# **Work-in-Progress**

# Excavation Plan for Phase B Soil Remediation of RZ-C Addendum to the Removal Action Work Plan Tronox LLC Henderson, Nevada

July 1, 2010

Prepared For:

Tronox LLC 560 West Lake Mead Parkway Henderson, Nevada 89015

Prepared By:

Northgate Environmental Management, Inc. 300 Frank H. Ogawa Plaza, Suite 510 Oakland, California 94612

Deni Chambers, CEM Principal-in-Charge Derrick Willis Project Manager Ted Splitter, P.E., CEM Principal Engineer



# Excavation Plan For Phase B Soil Remediation of Remediation Zone RZ-C Addendum to the Removal Action Work Plan Tronox LLC Henderson, Nevada

### Responsible Certified Environmental Manager (CEM) for this project

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 provided 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.

Susan M. Crowley, CEM 1428 Exp.:03/08/11

Crowley Environmental LLC



## TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1 1.2 1.3	SITE DESCRIPTIONBACKGROUNDRZ-C SITE CONDITIONS	2
2.0	SCOPE OF WORK	4
2.1 <b>3.0</b>	Excavation Boundary Constraints	
3.1 3.2 3.3 3.4 3.5	Work Area Preparation Well Abandonment Excavation Post-Excavation Backfilling Air Monitoring	
4.0	INSTITUTIONAL AND ENGINEERING CONTROLS	10
5.0	REFERENCES	11

#### **TABLES**

- 1 Excavation Area Summary
- 2 Target Remediation Concentrations: NDEP Worker Background Comparison Levels, Background and Risk-Based Cleanup Goals

#### **FIGURES**

- 1 Remediation Zone C Excavation
- 2A Remediation Zone C West Excavation
- 2B Remediation Zone C South Excavation
- 2C Remediation Zone C North Excavation
- 2D Remediation Zone C East Excavation
- 3 Approximate Location of Utilities RZ-C
- 4 Location of Monitoring Wells RZ-C

#### **APPENDIX**

A RZ-C Analytical Data

#### 1.0 INTRODUCTION

Northgate Environmental Management, Inc. (Northgate) has prepared this Excavation Plan (EP) for Remediation Zone C (RZ-C) at the Tronox LLC (Tronox) facility located in Henderson, Nevada (the Site). This EP is an addendum to the *Removal Action Work Plan for Phase B Soil Remediation of Remediation Zones RZ-B through RZ-E* (RAW) issued May 4, 2010 and approved by the Nevada Division of Environmental Protection (NDEP) May 12, 2010. The EP presents the methods and procedures to be used to implement the remedial alternative approved by NDEP for RZ-C to address contaminated soil within 10 feet below ground surface (bgs) at the Site. The scope of work presented in this EP is based on the NDEP-approved scope of work contained in the RAW. It incorporates the results of a pre-confirmation sampling program (described in Section 1.2) performed to identify the limits of the cleanup actions. Soil remediation work will be performed in accordance with this EP, the Standard Operating Procedures (SOPs) established by Basic Remediation Company (BRC, 2009a-j) for the Black Mountain Industrial (BMI) complex, and the *Quality Assurance Project Plan* (QAPP; AECOM and Northgate, 2009). A human health risk assessment will be conducted for RZ-C in accordance with the *Health Risk Assessment Work Plan* (HRA WP; Northgate, 2010a).

The objective of this EP is to present a cleanup strategy that complies with the NDEP Order issued to Tronox on December 14, 2009 to remove impacted soil from RZ-C by the end of 2010. For purposes of the EP and designation of potential remediation areas, "contaminated soil" is generally defined as soil containing chemicals of potential concern (COPCs) at concentrations exceeding NDEP worker Basic Comparison Levels (BCLs), or modified risk-based goals agreed upon by NDEP. For metals with background concentrations exceeding BCLs (e.g., arsenic), "contaminated soil" is defined as concentrations that exceed the background for the RZ as a whole. There are no NDEP BCLs for asbestos; therefore, "asbestos-related contaminated soil" is defined as amphibole (one or more long fibers) and/or chrysotile (five or more long fibers). The final soil cleanup goals will achieve a cumulative theoretical upper-bound incremental carcinogen risk level point of departure of 1 x 10<sup>-6</sup> and a target organ specific non-cancer hazard index of 1 for each decision unit at the Site. If needed, NDEP may re-evaluate these goals in accordance with United States Environmental Protection Agency (USEPA) guidance.

