

STATEMENT OF HALLIBURTON ENERGY SERVICES, INC.
TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY
SCIENCE ADVISORY BOARD ENVIRONMENTAL ENGINEERING COMMITTEE
PUBLIC MEETING ON EPA'S PROPOSED RESEARCH APPROACH FOR
STUDYING THE POTENTIAL RELATIONSHIP BETWEEN HYDRAULIC
FRACTURING AND DRINKING WATER RESOURCES

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MY NAME IS MIKE WATTS. I AM THE DIRECTOR OF FRACTURE STIMULATION AFFAIRS FOR HALLIBURTON ENERGY SERVICES, INC. I WANT TO THANK YOU FOR THE OPPORTUNITY TO PROVIDE COMMENTS TODAY ON EPA'S PROPOSED RESEARCH APPROACH FOR STUDYING THE POTENTIAL RELATIONSHIP BETWEEN HYDRAULIC FRACTURING AND DRINKING WATER RESOURCES.

HALLIBURTON IS A LEADING PROVIDER OF SERVICES TO THE OIL AND GAS INDUSTRY AND IS THE GLOBAL LEADER WITH RESPECT TO HYDRAULIC FRACTURING SERVICES. HALLIBURTON HELPED PIONEER THE USE OF HYDRAULIC FRACTURING IN THE 1940S AND HAS BEEN HYDRAULICALLY FRACTURING WELLS IN A WIDE VARIETY OF GEOGRAPHIC SETTINGS AND FORMATIONS FOR OVER 60 YEARS. DURING THIS TIME, HALLIBURTON HAS HYDRAULICALLY FRACTURED MANY HUNDREDS OF THOUSANDS OF WELLS AND HAS BEEN RESPONSIBLE FOR NUMEROUS INNOVATIONS IN THE FIELD OF HYDRAULIC FRACTURING. HALLIBURTON HAS ALSO CONDUCTED INDEPENDENT RESEARCH ON HYDRAULIC FRACTURING TECHNOLOGIES AND POTENTIAL RELATIONSHIPS TO UNDERGROUND SOURCES OF DRINKING WATER. THIS WEALTH OF

EXPERIENCE MAKES HALLIBURTON PARTICULARLY WELL QUALIFIED TO COMMENT ON EPA'S PROPOSED STUDY OF HYDRAULIC FRACTURING.

HALLIBURTON STRONGLY SUPPORTS THE STATEMENTS MADE IN THE SCOPING MATERIALS THAT EPA PLANS TO USE A TRANSPARENT, PEER-REVIEWED PROCESS TO CONDUCT ITS PROPOSED STUDY AND THAT IT INTENDS TO PROVIDE FOR EXTENSIVE STAKEHOLDER INVOLVEMENT. UNFORTUNATELY, HALLIBURTON AND OTHER INTERESTED STAKEHOLDERS HAVE NOT HAD AN ADEQUATE OPPORTUNITY TO FULLY REVIEW THE SCOPING MATERIALS, WHICH WERE RELEASED BY EPA ONLY SHORTLY BEFORE THE DEADLINE FOR COMMENTS AND THIS MEETING. WE GREATLY LOOK FORWARD TO WORKING WITH THE AGENCY AS IT MOVES FORWARD ON THIS IMPORTANT PROJECT.

IN ESSENCE, THE SCOPING MATERIALS ARE QUITE DETAILED, AND EVEN AT THIS EARLY STAGE, RAISE A NUMBER OF SIGNIFICANT ISSUES CONCERNING THE AGENCY'S PROPOSED APPROACH TO THE STUDY. THESE ISSUES INCLUDE: (1) THE SCOPE OF THE PROPOSED STUDY, (2) THE USE OF PRIOR STUDIES, AND (3) THE CONSIDERATION OF STATE PROGRAMS AND INDUSTRY PRACTICES.

FIRST, HALLIBURTON BELIEVES THAT THE SCOPE OF THE STUDY AS OUTLINED IN THE SCOPING MATERIALS SIGNIFICANTLY EXCEEDS EPA'S MANDATE. AS YOU ARE AWARE, CONGRESS HAS DIRECTED THE AGENCY TO CONDUCT A STUDY OF THE RELATIONSHIP SPECIFICALLY BETWEEN HYDRAULIC FRACTURING AND DRINKING WATER. HOWEVER, THE SCOPING MATERIALS HAVE SUGGESTED THAT THE AGENCY HAS IDENTIFIED ISSUES AND POTENTIAL RESEARCH QUESTIONS THAT GO WELL BEYOND JUST THE IMPACTS TO DRINKING WATER, AND IN SOME CASES, HAVE RAISED POINTS THAT ARE NOT EVEN RELATED TO HYDRAULIC FRACTURING OPERATIONS.

