

Hazardous Waste Management Plan Nevada Environmental Response Trust Site Henderson, NV NVR 000 091 819

PREPARED FOR

Nevada Environmental Response Trust
35 E. Wacker Drive, Suite 1550
Chicago, IL 60601

PREPARED BY

Tetra Tech, Inc.
150 S. Fourth Street, Unit A
Henderson, NV 89015

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CERTIFICATION

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been prepared in a manner consistent with the current standards of the profession, and to the best of my knowledge, comply with all applicable federal, state, and local statutes, regulations, and ordinances.

Description of Services Provided:

This Hazardous Waste Management Plan (HWMP) has been prepared to address the proper management of solid wastes characterized as hazardous waste generated at the Nevada Environmental Response Trust facility at 510 S. Fourth Street, Henderson, Nevada. This plan addresses management of hazardous waste to comply with State of Nevada laws and regulations, which incorporate by reference many of the federal requirements under the Resource Conservation and Recovery Act (RCRA).



Kyle Hansen, CEM
Field Operations Manager/Geologist
CEM 2167, exp. 9/18/18
Tetra Tech, Inc.

December 11, 2017

Date

PLAN REVISIONS

Tetra Tech, Inc., on behalf of the Nevada Environmental Response Trust (NERT), will review this plan periodically and amend as necessary, as follows:

The RCRA Contingency Plan (Section 2.0) will be revised whenever:

- Applicable regulations are revised;
- The plan fails in an emergency;
- The Site or work activities change in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or in a way that changes the response necessary in an emergency;
- The list of emergency coordinators changes; or
- The list of emergency equipment changes.

In addition, this Waste Management Plan will be updated if, in the future, NERT'S generator status changes or waste characteristics change from those addressed in this plan.

ABBREVIATIONS AND ACRONYMS

ANSI	American National Standards Institute
ASD	Accumulation start date
CAA	Container accumulation area
CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
EC	Emergency Coordinator
EPA	U.S. Environmental Protection Agency
ETI	Envirogen Technologies Incorporated
FOL	Field Operation Leader
H&S	Health and safety
HWMP	Hazardous Waste Management Plan
LDR	Land disposal restriction
LQG	Large quantity generator
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NERT	Nevada Environmental Response and Trust
RCRA	Resource Conservation and Recovery Act
RQ	Reportable quantity
SAA	Satellite accumulation area
SSO	Site Safety Officers

1.0 INTRODUCTION AND PURPOSE

This Hazardous Waste Management Plan (HWMP) has been prepared to address the proper management of solid wastes characterized as hazardous waste generated by investigation and remediation activities at the NERT facility at 510 S. Fourth Street, Henderson, Nevada (herein after referred to as the “Site”). During demolition of buildings as part of investigation and remediation activities, more than 1,000 kilograms (kg) of hazardous waste were generated at the Site within a single month. As a result, NERT registered the Site with the Nevada Division of Environmental Protection (NDEP) as a Nevada large quantity generator (LQG). The NDEP assigned U.S. Environmental Protection Agency (EPA) ID Number NVR 000 091 819 to the Site. NERT continues to have potential to generate hazardous waste episodically in quantities that would result in classification as a LQG.

This plan addresses management of hazardous waste, universal waste, and used oil to comply with state of Nevada laws and regulations for LQGs, which incorporate by reference federal requirements under the Resource Conservation and Recovery Act (RCRA). Nevada has additional management requirements related to container labeling, documentation of weekly inspections, and submission of manifests back to the state.

The entirety of the Site is owned by NERT. A portion of the property owned by NERT is leased to Tronox LLC (Tronox), which uses it for ongoing chemical manufacturing operations (referred to herein as the “Tronox Leasehold”). While most, if not all, of the hazardous waste generated within the footprint of the NERT property will be generated at the Tronox Leasehold, Tronox is itself an LQG of hazardous waste. Tronox maintains its own hazardous waste identification number and plan for managing hazardous waste generated as a result of its own operations. As a result, the Tronox Leasehold is not considered part of the Site. This HWMP does not apply in any way to Tronox’s operations and applies solely to the investigation and remediation activities being performed at the Site by Tetra Tech, on behalf of NERT. All hazardous waste generated from such investigation and remediation activities will be manifested to a disposal facility using NERT’s hazardous waste identification number for the Site.

Any and all solid wastes generated as a result of investigation and remediation activities at the Site and determined to be hazardous waste will be managed in accordance with this HWMP. Waste determination procedures and findings are discussed in more detail in Section 5.0.

This plan incorporates the following plans required of LQGs:

- RCRA Contingency Plan (Section 2.0), as required by *Nevada Administrative Code* (NAC) 444.8632, incorporating Title 40 *Code of Federal Regulations* (40 CFR) 262.34(a)(4) and 265 Subpart D by reference;
- Hazardous Waste Training Plan, including job descriptions (Section 3.0), as required by NAC 444.8632, incorporating 40 CFR 262.34(a)(4) and 265.16 by reference; and
- Waste Minimization Plan (Section 4.0), as required by NAC 444.8632, incorporating 40 CFR 262.27 by reference.

This document also addresses waste characterization (Section 5.0), waste management (Section 6.0), waste documentation and transportation (Section 7.0), and recordkeeping (Section 8.0).

2.0 RCRA CONTINGENCY PLAN

This RCRA contingency plan contains the elements required by NAC 444.8632, 40 CFR 262.34(a)(4), and 40 CFR Part 265 Subpart D, to allow Site personnel to effectively handle and report emergencies that could affect hazardous waste at the Site.

Copies of this RCRA contingency plan, including all revisions to this plan, will be or have been:

- Maintained at the Site, and
- Submitted to the St. Rose Dominican Hospital, City of Henderson Police Department, City of Henderson Fire Department, City of Henderson Office of Emergency Management, Las Vegas Metropolitan Police Department, and Clark County Fire Department.

Copies of letters to response agencies submitting the initial plan and revised sections of the plan are included as Appendix A.

Tetra Tech, on behalf of NERT, will review and amend this contingency plan, if necessary, whenever:

- Applicable regulations are revised;
- The plan fails in an emergency;
- The Site changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or in a way that changes the response necessary in an emergency;
- The list of emergency coordinators (ECs) changes; or
- The list of emergency equipment changes.

2.1 EMERGENCY COORDINATORS

The EC will be on the premises or on-call to coordinate all emergency response measures. In the event that the primary EC is not available to respond to an emergency in a short period of time, the primary EC will designate authority to the designated alternate EC. Both the EC and the designated alternate EC are thoroughly familiar with all aspects of the Site's contingency plan, all operations and activities at the Site, the location and characteristics of waste handled, the location of all records at the Site, and the Site layout, and have the authority to commit the resources needed to carry out this plan.

The primary and alternate ECs will be familiar with:

- All aspects of this RCRA contingency plan;
- Operations and activities at the Site;
- Location and hazardous properties of the wastes handled at the Site;
- Location of hazardous waste records;
- Layout of the Site;
- Agreements made with state or local authorities; and
- Outside emergency response contractors who can assist in the event of an emergency.

Tetra Tech, on behalf of NERT, will train employees in proper waste handling and emergency procedures relevant to their job responsibilities (Section 3.0).

ECs at the NERT Site are:

PRIMARY EC

Steve Clough
Trust Environmental Contact
Office: (702) 960-4309
Home/Cell: (702) 686-9611
Home Address: 825 Plockton Ave.
Henderson, Nevada 89012

ALTERNATE EC

Kyle Hansen
Trust Environmental Contact
Office: (702) 966-8340
Home/Cell: (801) 949-6663
Home Address: 1700 Estrella Street
Las Vegas, Nevada 89117

2.2 OUTSIDE EMERGENCY RESPONDER ARRANGEMENTS

This section refers to arrangements with response agencies, including their contact information and resources. Section 2.3, which follows, describes agency or contractor responses to fires and explosions, medical emergencies, and spills. This contingency plan has been submitted to St. Rose Dominican Hospital, City of Henderson Police Department, City of Henderson Fire Department, City of Henderson Office of Emergency Management, Las Vegas Metropolitan Police Department, and Clark County Fire Department.

Procedures for Site personnel are contained in the remaining sections of this contingency plan. Table 1 provides a list of emergency contacts and their associated telephone numbers. This table is posted where it is readily available to Site personnel (for example, field office and other central and visible location) and in any less-than-90-day container accumulation area (CAA). A copy of the emergency contact list and routes to the nearest hospital and clinic will be kept in all Site vehicles.

2.2.1 Fires and Explosions

Different response procedures are in place depending upon if the incident occurs on the Tronox Leasehold portion of the Site or on other portions of the Site. In the event that a fire or explosion occurs off of the Tronox Leasehold, 9-1-1 will be notified first. If an incident occurs on the Tronox Leasehold, Tronox security will be notified first, who will then call 9-1-1. The Emergency Coordinator, as designated in this plan will be notified as soon as possible of any fire or explosion.

In the event of fire or explosion, it is anticipated that the fire department will function as the lead agency until the emergency situation is resolved. The Henderson Fire Department consists of nine stations and has been divided into two battalions, with approximately 60 personnel per shift. The City of Henderson Fire Department has the ability to respond to emergencies with two truck companies. Daily staffing of the engine companies consists of one captain, one engineer, one firefighter and one firefighter/paramedic. The Technical Rescue Team on each shift provides expertise on swift water, confined space, high angle, trench rescues, and vehicle and heavy machinery extrication.

A HazMat Team formed by the City of Henderson Fire Department provides response, detection, and decontamination capabilities for incidents involving hazardous materials. If hazardous waste is involved in the fire or explosion situation, the fire department will be notified of the hazards presented by the waste. However, this team is not a primary response contractor for non-emergencies.

Table 1 Emergency Contacts

Agency	Telephone
EMERGENCY (Police, Fire, and Ambulance)	9-1-1
Tronox Security/EMT (Emergency)	(702) 651-2200 via cell
St. Rose Dominican Hospital, Henderson, NV	(702) 564-2622
Poison Control Center	(800) 222-1222
City of Henderson Police Department (Non-emergency)	(702) 267-5000
Las Vegas Metropolitan Police Department (Non-emergency)	(702) 828-3111 or 311
Fire Departments (Non-emergency)	Henderson: (702) 267-2222 Clark County: (702) 455-7311
Public Utility Clearance – Nevada One Call	8-1-1 usanorth811.org
Henderson Public Utilities (emergency numbers)	Call 9-1-1 first NV Energy Electric – (702) 402-2900 Natural Gas – (877) 860-6020 Water – (702) 267-5900
Site Contacts	
Steve Clough (Emergency Coordinator)	Office: (702) 960-4309 Home/Cell: (702) 686-9611
Kyle Hansen (Alternate Emergency Coordinator)	Office: (702) 966-8340 Home/Cell: (801) 949-6663
Andrew Steinberg (NERT Coordinator)	(312) 498-2800
Tronox Contact – John Holstrom (Non-emergency) Alternates: Shift Supervisor (plant permits/assistance) Gilbert Bucu, Project Engineering	(702) 465-6703 (702) 592-3759 (702) 651-2353
Contractors	
Envirogen Technologies Inc. (ETI) Wendy Prescott	Cell: (702) 371-9307
Spill Notification	
NDEP 24-hour Spill Hotline	(888) 331-6337
National Response Center (oil/chemical spills)	(800) 424-8802

2.2.2 Spill Response and Clean Up

Should there be a spill or release of hazardous waste, the EC will be notified and will evaluate whether the Site's trained personnel can safely and effectively clean up the spill. In addition to Tetra Tech contractors active at the Site, NERT has a master service agreement in place with Tetra Tech that would allow mobilization of emergency responders to address larger spills. Based on the volume of material released, NERT also will notify state and federal spill response hotlines, as necessary. The NERT Coordinator will be notified as soon as possible of any reportable quantity release.