#### 1.1 Site Description

The Tronox Site is a portion of a larger complex that was first developed by the U.S. government in 1942 as a magnesium plant for World War II operations. The Tronox LLC facility currently produces electrolytic manganese dioxide, used in the manufacturing of alkaline batteries; elemental boron, a component of automotive airbag igniters; and boron trichloride, used in the



pharmaceutical and semiconductor industries and in the manufacturing of high-strength boron fibers for products including sporting equipment and aircraft parts.

RZ-C consists of approximately 64 acres that are sparsely occupied by existing buildings and ponds including the Laboratory Building, the Maintenance Building, the Steam Plant, as well as several other small buildings and sheds. An above-ground diesel fuel tank is also located in RZ-C. In the event that the natural gas supply is lost, this tank is the emergency source of fuel for the Steam Plant. The historic manganese tailings pile is located in the eastern portion of RZ-C. Removal of the historic tailings pile is currently underway in accordance with procedures described in the RAW. Confirmation sampling will be performed upon completion of the tailings removal to verify that chemical concentrations in the remaining soils meet the NDEP BCLs.

Former and currently operating ponds exist in RZ-C. Pond Mn-1 (Figure 1) is an operational pond used as an evaporation pond for non-hazardous manganese dioxide wastewater from the Unit 6 manganese dioxide production process. For ease of reading, the excavation areas are also represented as sub-areas, as shown in Figures 2A (west), 2B (south), 2C (north), and 2D (east). Some overlap of the areas is presented for clarity. A complete description of the Site, history of its use, and historical environmental investigations are presented in the RAW.

#### 1.2 Background

At the completion of the Phase A and B Investigations and the Area I and II supplemental soil sampling, a pre-confirmation sampling program was developed in concert with NDEP to refine remediation planning and establish the vertical and horizontal extent (cutlines) of the proposed excavations in shallow soils (0 to 10 feet bgs). These investigations are herein referred to as Soil Investigation Programs. The cutline identification also provides an opportunity for the final risk assessment calculations to be prepared in parallel with the excavation of contaminated soils, further facilitating completion of remedial excavation by the end of 2010 as required by the NDEP Order dated December 14, 2009 (NDEP, 2009).

Chemical analyses of soil samples collected in RZ-C during the Soil Investigation Programs showed that there are locations within the upper 10 feet of soil where dioxin, hexachlorobenzene (HCB), asbestos, metals, perchlorate, and semi-volatile organic compounds (SVOCs), exceed the various BCL criteria. Remedial excavation areas for RZ-C have been developed using the data generated from the Soil Investigation Programs. The excavation areas define portions of land with BCL or other criteria exceedances, as specified on Figure 1 of this EP. Figures 2A through 2D show the excavation area boundaries and the chemical data upon which they are based.

The analytical data for the samples collected during the Soil Investigation Programs are included as part of Appendix A. The Appendix contains a set of summary tables of the above-described information segregated by analytical method. In addition, four additional chemical data tables are presented in Tables A-1 through A-4 of Appendix A. These tables show the sampling data for those chemicals identified to be remediated in RZ-C (arsenic, lead, perchlorate, dioxin/furans, polynuclear aromatic hydrocarbons [PAHs], asbestos, and HCB). The Appendix data highlighted in orange indicate soil concentrations exceeding NDEP commercial worker BCLs, except dioxin (site-specific BCL), arsenic (based on background), and asbestos (based upon Parcels A/B). Data highlighted in green indicate soil concentrations not exceeding abovedefined comparison criteria; however, there are some exceptions for arsenic and manganese based on CSM considerations. Data highlighted in yellow indicates that the data is currently still pending. As part of the RZ-C risk assessment, a complete evaluation of validated data for chemicals will be conducted to document soil concentrations removed from further evaluation due to soil removal activities. Tronox has not yet received all of the step-out data and asbestos data from the pre-confirmation sampling program. When these data become available, an errata to this report will be prepared presenting the data and any changes in excavation areas or depths of excavations.

