

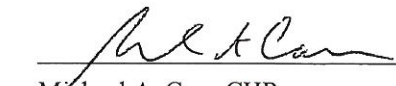
**REMEDIAL WORK PLAN
WASTE EXCAVATION AND SITE RESTORATION FOR
THE BRECKENRIDGE DISPOSAL SITE**

(Addendum)

Madison Road
St. Louis, Bethany Township, Michigan

Revision 0

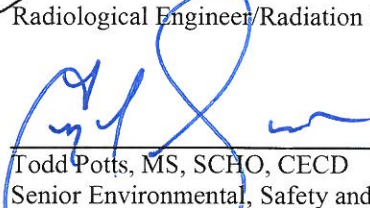
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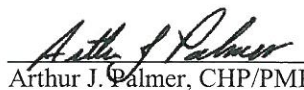
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- New Plan
- Title Change
- Plan Revision
- Plan Rewrite

Effective
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1.0 INTRODUCTION

On August 5th, 2010 two (2) poly drums (steel drum liners) containing an unknown liquid were discovered during the excavation of the waste trenches, (specifically CWA-5). These drums were accidentally ruptured with the excavator bucket during bulk remediation of the trenches and the contents spilled within the excavated portion of the trench and on top of the waste stockpile behind the excavator. As the drums were compromised, a foul odor was noticed and several site personnel affected. The excavation was immediately shut down, the excavator secured and all personnel evacuated from the immediate area until the material could be sampled and the project controls re-assessed.

A separate contractor, Waste-365, was contracted by the FTL Trustee and Environ to sample the materials found within the drums. Liquid and solid samples of the materials were collected and sent to an off-site laboratory for analysis. Based upon the analysis, it was determined that both the solids and liquids were very acidic and the liquid determined to be a characteristic hazardous waste with a pH less than 2.0. All liquid within the drums/liners was accidentally spilled within both the trench and on the surrounding soil with the exception of the small amount that was collected as a sample.

2.0 OBJECTIVES

Due to the discovery of two 55 gallon drums of liquid during site remediation, this Addendum to the Project Work Plan has been prepared to address the change in the remediation methodology and project controls to further ensure the safety of project personnel and equipment and to ensure the proper response in the event that additional materials, not anticipated during the original work scope, are discovered. This includes a change in the method of excavation, personnel monitoring, proper protective equipment in the event that additional materials are discovered and the isolation and control of the materials. Proper notifications shall also be made to the appropriate regulatory agencies and stakeholders.

3.0 PROJECT ORGANIZATION

The project organization will remain the same as provided in the Work Plan; however, a designated Site Safety and Health Officer (SSHO) to support the project has been established. This will include both on-site and off-site support.

4.0 TRENCH EXCAVATION

As the tops of the waste trenches are exposed, the method of excavation will be modified from the Work Plan to address the potential of finding similar materials and drums as discovered during the August 5th event. Rather than the bulk excavation of the waste trenches, the trenches will be excavated in a controlled manner to minimize any potential of compromising any containers or drums that may contain additional liquids or suspect materials.

Prior to resuming on-site excavation, several requirements shall be completed. These will include as a minimum:

- Personnel training including current 40-hour HAZWOPPER,
- Adequate supplies have been staged and personnel protective equipment to respond to another incident and to properly handle any additional materials that may be discovered,
- All personnel are trained to the revised Job Hazard Analysis (JHA),
- Response personnel have current medical qualifications, respiratory protection training and fit tests,
- Final approval from EnergySolutions management to resume activities.

4.1 LIFT REMOVAL

The excavator will continue to be used during excavation; however, rather than the bulk excavation of the waste materials, the excavator will remove the waste from the trenches in lifts of approximately 6-12 inches. The equipment operator and a spotter shall take caution during excavation to look for any unexpected materials and to stop excavating if any suspect materials are discovered. As each lift is removed, the trench will be visually inspected for any evidence of buried drums or other waste prior to the next lift removal. Each lift may also be inspected using other means as determined by the SSHO such as a magnetometer. Trench remediation will continue at each location until the bottom of the trench is reached and the excavator moved to the next section of trench where material will be continued to be excavated in a lift fashion.

Areas where the tops of the trenches have not been exposed will be excavated as directed in the Work Plan removing the surface and overburden soils until the tops of the trenches are reached. At that time, the waste will be excavated as described above.

In the event that a drum is found, the excavation process will stop until the container and all associated hazards are safely removed in accordance with this Addendum.

4.2 SURGICAL EXCAVATION

In the event that any drums, containers or other potentially hazardous materials are found, a more surgical approach to the excavation will be implemented including manual excavation as needed so as not to compromise any embedded containers and the appropriate authorities and stakeholders notified. Containers that are sufficiently in-tact shall be surgically removed to retain any fluids, if at all possible, and over-packed as directed by the SSHO. Soils surrounding the container(s) will be visually inspected for discoloration, free product or other indication of containment failure.

If the container(s) has been compromised or if it is determined that it cannot be safely handled, the contents will be transferred to another container as necessary with the use of a peristaltic pump or other safe means of transfer. Any remnant drums and drum liners containing no fluids will be excavated without any concern for hazardous constituents unless the surrounding soils appear to be impacted. All full containers shall be treated as hazardous and the materials

segregated until it has been sampled. In the event that any surrounding soils may have been affected, these will also be excavated and segregated pending sampling.

All employees have the ability to stop work if there are any concerns or suspicion of unknown materials. The SSHO and Project Manager will be informed such that the area may be inspected prior to continuing with the excavation.