FOR EXAMPLE, EPA STATES THAT THE “PRIMARY OBJECTIVE OF THE STUDY IS TO EVALUATE THE POTENTIAL FOR HF ACTIVITIES TO IMPACT SURFACE AND/OR UNDERGROUND SOURCES OF DRINKING WATER AND IMPOSE PUBLIC HEALTH OR ENVIRONMENTAL RISKS.” EPA GOES ON TO SAY THAT IN THE INITIAL SCOPING OF THE STUDY “POTENTIAL IMPACTS ON OTHER WATER RESOURCE FUNCTIONS, SUCH AS SUPPORTING AQUATIC ECOSYSTEMS AND RECREATIONAL ACTIVITIES, WILL ALSO BE CONSIDERED.” THESE CHANGES SUGGEST A STUDY FAR BROADER THAN ORIGINALLY AUTHORIZED OR INTENDED BY CONGRESS. (IN FACT, THE CONGRESSIONAL MANDATE TO STUDY THE RELATIONSHIP BETWEEN HYDRAULIC FRACTURING AND DRINKING WATER CLEARLY INDICATES THAT THE FOCUS OF THE STUDY SHOULD BE ON HUMAN HEALTH.) EXPANDING THE SCOPE OF THE STUDY AS PROPOSED WILL PROLONG THE STUDY AND NOT CONTRIBUTE TO ADDRESSING THE CENTRAL ISSUE AS DEFINED BY CONGRESS. CONSEQUENTLY, HALLIBURTON BELIEVES THAT EPA SHOULD RECONSIDER THE PROPOSED SCOPE OF ITS STUDY AND MORE CLOSELY FOLLOW THE MANDATE IMPOSED BY CONGRESS

SECOND, WHILE THE SCOPING MATERIALS MAKE REFERENCE TO “COMPILING BACKGROUND DATA AND INFORMATION” TO “INFORM THE EPA STUDY,” IT APPEARS THAT IN CONDUCTING ITS STUDY EPA INTENDS TO GO BACK INSTEAD TO “SQUARE ONE,” AND BEGIN “TO REINVENT THE WHEEL” WITH RESPECT TO HYDRAULIC FRACTURING RESEARCH. HOWEVER, GIVEN ITS LONG HISTORY OF USE, THE HYDRAULIC FRACTURING PROCESS IS WELL UNDERSTOOD AND HAS ALREADY BEEN EXTENSIVELY STUDIED; HALLIBURTON SUBMITS THAT THIS PRIOR INFORMATION IS QUITE VALUABLE AND SHOULD BE USED AS A BASIS FOR ANY FURTHER WORK ON THE POTENTIAL RELATIONSHIPS BETWEEN HYDRAULIC FRACTURING AND DRINKING WATER SOURCES.

NUMEROUS HIGHLY-REGARDED STUDIES OF HYDRAULIC FRACTURING HAVE BEEN UNDERTAKEN THROUGH THE YEARS. FOR EXAMPLE, EPA ITSELF HAS PREVIOUSLY CONDUCTED ITS

OWN COMPREHENSIVE, PEER-REVIEWED STUDY REGARDING THE POTENTIAL IMPACTS OF HYDRAULIC FRACTURING OF COALBED METHANE WELLS ON UNDERGROUND SOURCES OF DRINKING WATER IN WHICH THE AGENCY CONCLUDED THAT THESE FRACTURING OPERATIONS POSE LITTLE OR NO THREAT TO UNDERGROUND SOURCES OF DRINKING WATER. SINCE THAT TIME, ANOTHER SIGNIFICANT ANALYSIS HAS BEEN UNDERTAKEN BY ICF INTERNATIONAL FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH CONCLUDED THAT HYDRAULIC FRACTURING OF SHALE “DOES NOT PRESENT A REASONABLY FORESEEABLE RISK OF SIGNIFICANT ADVERSE IMPACTS TO POTENTIAL FRESHWATER AQUIFERS.” AT THE SAME TIME, STATE REGULATORS AND KEY ORGANIZATIONS SUCH AS THE GROUND WATER PROTECTION COUNCIL AND THE INTERSTATE OIL AND GAS COMPACT COMMISSION HAVE INVESTIGATED PARTICULAR ALLEGATIONS OF IMPACTS TO DRINKING WATER AS A RESULT OF HYDRAULIC FRACTURING AND HAVE CONTINUALLY REAFFIRMED THAT THERE ARE NO CONFIRMED INSTANCES ANYWHERE IN THE COUNTRY OF HYDRAULIC FRACTURING CAUSING CONTAMINATION OF DRINKING WATER AQUIFERS.