#### 1.3 RZ-C Site Conditions

RZ-C is generally rectangular in shape, with the long axis running roughly east/west. The southern boundary of RZ-C is the northern boundary of RZ-B, while the northern boundary of RZ-C coincides with the southern boundary of the Beta Ditch (RZ-E), as shown on Figure 1. In general, the land surface in RZ-C slopes northward at a gradient of approximately 0.023 feet per foot. The developed portions of RZ-C have been modified by grading to accommodate plant facility buildings, access roads, ponds, and other features.

RZ-C is crossed by asphaltic concrete roads and dirt roads. A network of active and inactive underground utility lines is present under the roads and some open areas of RZ-C. Figure 3 shows the approximate locations and types of utilities that are present in RZ-C, as well as the summary of the information provided on known utility lines. The locations of the lines have been field-checked by Tronox where surface expressions of the utilities are present. It is likely that unknown utilities, both active and inactive, also exist in RZ-C and may be encountered during remediation. Field procedures to address the possibility of encountering unknown utilities will be included in the contractor plans and specifications. It is Tronox's intent that the contractor be responsible for locating, avoiding, and protecting underground and above-ground utilities during remedial activities.

#### 2.0 SCOPE OF WORK

The remediation program at RZ-C will consist of soil excavation and off-Site disposal. The proposed excavation areas were generated using information gathered during the Soil Investigation Programs, a conceptual site model (CSM) review, and a field check of the existing Site conditions.

Based on NDEP guidance and the results of the Soil Investigation Programs, Tronox will excavate contaminated soil to the excavation boundaries and depths shown on Figures 2A through 2D and in Table 1 also shows the chemical group(s) driving the target excavation depths for each excavation area. Excavated soil will be transported for permanent off-Site disposal at the Republic Landfill in Apex, Nevada, or other approved landfills in accordance with sampling results and landfill acceptance criteria.

All work conducted as part of this EP will be performed in accordance with the following plans:

- Dust Mitigation Plan and Clark County Dust Permit (to be submitted by the Remediation Contractor);
- Perimeter Air Monitoring Plan (Approved by NDEP on May 12, 2010);
- Stormwater Pollution Prevention Plan (Approved by NDEP on May 12, 2010);
- Contractor's Site-Specific Health and Safety Plan (HSP; to be submitted by the Remediation Contractor); and
- Transportation Plan (Approved by NDEP on May 12, 2010).

These plans are part of the RAW (Northgate, 2010), with the exception of the contractor's Dust Mitigation Plan, Clark County Dust Permit, and the Site Specific Health and Safety Plan.

#### 2.1 Excavation Boundary Constraints

RZ-C has been subdivided into 46 excavation areas identified as RZ-C-01 through RZ-C-46, as listed in Table 1 and shown on Figure 1. Some of the excavation areas identified for RZ-C are constrained by site features. This section provides a detailed description, on an excavation areaspecific basis, of the constraints for the proposed excavations. These constraints are also listed in Table 1 under "Excavation Boundary Modification."

#### 2.1.1 Property Lines

Ten of the proposed excavation areas (RZ-C-01, -04, -06, -13, -15, -24, -26, -27, -45, and -47) are constrained by the Tronox Site property lines. Because soil sampling has only been performed in



areas owned by Tronox, no data exists in adjacent areas. Prior to excavation, confirmation samples at the limits of the proposed excavation areas that border the property line will be collected at a minimum of one sample per property line boundary excavation or one sample per 150 lineal feet, whichever is greater. Samples will be collected near the proposed excavation sidewall at a depth coinciding with the maximum concentration in the nearest sample. Samples will be analyzed for the chemical(s) driving the excavation, as shown in Table 1.

#### 2.1.2 RZ-E (Beta Ditch) Excavation Zone Boundary

Seven of the Excavation Areas border on RZ-E (the Beta Ditch). Those excavation areas are RZ-C-28, -29, -30, -31,-32, -37, and -38. The excavation areas were not carried into the Beta Ditch because this area will be excavated and removed in accordance with the Excavation Plan for RZ-E.

