June 19, 2017

Ms. Kim Shelley, Acting Director
Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870

Re: Corrective Action Plan Technical Details; Transwest Pick-A-Part, 3586 North 2000 West, Farr West, UT 84404

To Ms. Shelley:

The following is submitted in compliance with a request from Mr. Wynn John of your office.

Discharger: Transwest Pick-A-Part
Company Contact: Mr. John Roberts
Company Address: 4651 North Digital Drive, Lehi, UT 84043
Telephone Number: 801.738.0200
Project Location: 3586 North 2000 West, Farr West, UT
Technical Contact: Mr. Mark T. Ellis, Ellis Environmental, 801.768.0675

Treatment Procedure
A corrective action plan (CAP) has been submitted to Division of Water Quality (DWQ) on behalf of Transwest Pick-A-Part. Technical details include the following:

The fence on the north end of the crusher yard will be removed. The fence straddles the excavation zone. Refer to figure 11, Appendix A.

Corrective action area is centered around MW6. An area estimated in the previous submittal shows an area of approximately 1,500 ft² that will excavate MW6 and take out soil north, south, east and west from MW6.

The soil around MW6 will be excavated to expose about 2 feet of groundwater. The excavation will be 7-8 feet deep. Total volume of soil to be excavated and stockpiled on site is estimated at about 500 yd³. This assumes none of the soil excavated will have excessive petroleum contamination.

Excavated soil is not expected to be uniformly contaminated. Uncontaminated or lightly contaminated soil will be stockpiled to the east where the crusher was found. Additional area will be used if needed, north of the excavation.

Excavated soil will be screened so that excessively greasy or oily soil will be disposed as a
petroleum contaminated soil through Republic Services.

Excavation sidewalls will be properly sloped to avoid caving. No entry to the excavation will be permitted as a safety precaution against side wall collapse and against accumulated vapors in the excavation.

With the groundwater exposed in the excavation, the sidewalls of the excavation will be sprayed with surfactant/co-solvent to move any soil-borne petroleum into the exposed water. The sidewalls will be treated only one time and this before the open water is treated.

Iron and copper will be placed into the open water excavation to work as Fenton’s Reagent. There is a significant amount of metallic iron and copper in the lot surface soil.

The open water will be dosed with 10\% hydrogen peroxide (H\textsubscript{2}O\textsubscript{2}). First dose of H\textsubscript{2}O\textsubscript{2} will require about 10 gallons. A dosing hose will be connected to a 5 gallon container of the peroxide and dragged across the open water. Gravity flow will move the H\textsubscript{2}O\textsubscript{2} into the water throughout the excavation. The dosing hose will be moved to different locations to assure the water all received H\textsubscript{2}O\textsubscript{2}.

The H\textsubscript{2}O\textsubscript{2} will degrade the DRO, the surfactant and the co-solvent butyl alcohol.

**Mass of Contamination**

Assuming a surface area of 1,500 \( \text{ft}^2 \) or 139 \( \text{m}^2 \), a depth of 0.2 m, the volume of excavation water is estimated at 83.4 \( \text{m}^3 \). Assuming a worst case condition of 99.2 mg/L DRO in the excavation water, the mass of DRO is calculated at 8.27 kg or about 18.2 pounds of DRO. It is expected that additional DRO will be scavenged out of the soil sidewall of the excavation, maybe a pound or two. The mass of DRO expected to be treated is 20 pounds. The mass of surfactant and co-solvent butyl alcohol is expected to be another 5 pounds.

Mass of 10\% H\textsubscript{2}O\textsubscript{2} (specific gravity of 1.3) to be dosed into the excavation is expected to be 20 gallons or 218 pound of H\textsubscript{2}O\textsubscript{2}.

**Sampling**

Samples will be collected in the manner described in the Standard Operating Procedures submitted to DWQ. Samplers are trained and experienced in a large variety of sampling methods and situations. If site conditions require modification of the sampling methods, those changes will be explained with the sample results submitted to DWQ.

Open water will be sampled 1 week after dosing, with either a bailer or with a peristaltic pump. This will be a progress sample. Open water will be sampled within 1 week of each dose of H\textsubscript{2}O\textsubscript{2}. It is anticipated that the open water will require at least 4 doses.

The water will be collected into the 40 mil containers for analysis by the American West Analytical Laboratories. Ellis Environmental has been assured by the laboratory that the H\textsubscript{2}O\textsubscript{2} in small
concentrations will not react aggressively with the fixative in the sample containers.