2.2.3 Ambulance Services

The City of Henderson provides complete emergency medical services (EMS), from first response to hospital transport. The City of Henderson Fire Department currently has seven transport-capable paramedic rescue units serving the city 24 hours a day, each staffed with firefighters/paramedics. Nine fire engines, two truck companies, and one heavy rescue are equipped and staffed to provide first-response services from nine fire stations throughout the city. Each of the nine fire stations has an engine company staffed with firefighters/paramedics who provide advanced life support first response. The truck companies are also staffed with firefighters/paramedics, and the heavy rescue is staffed with EMT-trained personnel. All emergency response units are equipped with defibrillators. All front-line paramedic rescue units are equipped with 12-lead EKG monitors.

2.2.4 Tronox Response Team

In the event of an emergency on the Tronox Leasehold portion of the Site, Tronox security will be notified first, who will then call 9-1-1. Tronox security may also be notified for support during emergencies on the Site proper. In addition, the evacuation alarm (Section 2.7) is administered by Tronox security.

2.3 GENERAL EMERGENCY PROCEDURES

This section describes the general procedures for responding to an emergency and the follow-up procedures after an emergency. These procedures will apply to all emergencies, but additional actions specific to spills, fires, and explosions are included in Sections 2.4 through 2.6. Evacuation procedures are in Section 2.7.

If an emergency cannot be handled using resources available at the Site, personnel will evacuate to a safe place of refuge, and the appropriate emergency response agencies will be notified. It has been determined that the majority of potential emergency situations would be better supported by outside emergency responders. These agencies are located within a reasonable distance from the area of Site operations, which ensures adequate emergency response time.

In the event that Site personnel cannot control the incident through offensive and defensive measures, the EC will enact the following emergency notification procedures to secure additional assistance:

- If evacuated to a location on the Tronox Leasehold portion of the property, contact Tronox security first, who will then call 9-1-1.
- Otherwise, call 9-1-1 or other emergency contacts (Table 1) to report the emergency and provide the following information:
 - Location of emergency;
 - Type of emergency;
 - Number of injured personnel; and
 - Brief description of what occurred.

- Stay on the phone and follow the instructions given by the operator. The operator will then notify and dispatch the proper emergency response agencies.

When there is an imminent or actual emergency situation, the EC will immediately:

- Notify personnel of the nature of the emergency and initiate evacuation, as necessary, using cellular telephones; and
- Notify appropriate state or local agencies with designated response roles, if their help is needed.

When there is an emergency, the EC will immediately identify the character, exact source, amount, and areal extent of released materials, if any.

Concurrently, the EC will assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that may result from the emergency.

If the EC determines that the emergency could threaten human health or the environment, the EC will report the findings to the necessary agencies (Table 1) as follows:

- If the EC's assessment indicates that evacuation of local areas (for example, neighboring businesses, etc.) may be advisable, the EC will immediately notify appropriate local authorities. The EC will be available to help appropriate officials decide whether local areas should be evacuated; and
- The EC will immediately notify NDEP (using the 24-hour toll free number: 888-331-6337) and the National Response Center (using the 24-hour toll free number: 800-424-8802).

The EC's assessment report will include:

- Name and telephone number of reporter;
- Name and address of the Site;
- Time and type of incident (for example, release, fire);
- Name and quantity of material(s) involved, to the extent known;
- The extent of injuries, if any; and
- The possible hazards to human health or the environment outside the Site.

2.3.1 Actions during the Emergency

During an emergency, the EC will take all reasonable measures necessary to prevent the emergency from causing a release of other hazardous waste or hazardous chemicals (if any) at the Site. If the Site stops operations in response to the emergency, the EC will monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate. The EC will also stop processes and operations, collect and contain released waste, and remove or isolate containers.

In the event of an emergency alarm at the Site, as indicated by a notification using cellular telephones or the activation of the Tronox alarm (Section 2.7), the primary response action is for personnel to safely halt operations and move to the designated evacuation area at the direction of the EC (location should be upwind and not involved in the emergency) and to remain there until the all-clear signal is given by the EC or outside agency emergency responder personnel (for example, the fire department).

When the alarm sounds, all motor vehicle movement in the affected area will cease and vehicles on roads will clear the right-of-way in and around the affected area and remain parked until emergency vehicles have passed or the EC has directed them to move. The EC will direct personnel to stay clear of the affected areas of the Site and if required, direct other Site personnel (outside the affected area) to the evacuation area.

The EC will provide insipient emergency prevention activities such as:

- Initial (for example, non-structural) fire-fighting support (using fire extinguishers) and prevention;
- Initial spill control and containment measures that can be performed by qualified personnel with appropriate training (for example, the ECs);
- Evacuation of personnel from emergency situations and notification of Site and emergency personnel if emergency occurs; and
- Initial medical support (or direction to qualified first aid/CPR qualified persons at the Site) for injury/illness requiring only first aid-level support

Any response beyond the above initial or incipient actions will be performed by outside responders (for example, fire department, ambulance services, or spill response contractor, as appropriate).

2.3.2 Actions Immediately After Emergency

Immediately after an emergency, the EC will provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the Site.

If the container is damaged, the cleanup materials will be put temporarily in container with a lid until a new container is brought to replace any damaged or leaking container. If any liquid waste is generated, the liquids will be placed into a U.S. Department of Transportation (DOT) approved container compatible with the type of waste, then sampled and analyzed to determine appropriate characterization and disposal requirements.

The EC will ensure that, in the affected area(s) of the Site:

- No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
- Emergency equipment listed in the contingency plan (Table 2) is cleaned of adhering waste, restocked, and fit for its intended use before operations resume.

Table 2 Emergency Equipment

Equipment	Capabilities	Location
Unit 4 Cell Building Area		
Fire extinguishers	Tri-class (ABC)	<ul style="list-style-type: none"> • Each company vehicle • AP-5 Pond process tank area •
Spill kit	Container labeled "spill kit," containing a supply of sorbent materials, sorbent pads, and sorbent booms	<ul style="list-style-type: none"> • Conex box south of the AP-5 Pond process tank area
Dry cleanup equipment	Broom and shovel	<ul style="list-style-type: none"> • Broom at the AP-5 Pond process tank area • Shovel in the conex box south of the AP-5 Pond process tank area

Equipment	Capabilities	Location
First aid kit	Industrial kit with burn kit and blood borne pathogen kit for first aid and CPR needs based on American National Standards Institute (ANSI) standards.	<ul style="list-style-type: none"> AP-5 Pond process tank area
Eye wash stations	Two plumbed eye wash stations	<ul style="list-style-type: none"> AP-5 Pond process tank area
Safety shower	Two plumbed safety showers	<ul style="list-style-type: none"> AP-5 Pond process tank area
Decontamination Equipment	water hose	<ul style="list-style-type: none"> AP-5 Pond process tank area
Envirogen Technologies Incorporated (ETI) Laboratory		
Spill kit	Spill response equipment includes: 5 lbs. granular sorbent material for acids, 5 lbs. granular sorbent materials for caustics, broom	<ul style="list-style-type: none"> Cupboard in laboratory
Fire extinguisher	Tri-class ABC extinguisher	<ul style="list-style-type: none"> Inside laboratory
Shower	Standard shower	<ul style="list-style-type: none"> In bathroom next to the laboratory

Within 15 days after an incident, the EC will submit a written report on the incident to NDEP. The report will include:

- Name, address, telephone number, and EPA ID number of the Site;
- Date, time, and type of incident (for example, fire, explosion);
- Name and quantity of material(s) involved;
- The extent of injuries, if any;
- An assessment of actual or potential hazards to human health or the environment, where this is applicable;
- Estimated quantity and disposition of recovered material that resulted from the incident;
- Cause of incident; and
- Description of corrective action taken to prevent reoccurrence of the incident.

The contingency plan also will be reviewed and revised, as necessary, after any incident.

2.4 SPILL AND RELEASE PROCEDURES

Both hazardous waste (for example, contaminated concrete debris) and hazardous materials (for example, diesel fuel, or asbestos-containing debris) may be spilled or released at the Site.

In the event of a spill:

- The observer of the spill will:
 - Notify the EC immediately and keep others out of the area.
 - Direct traffic away from the spill area.

- If it can be safely stopped, the source of the release may be addressed (for example, closing a container).
- If the situation has the potential to result in a fire, explosion, or exposure or if there is an uncontrolled release (an imminent or actual emergency situation), **call 9-1-1 or Tronox security (702-651-2200)**, depending on the location of the release (Section 2.3).
- Proceed to a safe location.
- Upon notification, the EC will:
 - Evaluate the spill and sound the alarm if not already done.
 - Identify the character, exact source, amount, and areal extent of any released materials.
 - Observe personnel for any signs of overexposure.
 - If necessary, notify others in the area and proceed to move away from the area to an upwind evacuation area following the evacuation plan (Section 2.7).
 - If the situation has the potential to result in a fire, explosion, or exposure or if there is an uncontrolled release, **call 9-1-1 or Tronox security (702-651-2200)**, if a notification has not already been made.
- If the release can be addressed by the Site response team (EC and trained hazardous waste personnel) in a safe manner with the available personal protective equipment and response equipment (Table 2), the services of the response contractor may not be required. Tetra Tech personnel will use the spill kit to contain/absorb and remove spilled materials.
- For larger spills or releases that cannot be addressed by the response personnel, the EC will:
 - Inform the site safety officers (SSOs) of all consultants and contractors hired by NERT.
 - Notify the appropriate local, state, and federal agencies, if necessary, based on the volume of material released.
- After the spill has been cleaned up, the EC will:
 - Sound the all-clear.
 - Direct waste disposal for any cleanup wastes.
 - Conduct required follow-up reporting and documentation.
 - Evaluate and implement corrective actions.
 - As necessary, revise the contingency plan.

Spills in excess of Reportable Quantities must be reported to NDEP. The reportable quantity for hazardous waste is based on the federal EPA guidelines established under Title III, List of Lists (40 CFR 302). Reportable quantities for wastes that have been or are likely to be generated at the NERT Site include:

- Ignitable waste (D001): More than 100 pounds;
- Reactive waste (D003): More than 100 pounds; and
- Characteristic chromium waste (D007): More than 10 pounds of waste.

The reportable quantity for petroleum products, such as gasoline, diesel, and hydraulic fluid is 25 gallons or 3 cubic yards of contaminated material, or the presence on or in groundwater.

