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| **SECTION 1: GENERAL INFORMATION AND DISCLAIMER** | | **PROJECT NUMBER:** | **15-309** |
| PROJECT NAME: | **Jewett Brook Watershed Tile Drainage Study** | **CLIENT NAME:** | **Lake Champlain Basin Program** |
| PROJECT MANAGER: | **Julie Moore** | **SITE SAFETY OFFICER** | **Dave Braun** |
| PREPARED BY: | **Dan Curran** | **DATE:** | **07/11/2016** |
| NOTE: This site specific Health and Safety Plan - Short Form (HASP-SF) has been prepared for use by **Stone Environmental, Inc. (Stone)** employees for work at this site / facility. **The HASP-SF has been written for the specific site / facility conditions, purposes, tasks, dates and personnel specified, and must be amended and reviewed by those personnel named in Section 4 if these conditions change.**  Stone Environmental, Inc., is not responsible for its use by others.  Subcontractors shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations. In accordance with 1910.120(b)(1)(iv) and (v), Stone Environmental, Inc. will inform subcontractors of the site / facility emergency response procedures, and any potential fire, explosion, health, safety or other hazards by making this Site Specific Health and Safety Plan and site information obtained by others available during regular business hours. All contractors and subcontractors are responsible for: (1) developing their own Health and Safety Plan, including a written Hazard Communication Program and any other written hazard specific or safety programs required by federal, state and local laws and regulations, that details subcontractor tasks, potential or actual hazards identified as a result of a risk analysis of those tasks, and the engineering controls, work practices and personal protective equipment to be utilized to minimize or eliminate employee exposure to the hazard; (2) providing their own personal protective equipment; (3) providing documentation that their employees have been health and safety trained in accordance with applicable federal, state and local laws and regulations; (4) providing evidence of medical surveillance and medical approvals for their employees; and (5) designating their own site safety officer responsible for ensuring that their employees comply with their own Health and Safety plan and taking any other additional measures required by their site activities.  Providing a copy of this Stone Environmental, Inc. HASP-SF to subcontractors, does not establish, nor is it intended to establish a "joint employer" relationship between the Contractor and Stone Environmental, Inc. This allowance does not establish, nor is it intended to establish, a direct or indirect employer/employee relationship with subcontractor's employees.  In addition, if any site has a HASP, prepared by another contractor then that document should be made available to Stone Staff. | | | |

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| **SECTION 2: EMERGENCY INFORMATION** | | | | | |
| **(A)** **LOCAL RESOURCES** | | **SERVICE NAME AND ADDRESS,** | | **TELEPHONE NUMBER (nonemergency and emergency)** | |
| EMERGENCY MEDICAL SERVICES | | **Northwestern Medical Center** | | **911/ 802-524-5911** | |
| HOSPITAL (Map attached) | | **Northwestern Medical Center** | | **911/ 802-524-5911** | |
| FIRE DEPARTMENT | | **St. Albans City Fire Department** | | **911/ 802-524-2132** | |
| POLICE / SECURITY | | **St. Albans Police Department** | | **911/ 802-524-2166** | |
| HAZMAT/ SPILL / OTHER RESPONSE | | **VT HAZMAT Response Team** | | **911 / 800-641-5005** | |
| **(B) CORPORATE RESOURCES STONE ENVIRONMENTAL, INC. INCIDENT TELEPHONE NUMBERS** | | | | | |
|  | | | | |  |
| **MAIN LINE NUMBER (802) 229-4541** | |  | **OFFICE** | | **CELL PHONE** |
| CORPORATE HEALTH & SAFETY | **Kim Watson** | | (802) 229-2196 | | (802) 249-7753 |
| PROJECT OFFICER | **Seth Pitkin** | | (802) 229-2192 | | (802) 249-8700 |
| PROJECT MANAGER | **Julie Moore** | | (802) 229-1881 | | (802) 279-5323 |
| SITE SAFETY OFFICER | **Dave Braun** | | (802) 229-5379 | | (802) 272-8819 |

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| **SECTION 3: PROJECT INFORMATION**  **(A) SITE / FACILITY INFORMATION:** | | | | | | | | | | | | |
| SITE NAME: | | **Jewett Brook Watershed** | | | | | SITE CLIENT CONTACT: | | | **Various** | | |
| ADDRESS | | **Farms within the Jewett Brook Watershed** | | | | | PHONE NUMBER: | | | **Various** | | |
| TOWNSHIP/ COUNTY: | | **St. Albans Town/ Franklin County** | | | | | SITE SAFETY CONTACT: | | | **Dave Braun** | | |
| STATE | | **Vermont** | | | | |  | | |  | | |
| CLIENT TYPE | |  | FEDERAL |  | STATE | |  | MUNICIPAL / REGIONAL | | |  | PRIVATE |
| **(B) SITE / FACILITY TYPE:** | | | | | | | | | | | | |
|  | HAZARDOUS (RCRA) | | | | | UST / LUST | | | WTP / WWTP | | | |
|  | HAZARDOUS (CERCLA / Superfund) | | | | | BROWNFIELD | | | FIFRA | | | |
|  | CONSTRUCTION | | | | | CHEMICAL PLANT | | | STATE \_\_\_\_\_\_\_\_\_ (describe) | | | |
|  | LANDFILL (NON-HAZARDOUS) | | | | | REFINERY | | | OTHER: **Private Farm Fields** | | | |
|  | ACTIVE | | | | | INACTIVE | | |  | | | |