One confirmatory sample will be collected when a progress sample indicates that the treatment has degraded the diesel range organics (DRO) to less than 10 mg/L. The confirmatory sample will be collected the same as the progress sample.

All samples will be collected, preserved, possessed, transported and surrendered according to chain of custody procedures. All samples will receive first order (lowest) Quality Assurance/Quality Control.

Safety
Site workers need to have a minimum of 8 hours safety training. This project will require Level D personal protection. Attached is the Health and Safety Plan, Appendix B. This plan is modified from the site investigation plan.

Project Duration
Open water will be treated primarily through the dosing of H₂O₂ to the water. The effects of photolysis as an effective hydrocarbon degrader cannot be ignored, as well the effects of evaporation/volatilization. The treatment is estimated to take 4-6 weeks to complete.

As long as progress is made in degrading the DRO, the successive rounds of H₂O₂ dosing will continue until the target clean up is achieved of DRO less than 10 mg/L.
Sincerely,

Mark T. Ellis
Environmental Professional

David B. Johnson, P.E., PLS, MBA

Appendices

A Maps and Drawings
B Health and Safety Plan
C Statements of Qualifications
Appendix A

Maps
Appendix B

Health and Safety Plan
SITE HEALTH AND SAFETY PLAN

Job No. A17-1983

I. Project Information

Project Manager: Mark Ellis  
Client: Transwest Pick-A-Part  
Environmental Technician: Joseph Ellis  
Site Name: Transwest Pick-A-Part  
Site Location: 3586 North 2000 West, Farr West, UT  
Site Supervisor: Mark T. Ellis  
Safety Officer: Mark T. Ellis

II. Objective of the Plan

The purpose of this site safety plan is to protect our employees from health and safety hazards they might experience in the performance of this task of exposed groundwater treatment of diesel range organics (DRO).

III. Objective of the Safety Plan

Site Investigation looking for diesel fuel and gasoline contamination identified by Enercon, a consultant to Copart, a bona fide prospective purchaser of this property. Further site investigation led to the installation of 9 groundwater monitoring wells. MW6 was found to be excessively contaminated with DRO. This plan is designed to keep company employees, site workers and the general public safe.

IV. Site Characterization

A. Site Description: Transwest Pick-A-Part owns and operates this property for vehicle salvage. The property has been used for this purpose since the 1960's. The area of concern is the crusher lot and the lot to the north of the crusher lot. The lots are both secured from public access with concrete and with steel walls.

B. Site History: This property has been used for auto salvage since the 1960's. Recent site characterization has shown DRO contamination in the groundwater above the Tier 1 Screening Criteria (10 mg/L) at MW6 at 99.2 mg/L.

C. Utilities: Two utilities are known in the crusher lot. An 8 inch diameter, high pressure, refined petroleum line owned by Tesoro runs the length of the crusher lot. The Tesoro line is east of the excavation. Excavators will operate more than 20 feet away from the Tesoro line.
A buried irrigation pipeline is suspected to be located west of the proposed excavation.

D. Hazardous Materials Present: DRO, hydrogen peroxide

DRO, gasoline, motor oil, transmission fluid and all constituents thereof are anticipated in the soil, water and air. Individual contaminants of concern include benzene, toluene, ethyl benzene, total xylenes and naphthalene. These are aromatics and polynuclear aromatics for which TLVs, STELs and IDLHs are listed. The DRO is to be treated with hydrogen peroxide.

<table>
<thead>
<tr>
<th>Chemicals</th>
<th>TLV</th>
<th>STEL</th>
<th>IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total xylenes</td>
<td>100 ppm</td>
<td>150 ppm</td>
<td>1,000 ppm</td>
</tr>
<tr>
<td>Toluene</td>
<td>100 ppm</td>
<td>150 ppm</td>
<td>2,000 ppm</td>
</tr>
<tr>
<td>Gasoline</td>
<td>300 ppm</td>
<td>500 ppm</td>
<td>N/A</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>100 ppm</td>
<td>125 ppm</td>
<td>2,000 ppm</td>
</tr>
<tr>
<td>Benzene</td>
<td>10 ppm</td>
<td>-------</td>
<td>suspected human carcinogen</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>15 ppm</td>
<td>79 mg/m3</td>
<td>affects internal organs</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>1 ppm (OSHA)</td>
<td>-------</td>
<td>75 ppm</td>
</tr>
</tbody>
</table>

V. Hazard Characteristics

All of these chemicals can be very hazardous. Watch for tingling, taste of the chemical due to skin or oral exposure, disorientation, difficulty breathing, blurry vision or nausea. These may be symptoms of over exposure. Any sign of chemical affect must be reported to the Safety Officer.