A spill of any quantity that affects a water way, or water of the State, must be reported, regardless of the quantity, according to NDEP spill reporting hotline guidance at http://ndep.nv.gov/bca/spil_rpt.htm.

Spills must be reported to the NDEP as soon as possible, but no later than the end of the first working day of the release.

2.5 FIRE PROCEDURES

Site personnel are responsible for fire protection in all of their work areas at all times. Approved fire-fighting equipment and extinguishers in adequate quantities for their work activities must be provided. Fire extinguishers will be kept in close proximity to field activities and their location will be discussed during daily tailgate safety meetings. **Note that a fire extinguisher cannot put out a perchlorate fire, and evacuation will be mandatory for such an event.**

Fire extinguishers will be inspected annually by a contracted professional fire suppression equipment service company and inspected monthly by the EC or the EC's staff to ensure:

- Sufficient charge
- No physical damage
- Tamper indicators are in place
- Up-to-date inspection tag

In the event of a fire:

- The observer of the fire or explosion will:
 - Notify the EC immediately and keep others out of the area.
 - Direct traffic away from the incident.
 - **Call 9-1-1 or Tronox security (702-651-2200)**, depending on the location of the release.
 - Proceed to a safe location.
- Upon notification, the EC will:
 - Evaluate the fire area and sound the alarm if not already done.
 - If necessary, notify others in the area and proceed to move away from the area to an upwind evacuation area following the evacuation plan (Section 2.7).
 - If a notification has not already been made, **call 9-1-1 or Tronox security (702-651-2200)**.
- If the fire can be addressed by the response team (EC and trained hazardous waste personnel) in a safe manner with available personal protective equipment and response equipment (Table 2), subcontractor personnel will use the fire extinguishers.
 - A fire that cannot be readily extinguished with one 10-pound fire extinguisher will be considered major and may require evacuation of project and/or Site personnel to safe areas.
 - In no case will workers attempt to fight any fire that cannot be reasonably extinguished within 30 seconds to 1 minute.
 - Workers attempting to extinguish the fire will stand 10 feet away from the fire, aim the nozzle at the base of the fire, and sweep from side to side.
 - Other staff should remain far enough away from the spray to avoid being splashed with the extinguishing agent.
- For fires that cannot be extinguished by Site response personnel (an imminent or actual emergency situation), the EC will:
 - Initiate evacuation procedures (Section 2.7).
 - After calling 9-1-1, describe to the fire dispatcher:
 - Location of the fire, number of injured persons and nature of injuries, if known;
 - Substance(s), chemical(s), or materials involved in the fire;
 - Size of the fire and available fuel (estimate);

- Extent of fire;
- Rate that the fire is expanding (estimate);
- Time the fire started; and
- Any other pertinent information (for example, are there injuries).
- Assist firefighters and/or police by notifying them of the location of any flammable or explosive material stored on the premises.
- For all fires, the EC will:
 - Inform NERT subcontractor SSOs.
 - Notify the appropriate local, state, and federal agencies, if necessary based on the volume of material released
- After the fire has been extinguished, the EC will:
 - Sound the all-clear, as allowed by fire or police personnel.
 - Direct waste disposal for any cleanup wastes.
 - Conduct required follow-up reporting and documentation.
 - Evaluate and implement corrective actions.
 - As necessary, revise the contingency plan.

2.6 EXPLOSION PROCEDURES

An explosion is a risk at the Site because of the nature of the materials being manufactured at the Tronox lease property, materials contaminating soil, and construction and demolition debris.

An explosion is considered an imminent or actual emergency situation (Section 2.3). In the event of an explosion, **personnel will immediately initiate evacuation procedures** (Section 2.7). From a safe location, personnel will **call 9-1-1 or Tronox security (702-651-2200), and notify the EC immediately.**

In the event of an explosion:

- Upon notification, the EC will:
 - Sound the alarm if not already done.
 - Initiate evacuation procedures (Section 2.7).
 - If a notification has not already been made, **call 9-1-1 or Tronox security (702-651-2200).**
 - Describe to the fire dispatcher or Tronox security:
 - Location of the explosion, number of injured persons and nature of injuries, if known;
 - Substance(s), chemical(s), or materials involved in the explosion;
 - If a fire results, the size of the fire and available fuel (estimate);
 - Extent of fire;
 - Rate that the fire is expanding (estimate);
 - Time the fire started and the time the fire was extinguished; and
 - Any other pertinent information (for example, are there injuries or damage to structures, equipment, or waste containers from the explosion).
 - Assist firefighters and/or police by notifying them of the location of any flammable or explosive material stored on the premises.
 - Inform the Tetra Tech SSO, a Tetra Tech office, and a Site representative immediately.

winds for that day, and will be discussed during the daily health and safety (H&S) tailgate meeting that begins each day's work. Evacuation routes from the Site and places of refuge are dependent on the location at which work is being performed and the circumstances under which an evacuation is required. Additionally, meteorological conditions (that is, wind speed and direction) may dictate evacuation routes. Evacuation should always take place in an upwind direction from the incident. Windsocks are located at several locations at the Site. An additional windsock will be placed near the work area for quick identification of wind direction.

During an evacuation, personnel will remain at the refuge location until directed otherwise by the Tetra Tech FOL or the incident commander of the emergency response team. When possible, the place of refuge will also serve as the telephone communications point for that area. The FOL, SSO, or EC will perform a head count at this location to account for and confirm the location of Site personnel. Emergency response personnel will be notified immediately of any unaccounted personnel. The SSO will document the names of personnel at the Site (on a daily basis) in the health and safety logbook or the daily tailgate safety meeting form. This information will be used to perform the head count in the event of an emergency.

During an evacuation, decontamination procedures will be performed only if doing so does not further jeopardize the welfare of Site workers. However, it is unlikely that an evacuation would occur which would require workers to evacuate the Site without first performing decontamination procedures.

The NERT Coordinator shall be contacted immediately in the event of a fatal or serious injury, an unpermitted environmental release, or any environmental, health or safety incident that is likely to generate significant publicity or an adverse situation for the Trust.

3.0 HAZARDOUS WASTE TRAINING

NAC 444.8632 and 40 CFR 262.34(a)(4) and 265.16 require that personnel involved in managing hazardous waste, preparing hazardous waste for transportation to the disposal facility, and implementing the RCRA contingency plan receive initial and annual training to perform their hazardous waste duties.

NERT understands that the owner or operator of a facility with hazardous waste operations must provide a program of classroom instruction and/or on-the-job training for Site personnel, which will be provided by Tetra Tech. This plan establishes how Site personnel will be instructed to safely perform their duties associated with hazardous waste management, and in a manner that ensures NERT's compliance with the hazardous waste regulations applicable to the positions in which personnel acting on behalf of NERT are employed, and the duties to which they are assigned.

For each position related to hazardous waste management tasks at the Site:

- Personnel will be named and have a written job title and job description.
- The training type and frequency of training will be documented.
- The Site will maintain training records until closure of the Site. Training records for former employees will be kept for at least 3 years from the date the employee last worked at the Site.

This hazardous waste training plan will be updated when personnel names, job titles, or functions and duties of assigned personnel change, or if regulations are updated.

3.1 TRAINING REQUIREMENTS

Training will familiarize hazardous waste personnel (Appendix B) with implementation of the RCRA contingency plan (Section 2.0), including Site-specific emergency equipment and systems, and emergency procedures such as: 1) communication and alarm systems; 2) responses to fires or explosions; and 3) shutdown of operations. This training will also include information about hazardous waste determination, management of hazardous waste onsite, weekly inspection procedures, and manifesting of waste. This training is required for all relevant personnel initially and then annually thereafter.

All project personnel must complete 40 hours of introductory hazardous waste operations (HAZWOPER) training prior to performing work at the Site. Project personnel who have had introductory training more than 12 months prior to work at the Site must have completed 8 hours of refresher training within the past 12 months before being cleared for work at the Site. In addition, 8-hour supervisory training in accordance with 29 CFR 1910.120(e)(4) will be required for subcontractor supervisory personnel. Additionally, all personnel with 40 hours of initial HAZWOPER training are also required to have a minimum of 3 days of field experience under the direct supervision of an experienced supervisor. Table 3 summarizes training frequencies.

Table 3 Training Frequency

Training	Hazardous Waste Team	All Other Site Supervisors	All Other Site Personnel
Hazardous Waste Management	Annual	n/a	n/a
Hazardous Waste Operations (HAZWOPER) 40-Hour Initial Training	One-time	One-time	One-time
HAZWOPER 8-hour Refresher	Annual	Annual	Annual
HAZWOPER 8-hour Supervisor	Annual	Annual	n/a
Basic First Aid	Biennial	Biennial	Biennial
Cardiopulmonary Resuscitation (CPR)	Biennial	Biennial	Biennial
Tronox Site Training	Semiannual	Semiannual	Semiannual
Perchlorate Hazard Communication	One-time	One-time	One-time

3.2 JOB DESCRIPTION

Following is the job description for members of the hazardous waste management team. All members of the team, which includes the EC and alternate ECs, will receive the same hazardous waste training. Personnel holding these positions are identified by name in Appendix B.

3.2.1 Duties and Responsibilities

Members of the hazardous waste management team have the responsibility for implementation of this HWMP, including the contingency plan and this training plan. Additional duties include:

- Reviewing and signing waste profiles, manifests, and land disposal restrictions forms;
- Tracking manifests returned from the designated disposal facility and preparing exception reports, as needed;
- Maintaining all records required for LQGs;
- Ensuring that waste is being managed correctly at the Site;
- Ensuring that waste accumulation areas are inspected thoroughly weekly and that any deficiencies are addressed in a timely fashion;
- Verifying proper containers and packaging requirements for hazardous waste;
- Marking and labeling of the hazardous waste containers while at the Site; and
- Maintaining the waste tracking log sheet and coordinating disposal of the containers with waste transportation and disposal vendors.

3.2.2 Training Requirements

The following material will be included in both initial and refresher hazardous waste management training. Initial training will be within 6 months of employment, and workers will be under the direct supervision of a trained employee until initial training is conducted. Refresher training will be conducted annually.

Training is designed to meet the federal and state requirements for hazardous waste and is designed for Site personnel who are responsible for ensuring compliance with state and federal hazardous waste regulations (the hazardous waste management team). Upon completion, personnel will know how to properly identify, store, ship, and dispose of hazardous waste.

An outline of a typical RCRA training course is included as Appendix C. Hazardous waste management topics include:

- Regulatory structure, key terms, and definitions;
- Waste identification: what is a hazardous waste and what is excluded from the definition of solid waste or of hazardous waste;
- How to properly accumulate and manage hazardous waste ;
- Preparing the EPA Hazardous Waste Manifest;
- Hazardous waste recordkeeping, reporting, and the training standard;
- General packaging and labeling requirements;

3.3 DOCUMENTATION

NERT and its subcontractors will ensure that all personnel included in this hazardous waste training plan document their training. An example of the training log is included as Appendix D. Documentation of HAZWOPER training and refreshers is maintained as part of the Site's H&S program.