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| **(C) INVESTIGATION TYPE:** | | | | | |
|  | HAZARDOUS WASTE | | SOLID WASTE | WASTE WATER | |
|  | HYDROGEOLOGY | | ENVIRONMENTAL | WASTE STREAM | |
|  | WASTE WATER | | AUDIT | AIR/ODOR |  |
|  | PRE-JOB VISIT | | CONSTRUCTION | SEDIMENT |  |
|  | (SUB) CONTRACTOR OVERSIGHT | | LANDFILL | SURFACE SOIL |  |
|  | CONSTRUCTION MGMT | | AIR | OTHER |  |
|  | INSPECTION | | SURFACE WATER | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  |
|  | INVESTIGATION SURVEY | | GROUND WATER |  |  |
| DATE(S) OF FIELD ACTIVITIES: | | **September 2016- September 2017** | | | |

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| **(D)** **FIELD TASKS**  STONE ENVIRONMENTAL TASKS (List field tasks to be performed by Stone Environmental, Inc. staff) | | |
|  | **S1** | **Travel to sites in St. Albans** |
|  | **S2** | **Construction/ installation of sampling stations.** |
|  | **S3** | **Perform routine maintenance of sampling stations including: minor sampler troubleshooting, shelter improvements, restocking shelter with necessary materials.** |
|  | **S4** | **Performing weekly sampling when the monitored tile drain is flowing.** |
|  | **S5** | **Bring samples to courier drop off or personally deliver samples to the State of Vermont Agriculture and Environment Lab.** |
|  | **S6** | **Demobilization back to Montpelier.** |
| TASKS PERFORMED BY OTHERS (List field tasks to be performed by client, subcontractors, or contractors) | | |
|  | **O1** |  |
|  | **O2** |  |

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| **SECTION 4: PROJECT SAFETY ORGANIZATION, HEALTH AND SAFETY TRAINING, AND MEDICAL MONITORING**  **(A) PROJECT HEALTH AND SAFETY ROLES, RESPONSIBILITIES AND COORDINATION** | | |
| PROJECT OFFICER:  **Chris Stone** | The Project Officer (PO) is ultimately responsible for project performance. The PO seeks and gets appropriate approvals for risk management decisions (e.g. Legal Counsel, Corporate Health and Safety, Other On-Site HASPs), and selects an effective and qualified project team. The PO supports the Project Manager with appropriate resources. The Project Officer is the chief liaison with the client and will coordinate Stone Environmental, Inc Project Managers and Resources to respond to the client’s needs. | |
| PROJECT MANAGER:  **Julie Moore** | The Project Manager (PM) has the responsibility for executing the project in accordance with the scope of work and good engineering practice. The PM will supervise the allocation of resources and staff to implement specific aspects of this HASP-SF and may delegate authority to expedite and facilitate any application of the program. The PM implements and executes an effective program of site-specific personnel protection and accident prevention. The Project Manager reports to the Program Manager. | |
| CORPORATE HEALTH & SAFETY:  **Kim Watson** | Corporate Health and Safety Officer is responsible for Stone Environmental, Inc.’s overall Health and Safety Program and provides project guidance on air monitoring methodology, data interpretation and assistance in determining appropriate project engineering controls, work practices, and personal protective equipment. Corporate Health and Safety also reviews and approve HASPs in accordance with Section 1. | |
| SITE SAFETY OFFICER:  **Dave Braun** ALTERNATE SITE SAFETY OFFICER (S):  **Dan Curran**  **Holly Abercrombie** | The Site Safety Officer (SSO) is responsible for interpreting and implementing the site health and safety provisions set out in this HASP-SF, and will guide the efforts of field team personnel in their day-to-day compliance with this HASP-SF. The SSO has the ability and authority to make necessary changes or additions to this HASP-SF and provide technical assistance to field team personnel on problems relating to worksite safety. The SSO has the authority to correct safety-related deficiencies in materials or practice and to call a Project STOP in the most serious cases.  Alternate Site Safety Officer (ASSO) is assigned all duties and responsibilities of the Site Safety Officer in his/her absence. | |
| FIELD TEAM PERSONNEL:  **Dan Curran**  **Holly Abercrombie**  **Dave Braun** | Field personnel have the following health and safety responsibilities:   * Implement the procedures set forth in the HASP-SF; * Take all reasonable precautions to prevent injury to themselves and their fellow employees; and * Perform only those tasks that they believe they can do safely, and immediately report any accidents and/or unsafe conditions in accordance with Section 1. | |
| PROJECT TEAM - The above Stone Environmental, Inc. personnel are designated to carry out the stated project job functions on site. THE SITE SAFETY OFFICER OR A DESIGNATED ALTERNATE WILL BE ON-SITE DURING **ALL** SITE ACTIVITIES. (NOTE: One person may carry out more than one job function.) | | | |
| The following subcontractor(s) and governmental agencies have been informed by Stone Environmental, Inc. of emergency response procedures, and any potential fire, explosion, health, safety or other hazards of the site / facility by making this Site Specific Health and Safety Plan and site information obtained by others available during regular business hours. Subcontractors and governmental agencies shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations as described in **Section 1** of this plan. | | | |
| SUBCONTRACTOR: Friends of Northern Lake Champlain | | | FEDERAL AND STATE AGENCY REPS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| OTHER AGENCY REPS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |  |

