NEW ALTERNATIVE AGENTS THAT ARE ACCEPTABLE TO

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E.P.A. AND COMPLY WITH N.F.P.A. 2001. WE ARE ALSO REVIEWING ALTERNATE ENGINEERING METHODS OF FIRE PROTECTION FOR OUR CUSTOMERS TO ELIMINATE THE HAZARDS IF AT ALL POSSIBLE. WE AT AUTOMATIC SUPPRESSION SYSTEMS, INC. ARE CONCERNED WITH THE ENVIRONMENT AND ARE DOING OUR PART IN PROVIDING SAFE AND PROPER FIRE PROTECTION METHODS.

TKANK YOU.