ACCORDINGLY, ANY NEW STUDY SHOULD CAREFULLY CONSIDER EXISTING KNOWLEDGE AND RESEARCH DURING ALL STUDY STAGES, INCLUDING STUDY DESIGN AND DATA GAP ANALYSIS. UTILIZING EXISTING KNOWLEDGE AND RESEARCH WILL CONSERVE VALUABLE PUBLIC AND PRIVATE RESOURCES WHILE ALLOWING THE STUDY TO CONCENTRATE RESOURCES ON QUESTIONS REQUIRING ADDITIONAL RESEARCH.

THIRD, WE BELIEVE THAT IT IS FUNDAMENTALLY IMPORTANT TO KEEP IN MIND THE NEED TO EVALUATE RISKS IN UNDERTAKING THIS STUDY – THIS INCLUDES A PROPER CONSIDERATION OF EXPOSURE PATHWAYS.

IN MAKING ANY ASSESSMENT REGARDING THE RISKS TO DRINKING WATER ASSOCIATED WITH HYDRAULIC FRACTURING OPERATIONS, EPA SHOULD FULLY TAKE INTO

ACCOUNT EXISTING REGULATORY PROGRAMS AND STANDARD INDUSTRY PRACTICES AS THEY RELATE TO HYDRAULIC FRACTURING. THE STATES HAVE BEEN REGULATING HYDRAULIC FRACTURING OPERATIONS AS PART OF THEIR OIL AND GAS REGULATORY PROGRAMS FOR MANY YEARS, AND THESE PROGRAMS HAVE BEEN VERY EFFECTIVE. HYDRAULIC FRACTURING OPERATIONS ARE UNDERTAKEN IN WELLS CONSTRUCTED PURSUANT TO LONGSTANDING INDUSTRY PRACTICES THAT CONFORM TO THESE REGULATORY PROGRAMS AND THAT ARE SPECIFICALLY DESIGNED TO PROTECT WATER RESOURCES. THESE PRACTICES EFFECTIVELY PRECLUDE THE MATERIALS IN THE WELLBORE FROM COMING INTO CONTACT WITH DRINKING WATER SOURCES. EPA'S STUDY SHOULD INCLUDE CAREFUL CONSIDERATION OF THESE PROGRAMS AND PRACTICES BECAUSE THEY ARE CRITICAL TO ASSESSING THE POTENTIAL FOR ANY COMPLETED EXPOSURE PATHWAY INVOLVING DRINKING WATER.

WHILE RECOGNIZING THESE SIGNIFICANT ISSUES, HALLIBURTON SUPPORTS EPA'S GOAL OF CONDUCTING THE PROPOSED STUDY IN A TRANSPARENT, SCIENTIFIC MANNER. AS DIRECTED BY CONGRESS, EPA'S STUDY MUST RELY "ON THE BEST AVAILABLE SCIENCE" AND "BE CONDUCTED THROUGH A TRANSPARENT, PEER-REVIEWED PROCESS." BY INCORPORATING RIGOROUS RISK ASSESSMENT, TRANSPARENCY, QUALITY ASSURANCE, AND PEER REVIEW PRINCIPLES, EPA WILL ENSURE THAT THE PROPOSED STUDY REACHES VALID SCIENTIFIC CONCLUSIONS. THE PROPOSED STUDY SHOULD ALSO INVOLVE STAKEHOLDERS AT ALL STAGES. ROBUST STAKEHOLDER INVOLVEMENT WILL ENHANCE THE STUDY'S LEGITIMACY, ADD VALUABLE TECHNICAL AND REGULATORY EXPERTISE AND IMPROVE THE OVERALL QUALITY OF THE SCIENTIFIC PROCESS.

HALLIBURTON IS ENCOURAGED BY EPA'S STATEMENT THAT THE SCOPING MATERIALS REPRESENT MERELY THE FIRST STEP IN THE PROCESS OF DESIGNING THE STUDY AND

LOOKS FORWARD TO CONTINUED INVOLVEMENT IN THE STUDY DESIGN PROCESS. THANK YOU
AGAIN FOR THE OPPORTUNITY TO PRESENT THESE COMMENTS.