#### 2.1.3 Pond Constraints

Ten of the excavation areas (RZ-C-9, -10, -16, -18, -19, -29, -30, -31, -32, and -33) border on or are part or all of the former ponds. The boundaries of these areas were altered because of the presence of the ponds. In the case that pond samples meet the project BCLs, the excavation area(s) abutting the ponds were truncated and the entire pond was considered to meet the BCLs. Generally, in the case where one or more of the pond samples exceeded project BCLs, the entire pond was considered to exceed project BCLs and the excavation area was extended to the full area of the pond. However, in the case of RZ-C-9 and -10, the pond was split due to sufficient available data (including data at depth) that justified splitting the pond. The resulting excavations were shallow for only asbestos in the west end and a 10-foot excavation in the eastern end driven by arsenic, dioxin, HCB, magnesium, and perchlorate.

Pond MN-1 is located at the eastern end of RZ-C north of the former Historic Manganese Tailings pile. This pond remains in service and will continue to be operational for the foreseeable future. No borings have been drilled in the pond during the Soil Investigation Programs; therefore, no excavation areas are associated with this pond.

#### 2.1.4 Equalization (BT) Tanks

Four tanks exist in the northern central portion of RZ-C, as shown on Figure 1. Two of these tanks are currently in use by Veolia for their water treatment operations. These tanks are expected to continue to be in use for the foreseeable future. Excavation area RZ-C-29 has been modified to exclude the Equalization Tank Area.



#### 2.1.5 Utility Lines

Currently, no excavation boundary modifications are proposed for existing utilities. However, as shown on Figure 3, a number of overhead and buried utilities are present in proposed excavation areas. It is Tronox's intent to excavate to the boundaries and depths shown on Figures 2A through 2D. As work proceeds, depending on the location and depth of active utilities, it may become necessary to keep some existing soil in place for support of utilities that cannot be moved or temporarily taken out of service. If and when these situations arise, Tronox will contact NDEP to discuss the situation and Tronox's proposed procedure measures.

#### 3.0 REMEDIATION

#### 3.1 Work Area Preparation

This section describes the preparation activities that will be performed prior to excavating and transporting soil from the RZ excavation areas. As described in the RAW, the following remediation support features will be established and/or constructed prior to performing soil excavation activities in RZ-C, as delineated in Figure 5 of the RAW:

- Access routes for authorized visitor and contractor Site ingress and egress;
- Haul roads to the public access roads;
- Clearing and disposal of vegetation in excavation areas, access and haul roads;
- Dust-control water source(s);
- Visitor area;
- Management/engineering trailers;
- Parking areas for workers, vehicles, and heavy equipment;
- Debris storage area; and
- Vehicular and personnel decontamination areas.

Portions of RZ-C contain imported excess soil materials and debris. Prior to beginning soil excavation in the excavation areas, debris and imported excess soil will be moved from the work area and disposed or stockpiled in non-working areas. Provided that the imported excess soil meets the project BCLs, it is also possible that this imported excess soil and concrete debris could be recycled and used as fill.

#### 3.2 Well Abandonment

Twenty-two active wells are located within RZ-C, as shown approximately on Figure 4. Based on the location of planned excavation areas, three of the wells (M-111, M-111A, and M-17A) will be impacted during remediation activities. M-17A is located in an area where the excavation depth is proposed to be 6 feet. Wells M-111 and M-111A are located in an area where excavation is planned for a depth of 10 feet. These wells could be protected during excavation and backfilling by marking and placing barricades and caution tape, or they could be properly abandoned prior to excavation. If wells become damaged beyond repair, they will be properly abandoned and similar wells will be installed after remediation work is complete in order to continue groundwater characterization and remediation activities, if appropriate. Well



abandonment procedures will be performed in accordance with Nevada Division of Water Resources (NDWR) requirements.

#### 3.3 Excavation

This section describes the excavation of contaminated soil from RZ-C. The excavation areas are shown on Figure 1, with areas impacted by asbestos only shown in blue and the remainder of excavation areas shaded in tan. The target depths of excavation areas are shown on Figures 2A through 2D and summarized in Table 1.

In general, the cutlines represent the lateral limit of the bottom of the excavation area. The limits and depths selected for the excavation areas are based on the soil data collected and NDEP worker BCLs, background for arsenic, and risk-based cleanup goals. The criteria used for the selection is presented in Table 2.

Where data is pending that may change the shape of the excavation area, it is Tronox's intent that the sampling location not be incorporated into the design of the excavation area shapes. When the data become available, the shape and number of excavation areas may change. At that time, an errata will be prepared to reflect these changes and will be sent to NDEP for review and approval.