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| **(B) HEALTH AND SAFETY TRAINING, MEDICAL MONITORING, AND FIT TESTING PROGRAM** | | | | | |
| The following project staff members are included in the Stone Environmental, Inc. Health and Safety Training and Medical Monitoring programs. The details of these programs can be found in the Health and Safety Policies and Written Programs. | | | | | |
|  | **HAZWOPER TRAINING** | | **MEDICAL MONITORING** | | |
| NAME | INITIAL  40HR (DATE) | 8HR  (DATE) | | MEDICAL  (DATE) | FIT TEST (DATE) |
| **Dave Braun** | **9/22/1998** | **1/8/2016** | | **NA** | **111/9/2016** |
| **Dan Curran** | **1/7/2016** | **NA** | | **1/7/2016** | **NA** |
| **Holly Abercrombie** | **NA** | **NA** | | **NA** | **NA** |
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| **SECTION 5: HAZARD ANALYSIS**  **(A) ACTUAL OR POTENTIAL PHYSICAL HAZARDS** – (Check all that apply to Stone Environmental, Inc. activities) | | | | | | | |
|  | ANIMALS / PLANTS /DEER TICKS/SNAKES |  | ELECTRICAL |  | HUNTING SEASON |  | POWERED PLATFORMS |
|  | ASBESTOS / LEAD |  | EXCAVATIONS  (See Section 13) |  | IMMERSION |  | POOR VISIBILITY |
|  | CHEMICAL EXPOSURE (See Section 5B/5C) |  | EXTREME COLD (See Section 10) |  | IONIZING RADIATION |  | ROLLING OBJECTS |
|  | CONFINED SPACE (See section 5b/5c) |  | FALL >6’ VERTICAL |  | LIGHT RADIATION (i.e., Welding, High Intensity) |  | SCAFFOLDING |
|  | DEMOLITION |  | FALLING OBJECTS |  | LIMITED CONTACT |  | SHARP OBJECTS |
|  | DRILLING |  | HEAT STRESS |  | MOVING PARTS (LO / TO) |  | TRAFFIC (STRUCK BY) |
|  | DRUM HANDLING |  | HEAVY EQUIPMT |  | NOISE (> 85 dB) |  | STEEP / UNEVEN TERRAIN |
|  | DUST, HARMFUL |  | HEAVY LIFTING |  | NON-IONIZING RADIATION |  | OTHER: |
|  | DUST, NUISANCE |  | HOT WORK |  | OVERHEAD OBJECTS |  |
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| **(B) PRESENCE OF HAZARDOUS MATERIALS STORED OR USED ON SITE – If active.** | | | | | | CURRENTLY | | FORMERLY | | |
| TYPE | | | | | | YES | YES | | | NO |
|  | EXPLOSIVES |  | FLAMMABLE/  COMBUSTIBLE LIQUIDS |  | OXDIZERS | |  | | CORROSIVE | |
|  | COMPRESSED GASES |  | FLAMMABLE/  REACTIVE SOLIDS |  | TOXIC/INFECTIOUS | |  | | MISCELLANEOUS | |
|  |  |  |  |  | RADIOACTIVE | |  | | HAZARDOUS WASTE (STORED) | |