4.0 WASTE MINIMIZATION

RCRA sets national policy that emphasizes the importance of reducing or preventing the generation of hazardous waste. It also contains provisions to promote implementation of waste minimization programs at hazardous waste management facilities. Under those provisions, hazardous waste generators must certify that they have a waste minimization program in place to reduce the volume or quantity and toxicity of their waste to the degree they determine to be economically practicable.

Because of the nature of waste generation at the Site, generation of hazardous waste will be for a finite period during investigation and remediation activities at the Site. Given the nature of the hazardous waste that is expected to be generated, health and safety requirements suggest that hazardous wastes be handled as little as possible and that hazardous wastes be removed from the Site as quickly as possible. However, to minimize the volume or toxicity of waste generated at this Site, the following is being implemented:

- NERT and its contractors have a training program in place to familiarize personnel with proper waste management and have designated individuals as Site points of contact to assist other Site personnel in the proper management of waste, should it be generated.
- Wastes that are recyclable (such as scrap metal) will be recycled rather than disposed of, to minimize the regulatory burden and the quantity of regulated hazardous waste generated.
- Small spills that occur will be promptly cleaned up and contained to prevent the spread of contaminants to other areas or other materials.
- Contaminated material (if generated) will not be placed with clean material.

5.0 WASTE CHARACTERIZATION

To properly manage waste at the Site and to ensure proper transport and disposal, all solid waste must be characterized to determine if it is hazardous waste.

Waste characterization will be based on one or a combination of the following criteria:

- Laboratory analysis of a representative sample of the waste for those contaminants reasonably expected to be present; and
- Generator knowledge about the process or waste (for example, safety data sheets).

Each hazardous waste must be characterized to identify applicable treatment standards and underlying hazardous constituents in accordance with 40 CFR Parts 261 and 262.

Before demolition of a building at the Site, waste characterization sampling will be conducted to classify waste materials. The following types of debris are anticipated to be generated by building demolition activities:

- Steel debris from the demolition of tanks;
- Processed concrete debris;
- Cut-up steel debris;
- Materials removed from trench drains;
- Demolished piping along with the contents of that piping;
- Material contained in electrolytic cells;
- Materials used to construct electrolytic cells;
- Surface and subsurface soil; and
- Sump, purge, and decontamination water.

Appendix E describes the waste streams generated at the Site to date, including the generating process and the waste characterization method used for each.

6.0 WASTE MANAGEMENT AT THE SITE

When hazardous waste is generated at the Site, it will be managed properly in accordance with all applicable Nevada hazardous waste regulatory requirements and in consideration of the environmental and safety hazards the waste presents. Included in management of the waste are the requirements for specific marking and labeling of containers, container selection and use, storage and accumulation requirements, routine inspections, and recordkeeping. Hazardous waste generated at the Site is managed only in containers. Some hazardous construction and demolition waste may be placed directly into truck trailers as it is removed from demolition areas, without being managed in a less-than-90-day container accumulation area (CAA).

6.1 GENERATOR WASTE TRACKING LOG

NERT will maintain an updated waste tracking log. A blank waste tracking log is included as Appendix F. The log, at a minimum, will document the following:

- Container Identification Number;
- Accumulation Start Date (ASD) for waste in each new container (date the waste is first placed into the roll off or container);
- Date by which waste must be shipped to the disposal facility (less than 90 days from ASD);
- Manifest number;
- Manifest date (date the waste is picked up);
- Final copy of manifest received date; and
- Final weight of waste per manifest (weight determined at treatment/disposal facility).

6.2 GENERATOR IDENTIFICATION NUMBER

NDEP has assigned EPA ID Number NVR 000 091 819 to the Site.

6.3 HAZARDOUS WASTE CONTAINER SELECTION AND USE

The container selection and management requirements for hazardous waste are summarized below.

Containers will be selected based on condition and classification. They will be:

- Inspected prior to use to ensure they are in good condition (inspect upon receipt). Containers that are not in good condition (leaky, rusted, severely dented, or lids or bungs damaged) will not be used.
- Evaluated prior to use to determine if the container is compatible with the waste (for example, are the containers acceptable for concrete debris, Class 9 hazardous waste solids, and “sift proof”?). Incompatible containers or containers delivered which contain other wastes will not be used.
- DOT approved (for example, United Nations specified roll-off boxes).
- No unwashed container will be accepted for use.

While at the Site, containers of hazardous waste will be managed to meet all LQG requirements. They will be:

- Closed at all times, except when waste is being added or removed. Waste containers holding solids will have snug-fitting lids or tarps.
- Opened, handled, or stored in a manner that does not cause the container to rupture or leak, or the content to be released to the environment.
- Positioned so that labels and markings are clearly visible.
- Stored so that the container can be inspected from all sides (for example, 30 inches from the building).
- Marked with an ASD when the first waste is put in the container.
- Labeled with the words “Hazardous Waste” and relevant waste codes (Appendix E).
- If ignitable or reactive, managed more than 50 feet from the property boundary.

6.4 LESS-THAN-90-DAY CAA

For quantities of hazardous waste exceeding 55 gallons, a less-than-90-day CAA will be set up that conforms to the hazardous waste requirements summarized below.

- The waste must be placed in approved containers (except bulk concrete waste, which will be directly loaded into trucks that immediately leave the Site).
- The area must be inspected not less than once per calendar week while in use to ensure containers are in good condition. A weekly hazardous waste accumulation area inspection log is included as Appendix G to this plan. Copies of these inspections and corrective action for deficiencies found during inspections will be maintained in the hazardous waste file records at the Site main office.
- A procedure is in place to document and ensure that wastes remain in such areas for less than 90 days. A hazardous waste tracking log is included as Appendix F. All containers will also be marked with an ASD.
- The area will only be used for storage of hazardous waste and not for storing non-hazardous waste materials, chemicals, or equipment. Good housekeeping practices will be followed.
- A copy of the emergency spill response procedures will be posted at the accumulation area, and appropriate spill response material will be located in an immediately accessible location (Section 2.0).
- A two-way communication or cellular telephone will be available to the operator when working in this area for emergency communication purposes. Any staff involved in management of hazardous waste must carry a cellular phone at all times.

6.5 SATELLITE ACCUMULATION AREA (SAA)

In areas where small amounts of hazardous waste are being generated, waste may be managed in SAA containers. Waste must be under the control of the generator and at the point of generation. The amount of hazardous waste in the SAA must not exceed 55 gallons.

When quantities exceed 55 gallons, the container must be moved to the less-than-90-day CAA. When it arrives at the CAA, it must be marked with the ASD (the day the container is moved to the CAA).

The SAA must conform to the hazardous waste requirements summarized below.

- Closed at all times, except when waste is being added or removed. Waste containers holding solids will have snug-fitting lids or tarps.
- Opened, handled, or stored in a manner that does not cause the container to rupture or leak, or the content to be released to the environment.
- Positioned so that labels and markings are clearly visible.
- Stored so that the container can be inspected from all sides (for example, 30 inches from the building).
- Labeled with the words “Hazardous Waste” and relevant waste codes (Appendix E).
- If ignitable or reactive, managed more than 50 feet from the property boundary.

6.6 UNIVERSAL WASTE MANAGEMENT REQUIREMENTS

Universal wastes include used fluorescent or high-intensity lamps, used mercury-containing devices (for example, switches), and used lead-acid or nickel-cadmium batteries. Universal waste must be sent for recycling within 1 year of the ASD.

Containers holding universal waste will be:

- Closed at all times, except when waste is being added or removed. For containers without lids (for example, lamp ship-back boxes), “closed” consists of taped or Velcro closure.
- Opened, handled, or stored in a manner that does not cause the container to rupture or leak, or the content to be released to the environment.
- Positioned so that labels and markings are clearly visible.
- Stored so that the container can be inspected from all sides (for example, 30 inches from the building).
- Marked with an ASD when the item is put in the container.
- Labeled with the words “Used Lamps,” “Used Mercury-Containing Devices,” or “Used Batteries,” as appropriate.

If a lamp is broken, personnel should leave the room, and the room should be ventilated for 5 to 10 minutes by opening a window or door to the outdoor environment. Materials needed to clean up the broken lamp include stiff paper or cardboard; sticky tape; damp paper towels or disposable wet wipes (for hard surfaces); and a glass jar with a metal lid or a sealable plastic bag.

Vacuuuming is not recommended unless broken glass remains after all other cleanup steps have been taken because the vacuum could spread mercury-containing powder or mercury vapor. Fragments should be scooped up using stiff paper or cardboard. Duct tape can be used to pick up any remaining small glass fragments and powder. All materials, including the broken lamp and the used tape should be put in a glass jar, plastic bag, or other sealable container. The broken lamps should be managed following the same procedures outlined above.

Lead acid batteries should be stored in containers so that terminals do not contact each other. The terminals should be covered with clear, non-conducting tape.

6.7 USED OIL MANAGEMENT REQUIREMENTS

Used oil may be generated during maintenance of vehicles, compressors, process pumps, or hydraulic equipment. In order to be exempt from hazardous waste management requirements or other levels of regulation, it should be collected for recycling by a used oil transporter with an EPA ID number.

Alternatively, it may be transported to a recognized collection center (for example, an oil retailer or a community recycling center).

Containers holding used oil will be:

- Closed at all times, except when waste is being added or removed.
- Opened, handled, or stored in a manner that does not cause the container to rupture or leak, or the content to be released to the environment.
- In good condition (no dents or visible rust).
- Stored so that the container can be inspected from all sides (for example, 30 inches from the building).
- Labeled with the words "Used Oil."

If used oil is spilled, it will be cleaned up immediately using oil absorbent material (Table 2). Used oily absorbent material will be containerized, and the container will be labeled "Used Oil Absorbent." Used oily absorbent can be disposed of as nonhazardous refuse if the container does not hold any free liquids. If the container does hold free liquid, it should be sent for recycling as used oil.

7.0 WASTE SHIPMENTS

7.1 DISPOSAL FACILITY SELECTION

Disposal facilities selected for receiving hazardous waste will:

- Be in physical compliance with applicable state laws;
- Not be releasing any hazardous wastes, hazardous constituents, or hazardous substances;
- Meet minimum technology requirements;
- Have a corrective action program to address releases and environmentally significant releases at non-receiving units at the facility; and
- Demonstrate a properly designed system, and must presently operate (and historically have operated) in a manner that controls the types of materials accepted for disposal.

A list of hazardous waste disposal facilities approved by NERT is included as Appendix H.

7.2 HAZARDOUS WASTE DOCUMENTATION

A properly trained (Section 3.0) and designated Site representative will review and sign waste profile sheets, land disposal restriction (LDR) forms, and manifests. A disposal facility-approved and generator-signed waste profile sheet (along with supporting waste characterization documentation, such as sample results) will result in the disposal facility issuing a permit (authorization) for that waste to be shipped to the disposal facility. Every load of hazardous waste leaving the Site also will be accompanied by a properly filled out and signed manifest with an LDR form attached.

Waste documentation will include the following, as applicable:

- Waste profile sheets (forms supplied by disposal facility) with supporting waste information (such as laboratory analysis) attached;
- Manifests for hazardous waste shipments;
- LDR notification/certifications (forms supplied by disposal facility);
- Copy of the disposal facility-issued permit or acceptance letter to accept wastes as profiled; and
- Copies of the weekly inspection and waste tracking log.