The excavations will generally be sloped or benched outward and upward from the cutline at a slope of 1:1 slope (horizontal to vertical). In cases where the excavation abuts a structure, feature, or property line that cannot be removed, the cutline represents the top-of-slope. Temporary fencing will be placed along the perimeter of excavations 5 feet or more in depth and in areas where the excavations represent a potential traffic or safety hazard. If excavations are to be left un-backfilled, the side slopes will be flattened to 2:1 (horizontal to vertical). During construction, portions of the excavation sidewalls may also be flattened or the excavation partially backfilled to facilitate vehicle traffic or soil handling activities.

The target excavation depths may be revised based on visual staining, odors, monitoring instrumentation readings, or other indications. Depths may also be modified in the field if utilities and other buried structures are encountered. Northgate will obtain NDEP approval of any changes to the excavation depths shown in Table 1 and Figures 2A through 2D as field work progresses and if special cases are encountered.

It is anticipated the excavations deeper than 1 foot will be performed with heavy earth-moving excavators. Excavations less than 1 foot deep will be performed either with an excavator or

motor grader (blade). The contractor may elect to stockpile soil in the excavation area or may load the soil directly into trucks for off-Site disposal.

#### 3.4 Post-Excavation Backfilling

Tronox will backfill some of the excavations in RZ-C with clean material. Backfill will be required in instances where contaminated soil is left in place at 10 feet to provide a minimum 10-foot thickness of clean soil from the ground surface. Backfill will also be required to maintain vehicle access in excavation areas where roadways exist. Such backfilling will be performed by the contractor in accordance with the remediation plans and specifications. Backfill materials will be tested by Northgate for geotechnical engineering and environmental compliance requirements. Test results will be provided to NDEP before the material is accepted for use in backfilling. It is anticipated that soil backfill borrow sources will be from clean areas on the project Site. "Clean areas" are defined as areas with soil concentrations meeting the NDEP worker BCLs, background for arsenic and modified risk based cleanup goals. If backfilling to the previous surface grades is not proposed, Tronox will discuss these areas with NDEP.

Analytical test results indicate that the existing upper portion of the north-south Trade Effluent Pond berm in the north-west corner of RZ-B is clean soil and is suitable for use as backfill. Additional testing is being performed to evaluate the lower portions of the berm.

The areas and thickness of backfill that Tronox anticipates will be backfilled are noted on Table 1.

#### 3.5 Air Monitoring

Air monitoring will be performed for fugitive dust emissions, chemicals of concern, and volatile chemical emissions in accordance with the *Perimeter Air Monitoring Plan* (PAMP; Appendix B of the RAW) and the Contractor's HSP. Table 1 of the PAMP presents the RZ-C specific list of constituents to be monitored. Because of the relatively small size of the excavation area in comparison to the overall Site, it is Tronox's opinion that perimeter monitoring at the edges of individual excavation areas is not necessary to demonstrate that the dust control measures are adequate. Tronox proposes to perform perimeter air monitoring at the Site perimeter as described in the PAMP. In addition, PM10 real-time monitoring will be performed on selected workers in the work area. Perimeter and worker air monitoring will be used to evaluate the effectiveness of dust control measures in mitigating emissions. If emissions exceed the action levels outlined in the PAMP, actions will be taken in accordance with the PAMP to bring the emissions into conformance with the plan. Mitigation actions include additional soil wetting, covering exposed soil stockpiles, use of dust palliatives, ceasing operations if the wind velocity exceeds the value set in the PAMP, and ceasing operations until effective measures are implemented.



#### 4.0 INSTITUTIONAL AND ENGINEERING CONTROLS

It is Tronox's intent to excavate contaminated soils in RZ-C excavation areas to the lateral extent and to the depths described in Table 1 and shown on Figures 2A through 2D. Currently, there are no locations where institutional or engineering controls are proposed within RZ-C. However, there are several areas of concern that could be proposed for engineering and institutional controls. These areas include:

- The Equalization (BT) Tanks used by Veolia;
- The Steam Plant out buildings; and
- Avenues E and F.