5.0 HEALTH AND SAFETY

5.1 TRAINING

In addition to the training requirements as outlined in the Work Plan, all site personnel entering the controlled area will have current 40-hour HAZWOPPER and annual 8-hour refresher training in accordance with OSHA 29 CFR 1910.120. All project personnel shall be informed to the event that transpired on August 5th and be briefed and trained to the revised Job Hazards Analysis (JHA) addressing the proper response in the event that an unknown material is encountered during site remediation. The potential health and safety hazards and abatement measures associated with any drum removal and “potentially” haz waste packaging are detailed in the attached revised JHA.

All personnel involved with the direct handling of any hazardous or suspect hazardous material shall receive additional training on its proper handling. As necessary, personnel that may be required to wear respiratory protection shall have a current physical within the last year stating that they are medically capable of wearing respiratory protection, have a current fit test and be properly training to the EnergySolutions Respiratory Protection Program.

5.2 PERSONNEL PROTECTIVE EQUIPMENT (PPE)

PPE as specified on the applicable RWP and/or JHA will still be used; however, additional PPE may be required as directed by the SSHO. When directly handling any unidentified suspect materials, additional PPE will be required, including a corrosive compatible ensemble such as coated tyvek (Saranac) or Tychem SL, nitrile gloves, rubber shoe covers, and respiratory protection. Adequate amounts of PPE will be made available at the project site in the event that any suspect materials or liquids are identified.

If respiratory protection is required, a full face APR or PAPR respirator with GME Super P100 combination cartridge filters shall be used until the material is properly characterized. Upon characterization, PPE may be downgraded only with the concurrence of the SSHO.

5.3 EQUIPMENT AND MATERIALS

In addition to the proper PPE as specified, additional equipment and supplies will be available on-site to both respond to any spills and to over-pack any suspect materials. This will include:

- Polyethylene salvage drums or metal drums with polyethylene liners,
- 85 gallon over-pack drums for in-tact drums and containers,

- Spill kit(s) and adsorbant compatible with corrosive chemicals,
- pH indicator strips,
- Photoionization detector with standard 11.5 eV lamp or higher,
- Multi-gas meter for monitoring ambient oxygen, flammability, hydrogen sulfide and carbon monoxide.
- Peristaltic pump and Tygon tubing
- Calcium carbonate or similar neutralizing agent for limited acid spills under the direction of the SSHO in a careful and controlled manner.

5.4 PERSONNEL MONITORING

In addition to the perimeter monitoring for radiological contaminants, periodic monitoring of the immediate work area and excavation will be performed by the SSHO using a photoionization Detector (PID). Pending material identification, VOC ambient air concentrations above 5 ppm may necessitate personal breathing zone sampling during drum or contaminated soil removal.

5.5 BUDDY SYSTEM

At no time will anyone enter the work area alone. The buddy system will be implemented for all remediation activities with additional personnel ready to respond as necessary. All emergency response personnel shall have the same training as those that enter the affected area.

5.6 PERSONNEL DECONTAMINATION

Prior to approaching an embedded drum or contaminated soil area, a personnel decontamination station will be established at the direction of the SSHO. This will consist of a sequential gross decon, using pressurized water,alconox or similar surfactant, and brush application followed by a rinse station and a doffing station. Technicians will proceed through decontamination and doffing in accordance with standard procedures.

5.7 HAZARD CHARACTERIZATION

Upon visual indication of an embedded drum, contaminated soil, or unusual odor from the excavation, a limited in-situ characterization will be conducted prior to further direct investigation. The SSHO or designee in the prescribed Level C PPE will:

- Expose the contaminated media, drum contents (if accessible) to pH paper to determine corrosivity. pH levels below 5.0 and above 9.0 should be considered potentially hazardous for direct worker exposure.
- The area will be metered for flammability and hydrogen sulfide (H₂S), while confirming an oxygen level within normal range. Personnel and powered equipment will not be permitted within ambient air concentrations above 10% of the LFL (lower flammable limit), regardless of PPE.
- The area will be metered using the PID to determine VOC concentrations.

Findings will determine whether the prescribed Level C PPE ensemble is appropriate or if modifications to the PPE are warranted for safe access to the container or contaminated area.

6.0 WASTE MANAGEMENT

6.1 OVER-PACKING

All suspect liquids and remnant drums shall be containerized and over-packed as necessary to minimize the volume of waste. Suspect soils will be segregated in a separate stockpile for composite sampling. Containers shall be handled in tact unless the material has to be transferred. All suspect material including the containers will be handled as hazardous until it is determined otherwise. Prior to the movement of any container, it shall be inspected to determine its integrity and proper handling. If possible, the containers will be removed using the excavator and slings/chokers. If there is any reasonable suspicion that the integrity of the container is in question, the material will be transferred using a peristaltic pump with appropriate tubing such as Tygon.

6.2 WASTE SEGREGATION

All suspect materials shall be segregated away from all other waste materials on-site at a designated location pending sampling and analysis. If the material is determined to be hazardous waste, the MDEQ shall be notified.

6.3 SAMPLING

Once removed and contained, all suspect materials including potentially impacted soils will be sampled and analyzed to determine its characteristics as directed by the FTL Trust and Environ using either an outside vendor such as Waste-365 or qualified on-site personnel. All samples will be field screened for radioactive materials and shipped to an appropriate laboratory under a Chain of Custody record. If any samples are determined to be radioactive, it will be necessary that the analytical laboratory be licensed to receive and handle radioactive materials.

6.4 TREATMENT AND DISPOSAL

Following State notification (MDEQ) of the presence of "hazardous" wastes on site the appropriate stakeholders shall be notified. In addition, there will be a 90 days with which to properly handle, ship and dispose of the hazardous materials.