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| (C) **CHEMICAL HAZARDS OF CONTAMINANTS INFORMATION** | | | | | |
| 1. IDENTIFIED CONTAMINANTS - Known or suspected hazardous/toxic materials (**attach historical information, physical description, map of contamination and tabulated data, if available)** | | | | | |
| Characteristics: CA (corrosive, acid), CC (corrosive, caustic), IG (ignitable), RA (radioactive), VO (volatile), TO (toxic), RE (reactive), BIO  (infectious), UN (unknown), OT (other, describe)  Media types: GW (ground water), SW (surface water), WW (wastewater), AIR (air), SG (soil, gas), SL (soil), SD (sediment), WL (waste, liquid), WS (waste, solid), WD (waste, sludge), WG (waste, gas), OT (other, describe). | | | | | |
| SUBSTANCES INVOLVED | CHARACTERISTICS | MEDIA | ESTIMATED CONCENTRATIONS | LOWEST PEL or TLV | |
| Concentration | Units |
| **Sulfuric Acid as sample preservative** | **CA** | **Sample Container** | **H4SO4 to pH<2 (preservative)** | **1** | mg/m3 |
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| 1. DESCRIBE POTENTIAL FOR CONTACT WITH EACH MEDIA TYPE FOR EACH OF THE MPI TASKS LISTED IN SEC 3 (E): | | | |
| MPI TASK | ROUTE OF EXPOSURE  (INHAL/INGEST/CONTACT/ABSORB) | POTENTIAL FOR CONTACT  (HIGH / MEDIUM / LOW) | METHOD OF CONTROL |
| **S1** | **None** | **None** | **NA** |
| **S2** | **None** | **None** | **NA** |
| **S3** | **Ingest/ Contact** | **Low** | **Be aware of presence of sulfuric acid as preservative in total nitrogen sample containers. If there is contact flush area with copious amounts of water.** |
| **S4** | **Ingest/ Contact** | **Low** | **Be aware of presence of sulfuric acid as preservative in total nitrogen sample containers. If there is contact flush area with copious amounts of water.** |
| **S5** | **None** | **None** | **NA** |
| **S6** | **None** | **None** | **Na** |
| The Site Safety Officer will brief the field team on symptoms and signs of overexposure to chemical hazards | | | |
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| **SECTION 6: SITE CONTROL MEASURES** | |
| **(A)** | **WORK ZONES – EXCAVATIONS, DRILLING OPERATIONS AND HEAVY EQUIPMENT**  Julie Moore and/ or Dave Braun has been designated to coordinate access control and security for operations on site. |
| **(B)** | **WORK ZONES – CONTAMINATION**  The prevailing wind conditions are NA. A wind direction indicator is used to determine daily wind direction. The Command Post is located from the Exclusion Zone or at sufficient distance to prevent exposure should a release occur. Control boundaries are identified by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  **NO UNAUTHORIZED PERSON SHOULD BE WITHIN THIS AREA** |

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| **SECTION 7: SAFETY PROCEDURES/EQUIPMENT REQUIRED** | | | | | | |
|  | | Identify all procedures and equipment needed to eliminate or minimize exposure to hazards identified in Section 5. | | | | |
|  | AIR MONITORING EQUIPMENT  (Note type in see Section 9) | |  | FIRST AIDKIT |  | EMERGENCY AIR HORN |
|  | BARRIER TAPE | |  | FLOTATION DEVICE (USCG) |  | PPE – PHYSICAL HAZARDS  (see section 15) |
|  | COMMUNICATIONS - ONSITE | |  | GFCI EXTENSION CORDS |  | RESPIRATORY PROTECTION PROGRAM & EQUIPMENT (APR) (see Section 15) |
|  | COMMUNICATIONS – OFFSITE  (i.e. cell/digital phones if no other means) | |  | HARNESS(S) / LIFELINE(S) |  | TRAFFIC CONES |
|  | CONFINED SPACE PROGRAM & EQUIP (see Section 12) | |  | INSECT/TICK REPELLENT  Due to the increase in Deer Ticks and Lyme Disease in VT/ Tick checks should be performed after every trip to the field. |  | MSDS (Site Specific-Attach) |
|  | VENTILATION EQUIPMENT | |  | SAFETY VESTS |  | MSDS (Stone Environmental –on file at Stone) |
|  | EMERGENCY SHOWERS | |  | SAFETY HARNESS - LADDER(S) |  |  |
|  | EYE WASH | |  | LIGHTIING – HANDHELD |  | LONE WORKER: Check In protocol: call/text\_\_\_\_\_\_\_\_\_\_ |
|  | FALL PROTECTION PROGRAM & EQUIPMENT | |  | LIGHTING – FIXED EMERGENCY | OTHER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | FIRE EXTINGUISHER(S) - ABC | |  | LOCKOUT/TAGOUT PROGRAM & EQUIPMENT |

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| **SECTION 8: COMMUNICATIONS AND SAFE WORK PRACTICE** | | | | |
| **(A) COMMUNICATIONS - ONSITE** | | | | |
| Whenever possible, communications between site personnel should be face-to-face. When verbal communications is not possible, radio communications shall be established.  In case of radio communications failure, or when respiratory protection is in use, the following hand signals will be used: | | | | |
| OK; I AM ALL RIGHT; I UNDERSTAND | = THUMBS UP | | | |
| NO; NEGATIVE | = THUMBS DOWN | | | |
| NEED ASSISTANCE | = BOTH HANDS ON TOP OF HEAD | | | |
| DANGER - NEED TO LEAVE AREA, NO QUESTIONS | = GRIP PARTNERS WRIST WITH BOTH HANDS | | | |
| HAVING DIFFICULTY BREATHING | = HANDS TO THROAT | | | |
| **(B) COMMUNICATIONS – OFF SITE** | | | | |
| If applicable, telephone communication to the Home Office should be established as soon as practical. | | | | |
| Telephone numbers that can be used to reach the command post are: | | **(802) 229-4541** | and | **(800) 959-9987** |