VI. Risk Assessment

MW6 reported 99.2 mg/L DRO. This is a significant concentration that requires care in handling the water. Water with DRO must not be ingested or aspirated. In the case of exposure to the contaminated water, report to the Safety Officer.

VII. Site Procedures

A. Site Team Organization
<table>
<thead>
<tr>
<th>Compound</th>
<th>Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| Benzene      | Irritant to eyes, nose, respiratory system; giddy; headache; nausea; staggered gait; fatigue; anorexia; lassitude; dermatitis; depressant; abdominal pain; possible carcinogen | Eyes - irrigate immediately  
Skin - soap wash  
Breathe - artificial respiration  
Ingestion - Medical attention immediately |
| Ethyl benzene| Irritant to eyes, mucous membranes; headache; dermatitis; narcosis, coma | Eyes - irrigate immediately  
Skin - water flush promptly  
Breathe - artificial respiration  
Ingestion - Medical attention immediately |
| Toluene      | Fatigue, weakness, confusion, euphoria, dizziness, headache, dilated pupils, lacrimation (tears) nervousness, muscle fatigue, insomnia, paresthesia, dermatitis, photophobia | Eyes - irrigate immediately  
Skin - soap wash promptly  
Breathe - artificial respiration  
Ingestion - Medical attention immediately |
| Xylenes      | hematuria, back pain, hematoma in arms, legs, epistaxis, bleeding lips, hemorrhaging of mucous membranes, abdominal pain, vomiting, fecal blood, ptechial rash, abnormal hematology | Eyes - irrigate immediately  
Skin - soap wash promptly  
Breathe - artificial respiration  
Ingestion - Medical attention immediately |
Naphthalene | Irritant to eyes, confusion, excitement, malaise, nausea, vomiting, abdominal pain, irritated bladder, profuse sweating, jaundice, hematuria, renal shutdown, dermatitis, optical neuritis, corneal damage | Eyes - irrigate immediately
Skin - soap wash promptly
Breathe - artificial respiration
Ingestion - Medical attention immediately

C. Safety Procedures

Proper Monitor of contaminated soil and water
Proper Safety Equipment Worn by Employees
"Tool Box" Meeting

D. Personal Protective Equipment List

This is a level D site: Hardhats, Respirators, Eye Protection, Steel-toed Boots, Hearing protection

E. Standard Operating Procedures

Review the Health and Safety Plan before commencing with the excavating and sampling.

F. Monitoring

Site Supervisor will observe on site conditions and personnel to assure that excess exposure is not experienced. If exposure is suspected, follow the directions of the Site Supervisor.

G. Site Security

The crusher lot and the adjoining north lot are both secured with steel on the north, east and south. The lots are secured with a concrete fence on the west. The fencing is kept locked by company procedures. Access to the clean up site is restricted and is considered adequate with current operations.

VIII. Confined Space Procedures

Confined space entry is not permissible under this plan.

XI. Emergency Information
Nearest Hospital: 2850 North 2000 West, Ste. 101, Farr West, UT. This clinic is directly south on 2000 West from Transwest Pick-A-Part

Poison Control Center: 911

Police: 911 (Desk Sergeant)

Fire: Station (non-emergency) 2023 West 1300 North, Farr West, UT

Ambulance: 911

Electric: Rocky Mountain Power, 801.629.8221 for non emergency contact

Questar Gas: 800.767.1689

City Water: 801.731.4187

Sewer: 801.731.4187

XII. Plan Approval

This site safety plan has been written for the use of Ellis Environmental and its employees. Ellis Environmental claims no responsibility for its use by others. The plan is written for the specific site conditions, tasks, dates and personnel specified and must be amended if these conditions change.

APPROVED BY:

Company Officer __________________________

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Appendix C

Statements of Qualifications
# DAVID B. JOHNSON, PE, PLS, MBA

(801)-787-4569 / djohnson@johnsonengineeringinc.com / 4436 S 1025 E Salt Lake City, Utah 84124

## Education

<table>
<thead>
<tr>
<th>Degree</th>
<th>Institution</th>
<th>Location</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS</td>
<td>Brigham Young University</td>
<td>Provo, Utah</td>
<td>April 2005</td>
<td>Treatment Wetland Design for the Salton Sea, California</td>
</tr>
<tr>
<td>BS</td>
<td>Brigham Young University</td>
<td>Provo, Utah</td>
<td>April 2004</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>MBA</td>
<td>University of Utah</td>
<td>SLC, Utah</td>
<td>December 2010</td>
<td>Land Surveying</td>
</tr>
<tr>
<td></td>
<td>Salt Lake Community College</td>
<td>SLC, Utah</td>
<td></td>
<td>Satisfied the Utah PLS education requirements</td>
</tr>
</tbody>
</table>