7.3 TRANSPORTATION

All RCRA-regulated hazardous wastes are considered to be DOT hazardous materials and must be shipped in accordance with applicable DOT requirements. Hazardous material transported on U.S. land, water, or air must be properly classified, described, packaged, marked, and labeled for shipment as required by applicable DOT regulations. A DOT-trained person will review 49 CFR 172.101 to verify the packaging, shipping description, marking, labeling, and manifest prior to shipment.

7.4 REPORTABLE QUANTITY DETERMINATION

Hazardous waste is subject to federal and state spill or release reporting requirements according to the following:

The reportable quantity for hazardous waste is based on EPA guidelines established under Title III, List of Lists (40 CFR 302). Reportable quantities (RQ) for wastes that have been generated at the NERT Site include:

- Ignitable waste (D001): More than 100 pounds
- Reactive waste (D003): More than 100 pounds
- Characteristic chromium waste (D007): More than 10 pounds

A spill of any quantity that affects a water way within the state of Nevada must be reported, regardless of the quantity. The RQ applies to each shipment of hazardous waste and must be included with the proper shipping description on the manifest.

7.5 PACKAGING

Once a hazardous waste is characterized, it will be packaged, labeled, marked and/or placarded, as necessary, and in accordance with applicable regulations.

7.6 UNIFORM HAZARDOUS WASTE MANIFEST

For each bulk container of hazardous waste, the container will be transported to the disposal facility containing the following information on the manifest (EPA Form 8700-22):

- Shipping Description (including technical or group names (49 CFR 172.101)).
- Total Quantity: The total quantity of waste must appear either before or after the above information along with the unit of measure (e.g., P for pounds).
- Reportable Quantity: If a RQ of a hazardous material or substance applies, then an "RQ" must appear either before or after the shipping description.

Other required information:

- EPA identification numbers for: 1) generator; 2) transporter(s); and 3) disposal facility.
- 24-hour emergency response telephone number supplied by the disposal facility. This number must be:
 - Monitored at all times the hazardous material is in transportation, including storage incidental to transportation;
 - Monitored by a person who is knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information for that material, or has immediate access to a person who possesses such knowledge and information;
 - Listed conspicuously on the manifest (e.g., "Emergency Contact _____").
- Signatures of generator (Shipper's Certification) and first transporter signature.
- Disposal facility name and address.
- Profile number assigned by the disposal facility.

The facility's copy of the signed manifest will be detached and retained at the facility after both the facility and first transporter have signed. The remaining copies of the manifest (including original front page) will be given to the transporter along with the LDR certification (first disposal only), and the disposal facility permit. One copy of the manifest returned from the disposal facility will be sent to NDEP.

7.7 PLACARDING

Most hazardous waste generated by the NERT Site will be contained in bulk roll off containers. When the waste containers have 1,001 or more pounds of Class 9 hazardous waste inside, placards are required. Placards will be affixed on each side and each end (all four sides) of the vehicle.

NERT will confirm use of placards for hazardous waste transportation (49 CFR 172.506). Appropriate placards will be determined by DOT-trained personnel. For most wastes, placards will be supplied by the transporters in advance, based on the waste profile. The Site will have extra placards on hand, in the event the transporter arrives without placards.

8.0 RECORDKEEPING AND REPORTING FOR HAZARDOUS WASTE GENERATORS

The following sections contain the recordkeeping and reporting requirements for hazardous waste generators.

8.1 MANIFESTS AND BILLS OF LADING

The Site will maintain all hazardous waste manifests for the duration of the project. After the completion of the project, manifests will be maintained for at least 3 years after the last shipment of hazardous waste. For individual shipments, the copy of the manifest offered by the transporter will be maintained at the Site until the counter-signed manifest is received from the designated facility. After the counter-signed manifest is received, all earlier copies of that manifest can be discarded. The Site will also maintain for any bills of lading for used oil or other regulated wastes (for example, polychlorinated biphenyl wastes) and receipts for shipments of universal waste for the duration of the project.

8.2 EXCEPTION REPORTING

If the counter-signed manifest is not received from the designated facility within 35 days of the date the waste was collected by the transporter, the Site will document all attempts to locate the waste during this time, including efforts to contact the transporter and/or the owner or operator of the receiving facility. If the original manifest is not received by day 45, an exception report will be filed with NDEP. All calls or other efforts undertaken to locate shipments will be documented in a log and will be included along with the exception report and a copy of the manifest with a cover letter.

8.3 DISCREPANCY REPORTING

Discrepancies due to differences between the quantities (for example, a weight difference of > 10% or different number of containers) of hazardous waste designated on the manifest or shipping papers and the quantity of hazardous waste a facility actually receives will be rectified within 15 days after the disposal facility receives the waste.

8.4 BIENNIAL HAZARDOUS WASTE REPORTING

As a LQG of hazardous waste, the Site is required to complete and submit a Biennial Report to NDEP documenting the volumes of hazardous waste generated during odd-numbered years. The forms will be submitted by March 1 of each even-numbered year. Copies of all biennial reports will be maintained at the Site for the duration of the project. After the completion of the project, copies of Biennial Reports will be maintained for at least 3 years after the last shipment of hazardous waste.

8.5 TRAINING RECORDS

Hazardous waste training records on current personnel will be kept until closure of the Site. Training records on former employees will be kept for at least 3 years from the date the employee last worked at the Site.

8.6 RECORDKEEPING

Hard copies or electronic copies available to personnel onsite will be maintained as outlined below. The following hazardous waste records will be retained by the Site:

- Hazardous waste Biennial Reports
- RCRA Site Identification Form
- Waste characterization records (e.g., profiles, analytical documentation, generator knowledge)
- Hazardous waste manifests
- Spill reports
- Training records on emergency preparedness
- Weekly inspection logs for hazardous waste accumulation areas
- Waste tracking logs
- Exception reports
- Site inspection reports, logs, and schedule
- Written contingency plan (Section 2.0 of this HWMP)

Appendix A

Emergency Response Coordination

Letters

OFFICE OF THE NEVADA ENVIRONMENTAL RESPONSE TRUST TRUSTEE

Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee

35 East Wacker Drive - Suite 1550

Chicago, Illinois 60601

Tel: (312)498-2800

December 11, 2017

City of Henderson Office of Emergency Management and Fire Department
Henderson City Hall
P.O. Box 95050
Henderson, NV 89009

Subject: RCRA Contingency Plan Update
Nevada Environmental Response Trust (NERT)
510 S. Fourth Street
Henderson, Nevada

Dear Sir or Madam:

Enclosed is a copy of the updated Contingency Plan for the above referenced Site. Your organization will be contacted to provide emergency services, should the need arise.

Nevada Environmental Response Trust (NERT or Trust) intends to continue conducting operations in a safe and environmentally compliant manner and hopes that your services will never be required for our Site. However, in the event of an emergency, you may be called upon to respond. We therefore encourage you to review this contingency plan and to visit our Site to familiarize your staff with our operations.

You may comment on this plan and schedule a visit by contacting me by telephone at (702) 960-4309, or in writing at the address above.

Thank you for your prompt attention to this matter.

Office of the Nevada Environmental Response Trust



Stephen R. Clough, P.G., CEM

Emergency Coordinator

CEM Certification Number: 2399, exp. 3/24/19

Enclosures (1)

OFFICE OF THE NEVADA ENVIRONMENTAL RESPONSE TRUST TRUSTEE

Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee

35 East Wacker Drive - Suite 1550

Chicago, Illinois 60601

Tel: (312)498-2800

December 11, 2017

St. Rose Dominican Hospital
3001 St Rose Pkwy
Henderson, NV 89052

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510 S. Fourth Street
Henderson, Nevada

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Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee

35 East Wacker Drive - Suite 1550

Chicago, Illinois 60601

Tel: (312)498-2800

December 11, 2017

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P.O. Box 95050
Henderson, NV 89009

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Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee

35 East Wacker Drive - Suite 1550

Chicago, Illinois 60601

Tel: (312)498-2800

December 11, 2017

Las Vegas Metropolitan Police Department
400 S. Martin L. King Blvd.
Las Vegas, NV 89106

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Nevada Environmental Response Trust (NERT)
510 S. Fourth Street
Henderson, Nevada

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Tel: (312)498-2800

December 11, 2017

Clark County Fire Department
575 E. Flamingo Rd.
Las Vegas, NV 89119

Subject: RCRA Contingency Plan Update
Nevada Environmental Response Trust (NERT)
510 S. Fourth Street
Henderson, Nevada

Dear Sir or Madam:

Enclosed is a copy of the updated Contingency Plan for the above referenced Site. Your organization will be contacted to provide emergency services, should the need arise.

Nevada Environmental Response Trust (NERT or Trust) intends to continue conducting operations in a safe and environmentally compliant manner and hopes that your services will never be required for our Site. However, in the event of an emergency, you may be called upon to respond. We therefore encourage you to review this contingency plan and to visit our Site to familiarize your staff with our operations.

You may comment on this plan and schedule a visit by contacting me by telephone at (702) 960-4309, or in writing at the address above.

Thank you for your prompt attention to this matter.

Office of the Nevada Environmental Response Trust



Stephen R. Clough, P.G., CEM

Emergency Coordinator

CEM Certification Number: 2399, exp. 3/24/19

Enclosures (1)

Appendix B Hazardous Waste Personnel

Name	Job Title
Steve Clough	Primary Emergency Coordinator, Hazardous Waste Management Team
Kyle Hansen	Alternate Emergency Coordinator, Hazardous Waste Management Team

Appendix C Training Outline

Nevada Environmental Response Trust RCRA Training

- 1) Introduction to RCRA (40 CFR 260-268, NAC 444)
 - a) Definition of a solid waste
 - b) Exclusions
 - c) Definition of a hazardous waste
 - i) Listed wastes (F, P, U, K)
 - ii) Characteristic wastes (D)
 - d) Universal wastes
- 2) Waste Characterization Process
 - a) Review exclusions
 - b) Generator/Process knowledge
 - c) Sampling and Analysis
 - i) SW-846 and totals vs. TCLP
 - ii) Representative sampling
 - iii) Disposal facility requirements and profiles
- 3) Generator Requirements
 - a) EPA ID Number
 - b) Generator categories and quantities
 - i) Large quantity generator (LQG) definition
 - ii) Small quantity generator (SQG) definition
 - iii) Conditionally exempt small quantity generator (CESQG) definition
 - c) LQG accumulation areas and inspection requirements
 - i) 90-day accumulation and accumulation start dates
 - ii) Container management, marking, and labeling
 - iii) Container condition
 - iv) Weekly inspection criteria and documentation
 - v) Emergency response equipment
 - d) Satellite Accumulation Areas
 - i) 55-gallon limit
 - ii) Container management, marking, and labeling
 - iii) Point of generation issues