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| **(C) SAFE WORK PRACTICES** | |
| 1. | LONE WORKER: MUST ENSURE THAT SOMEONE KNOWS WHERE YOU ARE AND WHEN YOU ARE EXPECTED HOME. MUST HAVE MOBILE PHONE ACCESS AT ALL TIMES AND CONTACT SAFETY OFFICER OR DESIGNEE WHEN YOU ARE HOME SAFE (BY TEXTING OR CALLING). |
| 2. | A "BUDDY SYSTEM" IN WHICH ANOTHER WORKER IS CLOSE ENOUGH TO RENDER IMMEDIATE AID WILL BE IN EFFECT. CLIENTS AND/OR CONTRACTORS MAY SERVE AS A "DESIGNATED BUDDY." |
| 3. | WHERE THE EYES OR BODY MAY BE EXPOSED TO CORROSIVE MATERIALS, SUITABLE FACILITIES FOR QUICK DRENCHING OR FLUSHING SHALL BE AVAILABLE FOR IMMEDIATE USE (SEE SECTION 7). |
| 4. | IF DRILLING EQUIPMENT IS INVOLVED, HAVE A CURRENT UTILITY SURVEY, AND KNOW WHERE THE 'KILL SWITCH' IS. |
| 5. | CONTACT WITH SAMPLES, EXCAVATED MATERIALS, OR OTHER CONTAMINATED MATERIALS MUST BE MINIMIZED. |
| 6. | ALL ELECTRICAL EQUIPMENT USED IN OUTSIDE LOCATIONS, WET AREAS OR NEAR WATER MUST BE PLUGGED INTO GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTED OUTLETS (SEE SECTION 7). |
| 7. | IN THE EVENT OF TREACHEROUS WEATHER‑RELATED WORKING CONDITIONS (I.E., THUNDERSTORM, LIMITED VISIBILITY, EXTREME COLD OR HEAT) FIELD TASKS WILL BE SUSPENDED UNTIL CONDITIONS IMPROVE OR APPROPRIATE PROTECTION FROM THE ELEMENTS IS PROVIDED. |
| 8. | SMOKING, EATING, CHEWING GUM OR TOBACCO, OR DRINKING ARE FORBIDDEN EXCEPT IN CLEAN OR DESIGNATED AREAS. |
| 9. | USE OF CONTACT LENSES NEAR CHEMICALS OR DURING USE OF RESPIRATORY PROTECTION IS PROHIBITED AT ALL TIMES. |
| 10. | GOOD HOUSEKEEPING PRACTICES ARE TO BE MAINTAINED. |
| 11. | SITE / FACILITY SPECIFIC SAFE WORK PRACTICES: (example, hard hat, steel toe work shoes; protective eyewear) |
| 12. | FOLLOW ALL SITE / FACILITY H&S REQUIREMENTS-PROTECTIVE EYEWEAR AT ALL TIMES. |

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| **SECTION 9: ENVIRONMENTAL MONITORING** | | | | | | | | | | THIS SECTION IS NOT APPLICABLE TO SITE ACTIVITIES | |
| 1. The following environmental monitoring instruments shall be used on site at the specified intervals and recorded in the site logbook.   (NOTE: If monitoring period is "OTHER", monitoring schedule will be attached to this plan.) Note Action limit for upgrade or stop work. | | | | | | | | | | | |
| EQUIPMENT | | | | | | | | MONITORING PERIOD | | | ACTION LEVEL |
| Combustible Gas Indicator | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| O2 Meter | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| Toxics: | | CO | | | | H2S | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
|  | Other: |  | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| PID (Lamp | | |  | eV) | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| FID | | | | | | | |  | | | |
| Colorimetric tubes: | | | | | | | |  | | | |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| Radiation: | | alpha | | | beta | | gamma | **x Day**   Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| Respirable Dust Meter | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| Noise Meter | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | | | Continuous  Hourly     x Day  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | |
| 1. Monitoring equipment is calibrated according to manufacturers' instructions. Record calibration data and air concentrations in the Health and Safety on-site log book. | | | | | | | | | | | |
| **(C)** Recommended Action Levels for Upgrade or Downgrade of Respiratory Protection, or Site Shutdown and Evacuation. These are average values. Consideration should be given to the potential for release of highly toxic compounds from the waste or from reaction by-products. Levels are for persistent (> 10 min) breathing zone measurements in non-confined spaces. **For** **unexpected conditions, stop all work and contact Corporate Health and Safety.** | | | | | | | | | | | |
| Oxygen Levels | | | | | | | | |  | | |
| Less than 19.5%  19.5% to 23.5%  Greater than 23.5% | | | | | | | | | Level B necessary for work to start / continue. Consider toxicity potential.  Work may start / continue. Investigate changes. Continuous monitoring.  PROHIBITED WORK CONDITION | | |
| Flammability / Explosive Hazards  Less than 10% of LEL  10% to 25% of LEL  Greater than 25% of LEL | | | | | | | | |  | | |
|  | | | | | | | | | Work may start / continue. Consider toxicity potential.  Work may start / continue. Continuous monitoring.  PROHIBITED WORK CONDITION. | | |
| Uncharacterized Airborne Organic Vapors or Gases  Background\* | | | | | | | | | **See Section 9 A for actual action levels** | | |
|  | | | | | | | | | Work may start / continue. Continue to monitor conditions. | | |
| Up to 5 meter units (m.u. or "ppm") above background | | | | | | | | | Level C necessary for work to start / continue. Continuous monitoring. Use  Colorimetric tubes to characterize vapors. | | |
| Up to 50 m.u. above background | | | | | | | | | Level B necessary for work to start / continue. Continuous monitoring. | | |
| Greater than 50 m.u.  **\* Off-site clean air measurement** | | | | | | | | | PROHIBITED WORK CONDITION. | | |
| Characterized Airborne Organic Vapors or Gases\*\* | | | | | | | | | **See Section 9 A for actual action levels** | | |
| Up to 50% of TLV, or PEL or REL >51% see next level.  Up to 25 times the TLV, or PEL or REL  Up to 500 times the TLV, or PEL or REL  Greater than 500 times the TLV, or PEL or REL | | | | | | | | | Work may start / continue. Continue to monitor conditions.  Level C necessary for work to start / continue. Continuous monitoring.  Level B necessary for work to start / continue. Continuous monitoring.  PROHIBITED WORK CONDITION. | | |
| \*\* **Use mixture calculations (% allowed = CNELN) if more than one contaminant is present.** | | | | | | | | | | | |
| Radiation | | | | | | | | |  | | |
| Less than 0.5 mR/Hour (500 µR)  Up to 1 mR/Hour above background  Greater than 1 mR/Hour above background | | | | | | | | | Work may start / continue. Continue to monitor conditions.  Work may start / continue with Radiation Safety Officer present on site.  PROHIBITED WORK CONDITION. | | |