The Equalization (BT) Tank area is divided between two proposed excavation areas. These areas have associated 8-foot and 10-foot depths of excavation. There are no borings within the tank area that drive the excavations. Currently on the RZ-C Figures, The BT Tank area has been excluded. The steam plant out-buildings are located within an excavation area where a 1-foot depth of excavation is proposed. There are also no borings in the out-building area. Avenues E and F cross Parcel C and contain a significant number of shallow active utility lines (see Figure 3).

Tronox proposes to minimize these potential engineering and institutional control areas by performing additional sampling in strategic areas where, if samples are clean, controls become unnecessary.

If a situation arises where engineering or institutional controls become necessary, Tronox will contact NDEP and a decision will be in concert with NDEP. If a decision is made to institute institutional or engineering controls, the procedures will be in accordance with the NDEP-approved *Revised Environmental Covenants, Institutional and Engineering Control Plan* submitted by Tronox on June 9, 2010 for NDEP review and comment.

#### 5.0 REFERENCES

- AECOM, 2009. *Quality Assurance Project Plan*, Tronox LLC Facility, Henderson, Nevada. May 2009.
- AECOM, 2008. Revised Phase B Site Investigation Work Plan, Text, Tables and Figures. Tronox LLC Facility. Henderson, Nevada. December 2008.
- AECOM and Northgate Environmental Management, Inc., 2009. *Quality Assurance Project Plan*, Tronox LLC Facility, Henderson, Nevada. Revised June 18, 2009.
- Basic Environmental Company, 2008. Removal Action Work Plan for Soil, Tronox Parcels "C", "D", "F", "G", and "H" Sites, Henderson, Nevada. July 1, 2008.
- Basic Remediation Company (BRC), 2009a. *BRC Standard Operating Procedure (SOP) 06. Sample Management and Shipping*. Revision 4. December 2009.
- BRC, 2009b. *BRC Standard Operating Procedure (SOP) 07, Soil Sampling*. Revision 4. December 2009.
- BRC, 2009c. *BRC Standard Operating Procedure (SOP) 12. Asbestos Soil Sampling*. Revision 4. December 2009.
- BRC, 2009d. *BRC Standard Operating Procedure (SOP) 14. Field Documentation*. Revision 4. December 2009.
- BRC, 2009e. BRC Standard Operating Procedure (SOP) 17. Soil Logging. Revision 4. December 2009.
- BRC, 2009f. *BRC Standard Operating Procedure (SOP) 19. Borehole Abandonment*. Revision 4. December 2009.
- BRC, 2009g. *BRC Standard Operating Procedure (SOP) 23. Split Spoon Sampling*. Revision 4. December 2009.
- BRC, 2009h. BRC Standard Operating Procedure (SOP) 31. Equipment Drilling Decon. Revision 4. December 2009.
- BRC, 2009i. BRC Standard Operating Procedure (SOP) 34. Investigative Derived Waste (IDW) Management. Revision 4. December 2009.
- BRC, 2009j. BRC Standard Operating Procedure (SOP) 42. Soil Sampling by Geoprobe<sup>TM</sup> Methods. Revision 4. December 2009.

- ENSR Corporation (ENSR), 2005, Conceptual Site Model, Kerr-McGee Facility, Henderson, Nevada, February 2005
- ENSR, 2006. *Phase A Site Source Area Investigation Work Plan*. Tronox LLC Facility. Henderson, Nevada. September 2006.
- ENSR, 2008. *Phase B Site Source Area Investigation Work Plan*. Tronox LLC Facility. Henderson, Nevada. December 2008.
- Nevada Division of Environmental Protection (NDEP), 1994. *Phase II Letter of Understanding between NDEP and Kerr-McGee*, August 15, 1994.
- North American Vertical Datum of 1988 (NAV 88). Established in 1991 to replace the National Geodetic Vertical Datum of 1929 (NGVD 29).
- Northgate Environmental Management, Inc. (Northgate), 2010a. *Health Risk Assessment Work Plan, Tronox Facility, Henderson, Nevada*, March 2010.
- Northgate, 2010b. Revised Pre-Confirmation Sampling Work Plan, Remediation Zones RZ-A through RZ-E, Phase B Investigation, Tronox Facility, Henderson, Nevada, March 2010.
- United States Department of Labor, Occupational Health & Safety Administration (OSHA). CFR Part 1926, Safety & Health for Construction.

# **FIGURES**



# **TABLE**



APPENDIX A
RZ-C ANALYTICAL DATA
(Provided on DVD)