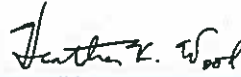
- 4) Contingency Plan
 - a) Role of the Emergency Coordinators
 - b) Arrangements with emergency providers (e.g., fire department and haz mat team).
 - c) Emergency equipment contents and location
 - d) General emergency procedures
 - e) Procedures for fire, spills, and explosions
 - f) Evacuation plan
- 5) Transportation and Disposal
 - a) RCRA waste requirements and correlation to DOT regulations
 - b) Use of labels and use of placards
 - c) Shipping description
 - d) Manifesting requirements
 - i) Manifest contents
 - ii) Land Disposal Restrictions (LDR) forms
 - iii) Exception reporting
- 6) Recordkeeping
 - a) Manifests
 - b) Inspection logs
 - c) Waste analyses
 - d) Discrepancy Report
 - e) Biennial Reports

Appendix D Training Log


ANNUAL AND INITIAL HAZARDOUS WASTE TRAINING

Year: 2017

Training Conducted By: Heather Wood



Digitally signed by Heather Wood
DN: cn=Heather Wood, o=Tetra Tech EM
Inc., email=heather.wood@gmail.com, c=US
Date: 2017.01.06 15:30:00 -0700

Name	Signature Certifying Training	Date of Hazardous Waste Training
STEPHEN CLOUGH		1/6/2017

Appendix E

Hazardous Wastes Generated

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
D05-01	3825-16-15444	Construction debris	Nonhazardous	n/a	Nonhazardous construction and demolition debris and trash: plastic, metal, fiberglass, wood, painted wood (not lead-based paint per HAZMAT Survey), and bird droppings.	Pre-Demolition Hazardous Materials Inspection Unit 1 Chlorinator Building and Cell Basement (Tetra Tech 2016) report confirmed via XRF analyses that painted wood and non-wood materials in this waste stream do not contain lead-based paint (Section 4.2.1 of the report) as defined by EPA.	No sampling required. Product and process knowledge that materials are inert debris and HAZMAT Survey for lead-based paint are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
D05-02	3825-16-15444	Concrete debris	Nonhazardous	n/a	Concrete debris generated from demolition of West End Unit 1 Chlorinator Building, floors 2, 3, and 4	Three composite samples were collected on July 26, 2016 and analyzed for TCLP VOCs, TCLP SVOCs, TCLP RCRA 8 metals, total PCBs (including Aroclor 1268), perchlorate, and chlorate. All VOCs, SVOCs, and PCBs were non-detect. For RCRA metals there were hits in all three samples for barium and chromium; however, all results were below RCRA regulatory levels. Sample data also reported very low levels of chlorate and perchlorate.	Sample ID(s): 2nd Floor Concrete; 3rd Floor Concrete; and 4th Floor Concrete. Data report(s): J153750-1	Service Rock Products - Henderson, Nevada
D05-03	n/a	Scrap metal, including painted metal with LBP	Nonhazardous	n/a	Scrap metal (steel, etc.) from building – structural and equipment or component metal, including painted metal with lead-based paint	Pre-Demolition Hazardous Materials Inspection Unit 1 Chlorinator Building and Cell Basement (Tetra Tech 2016) report confirms in Section 6.2 (Lead Based Paint) that “Materials that are recycled, such as metal components are not subject to waste characterization provisions under EPA, but proper disclosure of lead containing materials should be provided to the recycling facility for hazard communication purposes.” Before shipment, Tetra Tech will provide notice to the scrap metal recycler that certain materials contain lead-based paint.	No sampling required.	Desert Recycling - Las Vegas, NV
D05-04	869951	Mercury vapor lamps	Universal	n/a	Mercury vapor lamps	Safety Data Sheet for mercury vapor lamps. Intact lamps may be managed under the Universal Waste Rules rather than full RCRA hazardous waste rules.	No sampling required.	Veolia ES Technical Solutions, Phoenix, AZ
D05-05	TBD	Non-friable asbestos gaskets	Nonhazardous	n/a	Non-friable asbestos gaskets (intact gaskets sandwiched within flanges).	Pre-Demolition Hazardous Materials Inspection Unit 1 Chlorinator Building and Cell Basement (Tetra Tech 2016) report confirms asbestos-containing materials in Section 4.1.1.	No sampling required (asbestos).	Republic Services - Apex Landfill, Las Vegas, NV
ETI-01	n/a	Used oil	Nonhazardous	n/a	Used oil generated during maintenance of compressors and pumps	Used oil is managed according to the provisions of 40 CFR 279.	No sampling required.	
ETI-02	TBD	Waste residue from aerosol cans	Hazardous	D001	Residue generated during puncture of aerosol cans of paint and lubricants	Safety Data Sheet for paints and lubricants.	No sampling required.	
ETI-04	3825-13-12348	Wastewater treatment FBR sludge	Nonhazardous	n/a	Sludge from the filter press, generated during biological reduction wastewater treatment.	The sludge is sampled and analyzed every 3 years for a special waste authorization. During the most recent sampling in June 2016, it was analyzed for TCLP metals and TCLP VOCs and was determined to be nonhazardous.	Sample ID(s): FBR Bio Solids Data Report(s): J149697-1	Republic Services - Apex Landfill, Las Vegas, NV
ETI-05	3825-13-12349	Filter cake from Cr removal	Nonhazardous	n/a	Sludge from the filter press, generated during wastewater treatment for chromium removal.	The sludge is sampled and analyzed every 3 years for a special waste authorization. During the most recent sampling in April 2016, it was analyzed for TCLP metals and TCLP VOCs and was determined to be nonhazardous.	Sample ID(s): IRON OXIDE BIN 0097 Data Report(s): J145121-1	Republic Services - Apex Landfill, Las Vegas, NV
ETI-06	N/A	Lab pack wastes	Hazardous	various	Lab pack initiated during cleanout of maintenance building	Waste determination was based on labels and material safety data sheets	No sampling required.	Clean Harbors, Aragonite, UT

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
F01-01	3825-17-3278	Weathered utility poles	Nonhazardous	n/a	During the AP-5 pond remediation project, one wooden power pole adjacent to the pond that is no longer in use will be removed and disposed of off-site. The project is not able to reuse the poles on site. It is estimated that the pole will constitute approximately 2 cubic yards of waste. It will be resized for disposal, and any resulting wood chips will be collected and disposed of with the poles.	The areas from where the pole will be removed is not within the pond or pond liner and containment area and are not anticipated to be contaminated from activities performed at the AP-5 pond or pond contaminants. The pole will be removed from the ground and any adhering loose soil from the below-ground portion of the poles will be removed and left in place on the ground at the respective locations.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
F99-01	3825-17-5148	Lift station #1 soil pile	Nonhazardous	n/a	Soil generated November 2016 as a result of excavations for the replacement of piping secondary containment at Lift Station 1	One 8-point composite sample was collected on 9/14/16, for an estimated 80 CY. The sample was analyzed for the gas and diesel range organics, RCRA 8 metals, perchlorate, SVOCs and VOCs, and mercury. No regulatory or project thresholds were exceeded.	Sample ID(s): LS1Pile-20170303 Data Report(s): 440-178767-1	Republic Services - Apex Landfill, Las Vegas, NV
K01-01	3825-16-20275	Masonry/concrete blast walls	Nonhazardous	n/a	Masonry/Concrete generated during demolition of the blast walls (9/6/16)	One 4-point composite sample was collected on 3/3/17, for an estimated 50 CY. Samples were analyzed for total and TCLP RCRA 8 metals, total and TCLP VOCs, perchlorate, SVOCs, and TPH-GRO and DRO. No regulatory or project thresholds were exceeded.	Sample ID(s): BlastWall-SP-1- 20160914. Data Report(s): J158601-1 (all data except dioxin/furan data) and J158601-2 (just dioxin/furan data)	Republic Services - Apex Landfill, Las Vegas, NV
K01-02	3825-16-20275	Concrete pads/foundations	Nonhazardous	n/a	Concrete generated during removal of the concrete pads/foundations for upcoming IRM activities (9/7/16-9/12/16)	see K01-01	see K01-01	Republic Services - Apex Landfill, Las Vegas, NV
K01-03	3825-16-20275	Asphalt pads	Nonhazardous	n/a	Asphalt generated during removal of the asphalt pads for upcoming IRM activities (9/7/16 - 9/12/16)	see K01-01	see K01-01	Republic Services - Apex Landfill, Las Vegas, NV
K01-04	3825-16-20273	Road base material removed during trenching	Nonhazardous	n/a	Soil (road base material) removed from ECAs 6 and 8 during the trenching for the installation of water lines for extraction well system (9/13/16)	One 4-point composite soil sample was collected on 9/14/16, for an estimated 16 CY, as described in SMP Section 4.2.2.1. Trench was across ECAs D6 and D8 so samples were analyzed for the more conservative chemicals of concern for D8-- asbestos, metals, hex chromium, perchlorate, pH, dioxins/furans, SVOCs, and chloride. Samples were also analyzed for flashpoint/ignitability and VOCs as may be required by disposal facility. No regulatory or project thresholds were exceeded.	Sample ID(s): Trench-SP-1-20160914. Data Report(s): J158601-1	Republic Services - Apex Landfill, Las Vegas, NV
K01-soil-01	3825-16-20487	Soil cuttings	Nonhazardous	n/a	Soil cuttings from drilling operations, soil flushing IRM soil borings, and well installations	Two composite samples were collected -- one from bin RT4576 on 7/14/2016 and composited from bins 508, RT4560, 501, and RT4570 on 8/10/16. The samples were submitted for analysis of VOCs,TPH carbon range C6-C40, Title 22 Metals, perchlorate, and hexavalent chromium. The second composite sample was also tested for chlorate and ignitability. No regulatory or project thresholds were exceeded.	Sample ID(s): IDW-RT4576, IDW-2-20160810 Data Report(s): 152875-1, 155352-1	Republic Services - Apex Landfill, Las Vegas, NV