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| **SECTION 10: PERSONAL MONITORING** | THIS SECTION IS NOT APPLICABLE TO SITE ACTIVITIES |
| **(A) PERSONAL EXPOSURE SAMPLING** (Consider if high levels of noise or high concentrations of lead, mercury or arsenic are present) | |
| The following personal monitoring will be in effect on site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| A copy of personal monitoring results is to be sent to Corporate Health and Safety for inclusion in the Employee's Confidential Exposure Record File. | |
| (B) HEAT / COLD STRESS MONITORING | |
| The expected air temperature range will be \_\_\_\_\_\_\_ºF. If it is determined that heat stress or cold stress monitoring is required (mandatory for heavy exertion in PPE at temperatures over 70ºF, or at temperatures under 40ºF or wind chill equivalent), the following procedures shall be followed (describe procedures in effect, for heat stress i.e., monitoring body temperature, body weight, pulse rate; for cold stress i.e., appropriate clothing, shelter breaks): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
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| **SECTION 11: HAZARD COMMUNICATION PROGRAM** | | THIS SECTION IS NOT APPLICABLE TO SITE ACTIVITIES |
| If chemicals are introduced to the site by Stone Environmental, Inc. (e.g., decontamination liquids, preservatives, etc.), a copy of the Stone Environmental, Inc. Hazard Communication Program and Safety Data Sheets (SDSs) of chemicals introduced by Stone Environmental, Inc. to the site is provided in the mobile facilities. The Site Safety Officer will review this information with all field personnel prior to the start of the project, and will inform other employers (e.g., Owner, Contractor and Subcontractors) the availability and location of this information. The Comprehensive List of Chemicals introduced by Stone Environmental, Inc. to this site is: | | |
|  |  | |
|  |  | |
| All chemicals being introduced to the site, hazardous/potentially hazardous samples prepared at the site, and/or any hazardous materials previously sent to the site, that will be stored at the site or will be transported from the site by common carrier, will be packaged, labeled and identified as hazardous materials in accordance with U.S. Department of Transportation (DOT) and/or International Air Transport Association (IATA) regulations by a trained HazMat employee. *(NOTE: At multi-employer sites, the Site Safety Officer will obtain information, if applicable, on hazardous chemicals other employers may produce or introduce to the job site to which Stone Environmental, Inc. employees may be exposed, including the location of their written hazard communication program(s), labeling program(s), and Material Safety Data Sheet(s).* | | |

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| **SECTION 12: CONFINED SPACE ENTRY** | THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES |
| If a permit-required confined space entry will be made on site, a copy of the Stone Environmental, Inc. Confined Space Entry Program, and a completed Stone Environmental, Inc. Confined Space Pre-Entry Inspection Check List will be attached to this plan. A Confined Space Entry Permit must be completed and posted outside the confined space prior to entry, and the entry will follow the Stone Environmental, Inc. Confined Space Entry written program. Permits are to be saved and logged with project documentation.  Name of Competent Person:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