## Employment History

### Johnson Engineering, Inc.
Salt Lake City, Utah (2014-Present)
- Owner and Founder of Johnson Engineering, Inc. ([www.johnsonengineeringinc.com](http://www.johnsonengineeringinc.com))
  - Responsible for grading and drainage design for residential and commercial land development projects.
  - Responsible for the design of lead shot traps and lead dust suppression for national gun ranges.
  - Responsible for construction staking, conducting topo surveys, boundary surveys, and HD scanning.
  - Certified Underground Storage Tank Consultant with Utah Department of Environmental Response and Remediation (DERR).

### Anderson Engineering Company, Inc.
Salt Lake City, Utah (2005-2014)
- Professional Engineer and Land Surveyor
  - Responsible for project design and the preparation of construction documents.
  - Responsible for project management, including: the allocation of resources; the development and training of personnel; and, quality assurance.
  - Responsible for construction staking, conducting topo surveys, boundary surveys, and HD scanning.

### Agrarian Research and Management Co., Ltd.
Provo, Utah (2004-2005)
- Project Engineer and Land Surveyor
  - Responsible for project design, land surveying, and construction management for environmental projects throughout California.

### Spanish Fork City Engineering Department
Spanish Fork City, Utah (2002-2004)
- Geographic Information Systems (GIS) Intern
  - Responsible for collecting and managing GIS data for city utilities.

### BYU Materials Research Department
Provo, Utah (2003)
- Research Assistant
  - Responsible for soil sample analysis of local road base material for frost heave research.

## Skills and Certifications

### Computer Skills:
- AutoCAD Civil 3D
- ArcGIS Suite
- Microsoft Office
- Leica Cyclone
- Microsoft Project

### Survey Equipment:
- Trimble S6 Total Station
- Trimble GPS Systems
- Leica C10 HD Scanner

### Additional Skills:
- Fluent in writing and speaking Spanish.

### Certifications:
- Civil Engineer
  - UT # 5338869-2203
  - CA # 77583
  - WY# 14049
- MSHA Training
  - 24 hr

### Certifications Continued:
- OSHA Hazwoper
  - 40 hr
- Professional Land Surveyor
  - UT # 5338869-2201
  - CA # 8876
- Heavy Construction Contractor
  - UT # 8940121-5551
- Utah UST Consultant (DERR)

## Personal

- Brigham Young University Football Letterman (2002)
- BYU Student-Athlete Business Mentor

- BYU Student-Athlete Business Mentor

Provo, Utah (2011 to Present)
STATEMENT OF QUALIFICATIONS


Inventor:
- Subsurface Metabolism Enhancement (SME) hydrocarbon bioremediation system, Patent # 6,464,005; Winner of Stoel-Rives Utah Innovator 2010 for Clean Technology and Energy.
- Fuel Vault™, Patent #5,037,239, interest sold to Olsen-Beal Associates.
- SME Sensor, Patent #7,705,312; Infrared sensor for hydrocarbons, oxygen, CO₂ and methane.
- Identity Theft Protection, pat. pending.
- SMEC®, Aerobic, chlorinated solvent bioremediation system, pat. pending.


Utah Division of Environmental Quality:
- Acid Rain Coordinator for the State of Utah; chair of Utah ADTAC; member, WESTAR and WAD Task Force (1984-1987).
- Water Quality Specialist with the Utah Bureau of Water Pollution Control, (1981-1984).

Environmental experience and management includes:
- Citations from Utah Governor (1) and Utah Division of Environmental Health (2) for excellence
- UST closures, including the required site assessments for 347 tanks
- Phase I and II environmental audits/assessments, AAI, TSA at over 1,272 properties since 1989
- LUST abatement and remediation projects at over 130 projects
- Installation/design of Fuel Vault™ facilities at 6 sites
- Research and installation of closed and open loop fisheries at 4 projects
- Hazardous waste compliance at 55 sites
- Air Quality compliance at 15 sites
- Water quality projects at many sites including LUST projects and stormwater plans
- Projects in 16 States (AK, AZ, CA, CO, ID, IN, MT, NV, PA, RI, SC, TN, UT, WA, WI, WY)
- Qualified as Expert Witness in Utah and Arizona courts, 15 projects

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