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
K01-soil-08	3825-17-4134	AP-5 baseline soil cuttings	Nonhazardous	n/a	Soil cuttings from drilling operations, AP-5 area baseline source area characterization. All AP Area baseline source area characterization soil was generated from either ECAs D7, D8, and D5, or from non-ECAs in the AP-5 Area. The vast majority of excavated soil came from non-ECA areas.	see K01-soil-01	see K01-soil-01	Republic Services - Apex Landfill, Las Vegas, NV
K05-01	3825-16-21690	Concrete removed during construction of berm	Nonhazardous	n/a	Approximately 50 CY of concrete removed during construction of the berm north of the three 600,000-gallon Process Tanks; non- ECA area (2 piles)	Concrete located outside of an ECA, and generator has assumed that it is clean.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
K05-02	3825-16-21690	Asphalt removed during construction of berm	Nonhazardous	n/a	Approximately 100 CY of asphalt removed during construction of the berm north of the three 600,000-gallon Process Tanks; non-ECA area (2 piles)	see K05-01	see K05-01	Republic Services - Apex Landfill, Las Vegas, NV
K05-03	3825-16-21691	Diesel-impacted soil (10/28/16)	Nonhazardous	n/a	Diesel-impacted soil generated from a release of approximately 2 gallons of fuel from a cracked fuel filter on a water truck on 10/28/16 (est 0.5 CY).	Spill was not in an ECA, and diesel fuel does not contain hazardous constituents.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
K05-04	07-018-3439	Porous objects	Hazardous	D001	Porous objects (rope, miscellaneous plastic, trash, liner, and wood pieces) from AP-5 Pond	It is presumed, as a conservative measure, that the objects could contain residual ammonium perchlorate (AP) at less than 1% concentration, which may present the hazard of ignitibility. Due to the nature of the materials, they cannot be fully inspected by technicians and confirmed as free of contamination.	No sampling required. Product and process knowledge are sufficient.	US Ecology Landfill, Beatty, NV
K05-05	3825-17-3705	Treatment system equip and solids	Nonhazardous	n/a	Treatment system process equipment and solids mixing and transfer infrastructure debris, including HDPE piping ranging from 2 inches in diameter to 12 inches in diameter; plastic and neoprene hose; poly tubing; metal; PVC pallets; metal and non-metallic walkway grating; wooden telephone poles; electrical conduit; wire; various metal, HDPE, and PVC pipe fittings and valves; plastic liner; and pump parts.	Objects are been removed, sized, cleaned, and visually inspected/confirmed free of residual AP per the NERT AP-5 Pond Abandoned Equipment Work Plan and AP-5 Pond Object Removal Procedures .	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
K05-06	3825-16-21691	Diesel-impacted soil (11/10/16)	Nonhazardous	n/a	Diesel-impacted soil generated from a release of approximately 2 gallons of fuel during refueling of a crane on 11/10/16 (est 1 CY).	Spill was not in an ECA, and diesel fuel does not contain hazardous constituents.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
K05-07	3825-17-3278	Weathered utility poles	Nonhazardous	n/a	During the AP-5 pond remediation project, three wooden power poles located adjacent to the pond that are no longer in use will be removed and disposed of off-site. The project is not able to reuse the poles on site. It is estimated that the three poles will comprise approximately 10 cubic yards of waste. They will be resized for disposal, and any resulting wood chips will be collected and disposed of with the poles.	The areas where the three poles will be removed from are not located within the pond or pond liner and containment area and are not anticipated to be contaminated from activities performed at the AP-5 pond or pond contaminants. The poles will be removed from the ground and any adhering loose soil from the below-ground portion of the poles will be removed and left in place on the ground at the respective locations.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
K05-08	07-012-9455	Oily decontamination water	Nonhazardous	n/a	During the decontamination and resizing of metal debris from the AP-5 pond on November 17, 2016, approximately 1 quart of used gear oil from a Goulds pump was released into a tank that held approximately 900 gallons of decontamination water. Because the water was contaminated with oil, it could not be treated in the onsite WWTP. The water was contained and profiled for offsite disposal.	Because of the relative volumes of oil and water and because of the nature of the oil (compressor oil), the water is not expected to have become hazardous waste from the release of oil. The water consists of potable City water with trace amounts of perchlorate derived from decontamination activities. The water is not expected to be ignitable.	No sampling required. Product and process knowledge are sufficient.	Waste Management - Butterfield Station Landfill, Mobile, AZ
K05-09	07-012-8285	Coolant-contaminated soil	Nonhazardous	n/a	On 1/12/17, approximately 3 gallons of impacted soil generated from approximate release of <1 gal of coolant onto ground surface just west end of AP-5 Pond located in ECA D8 due to malfunctioning thermostat on 1/12/17	A sample was collected on March 29, 2017, and analyzed for total and TCLP VOCs, total and TCLP SVOCs, total and TCLP RCRA 8 metals, dioxins and furans, perchlorate, chlorate, ignitibility, and pH. No regulatory or project thresholds were exceeded.	Sample ID(s): Soil -K05-01 Data Report(s): 180991-1	US Ecology Landfill, Beatty, NV
K05-10	07-012-8285	Coolant-contaminated sand and absorbents	Nonhazardous	n/a	On 1/13/17, approximately 30 lbs (0.011 CY) generated from approximate release of <0.25 gals of coolant into drip pan below light plant that was secured in place due to windy conditions with a sand bag; absorbents used to soak up excess coolant	A sample was collected on March 29, 2017, and analyzed for total and TCLP metals. No regulatory or project thresholds were exceeded.	Sample ID(s): Soil -K05-02 Data Report(s): 180991-1	US Ecology Landfill, Beatty, NV
K05-11	n/a	Used mixer oil	Used oil	n/a	Used oil generated during maintenance of pumps, compressors, and other equipment for AP-5 Pond dewatering treatment. The oil does not come into contact with the water from AP-5.	Used oil is managed according to the provisions of 40 CFR 279.	No sampling required.	World Oil, Compton, CA
K05-12	n/a	Used hydraulic oil	Used oil	n/a	Used oil generated during maintenance of hydraulic equipment for AP-5 Pond dewatering treatment. The oil does not come into contact with the water from AP-5.	Used oil is managed according to the provisions of 40 CFR 279.	No sampling required.	World Oil, Compton, CA
K05-13	3825-17-18097	Used filter bags	Nonhazardous	n/a	Used filter bags generated during AP-5 wash water transfer operations	Three grab samples of filter bag material and filtrate were collected in June and September 2017 and analyzed for RCRA metals, ignitability, perchlorate, and pH. The samples from September also were analyzed for sulfide and cyanide. No regulatory or project thresholds were exceeded.	Sample ID(s): AP-5 Tank T-201 Filter Bag; Filter Bag and Filtrate (9/14/17), Filter Bag and Filtrate (9/19/17) Data Report(s): 187074-1; 182788-1	Republic Services - Apex Landfill, Las Vegas, NV
L09-01	3825-17-6226	Soil cuttings from Weir Dewatering geotech	Nonhazardous	n/a	Drill cuttings from the geotechnical investigation for L09 Weir Dewatering Water Treatment Plant.	A six-drum composite sample was collected on March 22, 2017, and analyzed for total VOCs, total SVOCs, total metals, perchlorate, and diesel- and gasoline-range organics. No regulatory or project thresholds were exceeded.	Sample ID(s): 6 Drum Sample Data Report(s): 180355-1	Republic Services - Apex Landfill, Las Vegas, NV
L09-02	3825-17-11805	Legacy soil/tamarisk pile	Nonhazardous	n/a	A mixed soil and brush pile that predates Tetra Tech remediation activity, likely generated during land clearing activities in late 2008 or early 2009.	A composite sample was collected on June 26, 2017, and analyzed for total VOCs, TCLP RCRA metals, SVOCs, perchlorate, ignitability, pH, and oil-, diesel- and gasoline-range organics. No regulatory or project thresholds were exceeded.	Sample ID(s): CWTP-150-20170626 Data Report(s): 187276-1	Republic Services - Apex Landfill, Las Vegas, NV
L09-03	TBD	Hydrocarbon-contaminated soil	Nonhazardous	n/a	Soil contaminated with diesel fuel from an overfilled diesel fuel tank.	Diesel fuel typically does not contain any hazardous constituents, and the soil is not in a known contaminated area.	No sampling required. Product and process knowledge are sufficient.	TBD

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
M02-01	858317	Fluorescent lamps	Universal	n/a	4-foot fluorescent lamps (intact), removed from fixtures prior to demolition of the Unit 4 Cell Building.	Safety Data Sheet for fluorescent lamps. Intact lamps may be managed under the Universal Waste Rules rather than full RCRA hazardous waste rules.	No sampling required.	Veolia ES Technical Solutions, Phoenix, AZ
M02-02	07-024-1571	Non-leaking PCB ballasts	PCB	n/a	Fluorescent lamp ballasts (intact), removed from fixtures prior to demolition of the Unit 4 Cell Building.	PCBs are not regulated as RCRA hazardous waste per 40 CFR 260-262 and equivalent state regulation. Ballasts that were suspected of containing PCBs and were either not labeled or not identified with labeling specifying "PCB-Free," were assumed to be PCB-containing. None of the PCB ballasts are leaking.	No sampling required.	US Ecology Landfill, Beatty, NV
M02-03	3825-16-10744	Structural steel with LBP & Galbestos	Nonhazardous	n/a	Structural steel painted with LBP with asbestos-containing mastic attached and Galbestos siding	EPA has stated that debris consisting of solid architectural components coated with LBP are unlikely to be hazardous waste because of the small ratio of lead paint to total waste mass. The US Army conducted a study which concluded that whole-building demolition debris is not likely to exceed TCLP limits for lead if it is handled as a single, whole waste stream and disposed of all together. Whole-building demolition debris is therefore considered a non-hazardous waste with regard to lead. The Pre-demolition Hazardous Materials Inspection report dated December 3, 2015, indicated Galbestos siding contains LBP and is an asbestos-containing material. A sample was collected on February 29, 2016, and was analyzed for total lead, TCLP lead, and PCBs. No regulatory or project thresholds were exceeded.	Sample ID(s): Unit 4 Galbestos, Unit 4 Galbestos (2) Data Report(s): 139535-1, 139535-2, and 144278-1	Republic Services - Apex Landfill, Las Vegas, NV
M02-04	3825-16-8337	Construction debris	Nonhazardous	n/a	Concrete debris generated from demolition of first floor slabs	Ten composite samples were collected May 22, 2016, and analyzed for TCLP VOCs, TCLP SVOCs, TCLP RCRA 8 metals, Total PCBs (including Aroclor 1268), perchlorate, and chlorate. No regulatory or project thresholds were exceeded.	Sample ID(s): SP-1-1, SP-2-1, SP-2-2, SP-2-3, SP-2-4, SP-2-5, SP-3-1, SP-3-2, SP-3-3, and SP-3-4 Data Report(s): 440-148230-1	Republic Services - Apex Landfill, Las Vegas, NV
M02-05	3825-16-10741	NH northern pipes with Cr	Nonhazardous	n/a	PVC pipe and valves and non-metallic walkway grating formerly associated with the AST previously northwest of the Unit 4 Cell Building; plastic covered plywood used during demolition for shoring; rebar; and steel piping and piping from SW and SE pipe ends.	Samples were collected on December 29, 2015. All samples were analyzed for VOCs, SVOCs, PCBs, RCRA 8 Metals, hexavalent chromium, perchlorate, ammonia, pH, and cyanide. No regulatory or project thresholds were exceeded.	Sample ID(s): SW #1 and SW #2; SE #1 and SE #2 (piping) Data Report(s): 139377-1 and 146643-2	Republic Services - Apex Landfill, Las Vegas, NV