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| **SECTION 13: EXCAVATION SAFETY** | | | THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES | |
| Excavations being created in order to accomplish Stone Environmental, Inc. tasks or in progress during Stone Environmental, Inc. inspection of other activities or tasks, shall be shored or slopped or otherwise protected to prevent accidental collapse prior to entry, in accordance with Subpart F of 29 CFR 1926. It is Stone Environmental, Inc. policy that Stone Environmental, Inc. personnel will not enter trench or excavated areas without approval of Corporate Health and Safety. If an entry into an excavation by Stone Environmental, Inc. personnel is necessary, a Competent Person will be designated by the Corporate Health and Safety Officer. Excavations will not be left open overnight unless absolutely necessary. | | | | |
| **COMPETENT PERSON** |  |  | |  |
| Print Name | Signature | | Date |

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| **SECTION 14: DECONTAMINATION PROCEDURES** | | | | | | THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES | | |
| Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated. The Site Safety Officer is responsible for monitoring adherence with this decontamination plan. | | | | | | | | |
| A | 5.1. | | | decontamination protocol shall be used with the following decontamination stations: | | | | |
|  | | (1) |  | | | | | |
|  | | (2) |  | | | | | |
|  | | (3) |  | | | | | |
|  | | (Other) |  | | | | | |
| The following decontamination equipment is required: | | | | | |  | | |
| Decon Pad (Plastic Sheet) \_\_\_\_\_\_\_ | | | | | Dry Brushes | Buckets | Other |  |
| Trash Cans/Bags | | | | | Wet Brushes | Hose / Spray |  |  |
|  | | | | | | Will be used as the decontamination solution | | |
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| **SECTION 15: PERSONAL PROTECTIVE EQUIPMENT** | | | | | | | | | | | | | | |
| **1 - List all that apply, i.e., FF w/ OV/AG/P** | | | | | | | | | | | | | | |
| **2 - Use same codes for clothing and boots of same material** | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| TASK \* | | RESPIRATORS | | USE \*\* | | | CLOTHING | | | GLOVES | | BOOTS | | OTHER |
|  | | & CARTRIDGE1 | | (See Section 16) | |  | | | |  | |  | |  |
| **S1** | | **None** | |  | | **N/S** | | | |  | |  | |  |
| **S2** | | **None** | |  | | **N/S** | | | |  | | **SL** | | **HP, G** |
| **S3** | | **None** | |  | | **N/S** | | | |  | | **SL** | |  |
| **S4** | | **None** | |  | | **N/S** | | | | **L, N** | | **SL** | | **G** |
| **S5** | | **None** | |  | | **N/S** | | | |  | |  | |  |
| **S6** | | **None** | |  | | **N/S** | | | |  | |  | |  |
| \* Same as Section 3E | | | | \*\*UP = Upgrade  CONT = Continuous | | | | **NOTE:** PPE use will be in accordance with Stone Environmental, Inc.’s Health and Safety Policy and Written Programs | | | | | | |
| **CODES:** | | | | | | | | | | | | | | |
| **RESPIRATORS1** | | | **CARTRIDGES1** | | **CLOTHING** | | | | **GLOVES2** | | **BOOTS** | | **OTHER** | |
| HF = Half Face APR | | | P = Particulate | | N/S = No Special | | | | Co = Cotton | | SL = Leather Safety | | HH = Hard Hat | |
| FF = Full Face APR | | | OV = Organic Vapors | | C = Coveralls | | | | Le = Leather | |  | | G = Safety Glasses | |
| ESCBA = Escape Bottle | | | AG = Acid Gas | | T = Tyvek | | | | L = Latex | | H = Hip (Fireman) | | GP = Glare Protection | |
| SAR = Airline | | | Multi = Multi-Gas/Vapor | | Sx = Saranex | | | | N = Nitrile | |  | | Gl = Goggles - Impact | |
| SCBA = SCBA | | |  | | PT = PE Tyvek | | | | B = Butyl | |  | | GS = Goggles - Splash | |
|  | | | Other | |  | | | | Neo = Neoprene | | O = Latex overboots | | FS = Face Shield | |
|  | | | | |  | | | | V = Viton | |  | | HP = Hearing Protection | |
|  | | | | |  | | | | PVC = Polyvinyl Chloride | |  | |  | |
|  | | |  | |  | | | | PVA = Polyvinyl Alcohol  T = Teflon | | CHM = Chemical Resistant | | PFD=Personal Flotation Device | |
|  | | |  | |  | | | |  | |  | |  | |
|  | | | | |  | | | | Other: \_\_\_\_\_\_\_\_\_ | |  | |  | |
|  | | | | |  | | | |  | |  | |  | |
| Respiratory protection will be upgraded under the following conditions: | | | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | | |
| The following cartridge change out schedule is to be followed onsite (attach any calculations to plan): | | | | | | | | | | | | | | |
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| **SECTION 17: EMERGENCY ACTION PLAN** | |
| The following standard emergency response procedures will be used by onsite personnel. The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed. | |
| **(A)** | **EVACUATION** |
|  | All work activities are suspended and the site is to be EVACUATED IMMEDIATELY, when there is a threat to life or health as determined by individual good judgment, i.e. fire, hazardous chemical spill, dangerous gas leak, severe weather (i.e., tornado); or when notified by other site / facility staff and local fire or police officials. |
|  | * If an evacuation is called for, the emergency alarm system for weather‑related, medical, fire and other evacuation emergencies is: |
|  | * 3 short blasts on a compressed air horn |
|  | * Evacuation from the Exclusion Zone should whenever possible occur through the decontamination line. In those situations where egress in this manner cannot occur, the following emergency escape routes have been designated (document on map if possible): |
|  | Once off site, all staff should gather at the **ASSIGNED RALLY POINT** which is a minimum of 250 feet away from the incident |
| (B) | **FIRE OR EXPLOSION** |
|  | Upon discovery of a fire or an explosion, the above-designated emergency signal shall be sounded and all personnel shall assemble at the **\_ ASSIGNED RALLY POINT**. The fire department is to be notified and all personnel moved to a safe distance (minimum 250') from the involved area. |
|  | If a person's clothing should catch fire, burning clothing may be extinguished by having the individual drop to the floor and roll. If necessary, physically restrain the person and roll them around on the floor to smother the flames. Use a fire blanket or extinguisher if one is readily available and you have been trained in its use. Call emergency medical services if not already done so. |
|  | If a person's clothing should become saturated with a chemical, douse the individual with water from the nearest safety shower if available. Consult the chemical Material Safety Data Sheets (MSDSs) for further information. Call emergency medical services if indicated by the MSDSs. |
|  | NEVER RE‑ENTER THE SITE / FACILITY until the emergency has been declared over and permission to re‑enter has been given by site / facility health and safety staff or local fire or police officials. If any staff is unaccounted for, notify an individual in charge. |
| (C) | **MEDICAL EMERGENCY** |
| If you discover a medical emergency and are by yourself, CALL OUT FOR HELP. When someone arrives, tell them to call for help. If no one comes or you know you are alone, provide whatever care you can for 1 minute, and then make the call yourself. (See Section 2)  Upon notification of an injury the SSO or alternate should evaluate the nature of the injury and shall initiate the appropriate first aid, and contact should be made for an ambulance (and other emergency services as needed) and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or a symptom is determined.  The hospital is **within 20** Minutes from the site. Ambulance response time is suspected to take more than 10 minutes based on the location. If applicable, local fire and police should be briefed on the situation and the potential hazards and the substances involved. When IDLH conditions exist, arrangements should be made for onsite standby of emergency services. A map for directions to the nearest hospital is attached to this plan along with a site map. | |
| **(D) FOLLOW UP** | |
| In all situations, when an on site / facility emergency results in evacuation of the work area, or a “large spill” has occurred, staff shall not resume work until:   * The conditions resulting in the emergency have been corrected; * The hazards reassessed by the SSO and Corporate Health and Safety; * The HASP has been reviewed by the SSO and Corporate Health and Safety; and * Site personnel have been briefed on any changes in the HASP by the SSO. | |