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
M02-06	07-018-1649	Haz northern pipes with Cr	Hazardous	D001, D007	The northernmost two pipes the Unit 4 Cell Building (see M02-05)	Samples were collected on December 29, 2015. The samples were analyzed for VOCs, SVOCs, PCBs, RCRA 8 Metals, hexavalent chromium, perchlorate, ammonia, pH, and cyanide. After failing 20x rule for chromium and lead, NW #1, NW #2, N #1 Mid, NE #1, and NE #2 samples were recollected on February 24, 2016, for additional testing to include TCLP VOCs, TCLP SVOCs, TCLP RCRA 8 Metals, and Total PCBs. These results indicate TCLP chromium at 51 mg/L for NW #1, 93 mg/L for NW #2, 46 mg/L for N #1 Mid, 140 mg/L for NE #1, and 160 mg/L for NE #2. All samples passed TCLP for lead. Previous sampling of the piping contents indicated perchlorate concentrations ranged from 0.28% to 2%. Tt Chemist professional opinion is that this concentration of perchlorates inside piping residue/sediment may be characteristically ignitable.	Sample ID(s): NW #1, NW #2, N #1 Mid, NE #1, and NE #2 Data Report(s): 132550-1 and 139377-1	US Ecology Landfill, Beatty, NV
M02-07	07-024-1278	Electrolytic cell debris w/Cr	Hazardous	D007	Concrete inner linings and steel outer shells from 10 electrolytic cell vessels formerly in basement of Unit 4 Cell Building	Sample data was collected for concrete lining of electrolytic cells (composite samples) on May 9, 2016. The samples were analyzed for TCLP RCRA 8 metals, TCLP VOCs, TCLP Semi - VOCs, PCBs, chlorates, and perchlorates. TCLP analysis found 8.4 mg/L chromium and 0.50 mg/L barium. As a result, NERT considers the electrolytic cell vessel lining debris characteristically hazardous for chromium. Electrolytic cell lining Sample ID "Unit 4 Elec. Cell Debris" contained 1.1% total perchlorate and 0.72% total chlorate. The waste is not considered characteristically ignitable or reactive. The outer steel linings of the electrolytic cells represent not more than 33% of the total mass of the waste stream. The extremely rusted and degraded appearance of the steel suggests that it also would exhibit elevated concentrations of chromium. Based upon the degraded appearance of the steel, and because the steel represents a low percentage of total waste stream mass, NERT also considers the steel linings D007 (chromium) characteristic waste.	Sample ID(s): Unit 4 Elec. Cell Debris Data Report(s): 146858-1	US Ecology Landfill, Beatty, NV

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
M02-08	07-018-2328-2	Perchlorate residue in electrolytic cell vessels	Hazardous	D001, D007	Perchlorate material in one of ten electrolytic cell vessels	A sample of the material was collected on May 9, 2016, and analyzed for chlorate and perchlorate. Sample exhibited 610 mg/kg (0.061%) chlorate and 120,000 mg/kg (12%) perchlorate. Based on the concentration of perchlorate and the physical properties (powder residue), NERT considers this waste likely to be characteristically ignitable. The material also was analyzed for TCLP metals. Chromium was observed at a concentration of 8.4 mg/L. Based on this analysis, NERT considers this waste characteristically hazardous for chromium. At the direction of the destination facility, the material is treated in its container to remove the characteristic of reactivity. It is stabilized by adding water to the container.	Sample ID(s): E. Cell Layer Data Report(s): 146858-1 and 146858-2	Clean Harbors, Aragonite, UT
M02-10	07-024-3623	Sediments from excavation of utility tunnel	Hazardous	D001	Following demolition of the Unit 4 Cell Building floor, three voids and a tunnel were discovered on the southwest side of the Unit 4 basement, and one void and tunnel were discovered on the southeast side of the Unit 4 basement. Tt Staff and equipment created access to the voids and tunnels using an excavator equipped with hydraulic hammer to facilitate installation of 8-inch diameter stand pipes to provide drilling access from the basement floor through the sub-basement floor to freely access the underlying soil. Subsequent to demolition and removal of the concrete floor immediately above the voids and tunnels, sediment was discovered.	On July 19, 2016, Tetra Tech collected one grab sample from the sediments removed from the utility tunnel void. The sample was analyzed for total perchlorate, chlorates, TCLP VOCs, TCLP SVOCs, and PCBs (including Aroclor 1268). Because of the concentration of chlorates in the sediment (1.5%), NERT considers this waste to be characteristically hazardous waste as an oxidizer and assigned the waste code D001.	Sample ID(s): Utility Tunnel Sediment. Data Report(s): J153245-1 and J153245-2	US Ecology Landfill, Beatty, NV
M02-11	3825-17-0971	Soil cuttings from Unit 4 investigation	Nonhazardous	n/a	Beginning on June 27, 2016, these cuttings were generated during the advancement of 72 boreholes and installation of one monitoring well related to the Units 4 and 5 Investigation second mobilization.	Five composite samples were collected from each of the five rolloff containers between 7/15/16 and 10/17/16. The samples were analyzed for total VOCs, SVOCs, OC pesticides, PCBs, total RCRA 8 metals, perchlorate, flashpoint ignitability, and pH. In addition, samples were analyzed using for TCLP VOCs and metals. All samples passed TCLP for VOCs and metals. Perchlorate concentrations were less than 1,200 mg/Kg, below the project threshold of 5% for ignitability and reactivity. Flashpoint testing determined that the material was "not ignitable."	Sample ID(s): CHHP20185, CHHP21196, CHHP21350, CHHP21367, CHHP20532 Data Report(s): J155003-1, J152934-2, J152934-3, J155869-1, J157644-1, J162211-1	Republic Services - Apex Landfill, Las Vegas, NV
M02-12	TBD	Concrete cores from Unit 4 investigation	Nonhazardous	n/a	Beginning on June 27, 2016, these cuttings were generated during the advancement of 72 boreholes and installation of one monitoring well related to the Units 4 and 5 Investigation second mobilization.	One composite sample was collected on August 16, 2016. The sample was analyzed for total and TCLP VOCs, total and TCLP RCRA 8 metals, perchlorate, flashpoint ignitability, and pH. A second sample was collected on September 6, 2016. It was also analyzed for SVOCs, OC pesticides, and PCBs.	Sample ID(s): U4U5-Concrete Cores-16-08-2016, CONCRETE CORES Data Report(s): J155817-1, J157648-1	Republic Services - Apex Landfill, Las Vegas, NV
M05-01	3825-17-9665	Soil from soil flushing treatability study	Nonhazardous	n/a	The soil was generated beginning on August 11, 2016, from (a) the drilling of 20 soil borings to evaluate treatment effectiveness and (b) the destruction of eight lysimeters.	Composite samples were collected from bin 2612 and bin 2620 on 01/04/17. The samples were submitted to TestAmerica for analysis of VOCs, TPH-DRO and -ORO, metals, perchlorate, and hexavalent chromium. No regulatory or project thresholds were exceeded.	Sample ID(s): 2612-IDW, 2620-IDW Data Report(s): J172250-1	Republic Services - Apex Landfill, Las Vegas, NV

3 - Waste Streams for Shipment

Stream #	Profile #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Destination Facility
M05-02	n/a - not required, C&D waste	Nonhazardous construction debris	Nonhazardous	n/a	PVC piping, lining, and geotextile associated with the soil flushing treatability study.	Materials were only ever in contact with clean fill soil, food-grade glycerol, and stabilized Lake Mead water.	No sampling required. Product and process knowledge are sufficient.	Republic Services - Apex Landfill, Las Vegas, NV
M11-01	3825-17-6226	Soil from bioremediation treatability study	Nonhazardous	n/a	Beginning February 20, 2017, these soil cuttings were generated from the preliminary field activities phase (installation of soil borings and monitoring wells) associated with Task M11 Seep Well Field Area Bioremediation Treatability Study.	Characterization of this waste as nonhazardous is based on analytical testing. Three composite samples were collected from each of the three rolloff containers on 3/15/17 and 3/16/17. The samples were analyzed for VOCs, total and TCLP RCRA 8 metals, perchlorate, flashpoint ignitability, and pH.	Sample ID(s): SWFTS-IDW-SO1, -SO2, and -SO3 Data Report(s): J179815-1	Republic Services - Apex Landfill, Las Vegas, NV
M12-01	3825-17-9665	Soil from in situ chromium treatment	Nonhazardous	n/a	Soil cuttings were generated between March 2017 and June 2017 during drilling of injections and monitoring wells associated with the M12 in situ chromium treatability study.	One five-point composite sample was collected on March 29, 2017. The sample was analyzed for total VOCs, total metals, ignitability, hex chromium, TPH-GRO and -DRO, chlorate, and perchlorate. No regulatory or project thresholds were exceeded.	Sample ID(s): IDW-CT-20170329-Composite Data Report(s): J180978-1	Republic Services - Apex Landfill, Las Vegas, NV
M13-01	3825-17-9665	Soil Cuttings from AP Area Treatability Study	Nonhazardous	n/a	Soil cuttings generated in June 2017 during the Plot 2 system installation activities phase of the AP Area treatability study.	Nine samples were collected on June 27, 2017, as part of the trenching activities. Samples were analyzed for SVOCs, perchlorate, RCRA metals, ignitability, and pH. No regulatory or project thresholds were exceeded.	Sample ID(s): Plot 2-Trench-N1-2.0-20170627, -N2-2.0-20170627, N3-2.0-20170627, -S1-2.0-20170627, -S2-2.0-20170627, -S3-2.0-20170627, -E1-2.0 Solid 06/27/17, -W1-2.0-2 Solid 06/27/17, B1-4.0-20170627 Data Report(s): J187360-1	Republic Services - Apex Landfill, Las Vegas, NV

4 - Other Wastes

Stream #	Short Waste Desc	Waste Category	Waste Code	Waste Description	Waste Characterization Basis	Sample ID(s) and Report Number(s)	Disposition
M11 IDW	Rinse water from frac tank cleanout	Nonhazardous	n/a	Investigation-derived waste (IDW) rinse water from frac tank cleanout associated with the Seep Well Field (SWF) Area bioremediation treatability study	The rinse water was sampled on September 23, 2017, and analyzed for metals, VOCs, and perchlorate. No regulatory or project threshold was exceeded.		reinjecting into wells

Appendix F Waste Tracking Log

Appendix G

Weekly Inspection Log

Weekly Inspection Checklist

For the Month

for Hazardous Waste Container Accumulation Area

_____, 20__

	Date	Time	Inspector's Printed Name AND Signature
Week 1	//		
Week 2	//		
Week 3	//		
Week 4	//		
Week 5	//		

Mark answers Yes or No below					
Week 1	Week 2	Week 3	Week 4	Week 5	
					Are containers marked or labeled as "hazardous waste"?
					Are containers marked with the hazardous waste code?
					Are containers marked with the accumulation start date?
					Are any containers near to or exceeding the LQG 90-day timeframe?
					Are container labels visible and readable?
					Are containers kept closed except when being actively used for placement of waste?
					Are containers in good condition?
					Are any containers leaking?
Universal Waste/PCBs					
					Are containers of universal waste and PCB ballasts closed?
					Are containers marked with an accumulation start date?
					Are universal waste containers labeled as "used lamps" or "used batteries," as appropriate?
					Are any universal waste containers near to or exceeding the 1-year timeframe?
					Are PCB containers marked with the "Caution PCBs" label?
					Are PCB containers near to or exceeding the 180-day timeframe?
Safety Equipment					
					Are fire extinguishers charged?
					Are spill kits stocked?
					Is the first aid cabinet stocked?
					Is the eye wash station functioning properly?
					Is the air horn available?

CHECKLIST CONTINUES ON PAGE 2

Appendix H

Approved Disposal Facilities

Approved Disposal Facilities	
Facility	Location
Republic Services	Apex Regional Landfill 13550 N. Highway 93 Las Vegas, Nevada 89165
US Ecology	Highway 95 Beatty, Nevada 89003
Clean Harbors	11600 N. Aptus Road Aragonite, Utah 84029