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| **SECTION 18: SPILL CONTAINMENT / CONTROL** | THIS SECTION NOT APPLICABLE TO SITE ACTIVITIES |
| For most chemicals introduced to the worksite, or under control of Stone Environmental, Inc. employees, spills of chemicals would be considered incidental and would be controlled in the immediate area of the spill. Such spills shall be handled utilizing precautions appropriate for the chemical characteristics specified in the MSDS for the chemical including spill control methods and selection and use of minimum personal protective equipment. | |
| For chemicals introduced to the worksite, or under control of Stone Environmental, Inc. employees, that would cause a ″large spill″ (greater than 55 gallons), a copy of the appropriate Emergency Response Guidebook (ERG) guide shall be attached to this plan, and a spill response contractor shall be identified in Section 2. | |

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| **SECTION 19: EMPLOYEE ACKNOWLEDGEMENTS** | | | | | | |
| PLAN REVIEWED BY: | | NAME | | | DATE | |
| Project Officer: | | Chris Stone | | |  | |
| Project Manager: | | Julie Moore | | |  | |
| Site Safety Officer: | | Dave Braun | | |  | |
| Corporate H & S | | Kim Watson | | |  | |
|  | I acknowledge that I have read the information on this HASP-SF, attached Material Safety Data Sheets (MSDSs), DOT Emergency Response Guides, and Health and Safety Programs.  I understand the site / facility hazards as described and agree to comply with the contents of the plan. | | | | | |
|  | **EMPLOYEE (Print Name/Signature/Date)** | | | | | |
|  | / / | | | / / | | |
|  | / / | | | / / | | |
|  | **VISITORS (Print Name/Signature/Date)** | | | | | |
|  | / / | | | / / | | |
|  | / / | | | / / | | |
| **ATTACHED DOCUMENTS** | | | | | | |
| MSDS(s) - attach | | Hazard Communication  Written Program – if introduction of other chemicals | Confined Space Entry  Written Program | | | Respiratory Protection  Program |
| Site Map – (at a minimum, use google maps for location.) | | Personal Protective Equipment  Written Program | DOT ERG Guides | | | Activity Hazard Analysis Forms  for activity risk assessment – attach. |
| Hospital Directions | | Emergency Action Plan | H&S Daily Site Sheet | | | Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |