

**From:** [Joey Pace](#)  
**To:** [Dhont, Jeffrey](#)  
**Cc:** [Karin Harker](#)  
**Subject:** FYI: Attached are the Posi-shell Scope of Work and Costs  
**Date:** Thursday, February 24, 2022 2:55:08 PM  
**Attachments:** [FY22\\_Tetra\\_Tech\\_Humboldt\\_Smelter\\_Proposal\\_and\\_Costs\\_TO3.pdf](#)

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Hi Jeff: For your records, attached please find the SOW and Cost Proposal for the posi-shell repair work. Please note, we believe we will only need 2 to 2.5 acres of posi-shell to repair the areas we disturbed during our work. However, we are actually planning to purchase enough for 3 acres, because ADEQ saw some area *near* our work zones (visible from our work areas but not directly disturbed by us) where the posi-shell is clearly eroded from trespass and we would like to address those areas as well if we have enough materials.

**Is there a good time to call you tomorrow to catch up on site items** and for me to discuss any questions you may have about the fencing, Public Work's-related interest, or the posi-shell? **I am free 9a-10a Pacific or 1p - 3:30p Pacific.**

**Joey Pace, PMP**

Project Manager/Hydrogeologist

Ph: 602-771-4818



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February 23, 2022

Ms. Joey Pace  
Project Manager, Federal Projects Unit  
Waste Programs Division  
Arizona Department of Environmental Quality  
1110 West Washington Street  
Phoenix, Arizona 85007

Via email:

**Subject: Proposal for Humboldt Smelter Posi-Shell Repair**

Dear Ms. Pace:

Tetra Tech, Inc. (Tetra Tech) is submitting this proposal at the request of the Arizona Department of Environmental Quality (ADEQ) to perform additional activities related to the Humboldt Smelter Site. This proposal presents a scope of work and budgetary cost estimate to perform the activities described herein.

### **PROJECT UNDERSTANDING**

In early 2022, ADEQ in coordination with Tetra Tech and its subcontractors, completed the disassembly of both the Humboldt Smelter smokestack and the remaining attached brick converter flue in a controlled fashion due to safety concerns. All brick debris were consolidated in place around the stack foundation and encapsulated utilizing shotcrete. An additional estimated 3,400 linear feet of fencing is currently being installed within the smelter plateau to further deter trespassers. During these activities the previously installed Posi-Shell® was disturbed in areas of additional work and takedown. The following describes the tasks and associated costs to complete the repair of the Posi-Shell®.

### **SCOPE OF WORK**

The proposed scope of work for this project is divided into two tasks, and the sections below describe the specific activities to be performed under each task.

Task 1 – Posi-Shell® Repair – 2 Acres

Task 2 – Posi-Shell® Repair Contingency – 1 Acre

#### **Task 1 – Posi-Shell® Repair – 2 Acres**

This task consists of the following activities, which will be performed by Tetra Tech and its subcontractors, to complete Posi-Shell® repair. Posi-Shell® is a patented blend of clay binders, reinforcing fibers, and polymers that, when mixed cement, produces a spray-applied mortar that dries in the form of a thin stucco distributed out of California. Posi-Shell® requires specific equipment rental for mixing an application. Approximately 2 acres of Posi-Shell® was disturbed during takedown and current fencing activities. Tetra Tech proposes completing Posi-Shell® repairs in the areas highlighted below.



Application of up to 2 acres of Posi-Shell® repair will require the following to be provided by Tetra Tech and its subcontractor:

- 24 super sacks of Posi-Shell® material and transport out of California.
- 24 super sacks of Portland cement and local transport.
- Rental of a Model PSA-3000 Posi-Shell® applicator.
- A crew to perform mixing and application for up to 4 days.

Tetra Tech will provide full time oversight of subcontractor activities to ensure proper installation and objectives are met. Additional care will be taken during the application process to avoid additional repairs to the existing Posi-Shell® on site.

#### **Task 2 – Posi-Shell® Repair Contingency - 1 Acre**

At the direction of the ADEQ a contingency task for an additional 1 acre of Posi-Shell® has been proposed in the event other areas should require application on-site not currently outlined in the above map. Contingency costs under this task include the following:

- 12 super sacks of Posi-Shell® material and transport out of California.
- 12 super sacks of Portland cement and local transport.
- Rental of a Model PSA-3000 Posi-Shell® applicator.

- A crew to perform mixing and application for up to 2 days.
- Full time oversight by Tetra Tech of subcontractor activities.

Additional materials will only be ordered if considered necessary during the application of the initial 2 acres at the direction of the ADEQ. No costs will be incurred under this task should additional Posi-Shell® be deemed unnecessary.

### **ASSUMPTIONS**

Tetra Tech has developed this scope of work based on the following assumptions:

- Necessary access agreements, or authorizations, will be in place for the subject work and will be provided by the ADEQ.
- Physical Site access is assumed to be clear, and the schedule assumes no delays due to Site access restrictions or weather events.
- Field oversight provided by Tetra Tech included in this estimate assumes 4 days (12-hour days) under Task 1 (12-hour days), and 2 days under Task 2.

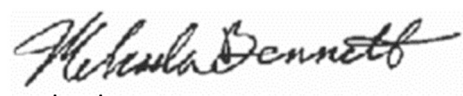
### **BUDGET REQUEST AND SCHEDULE**

The total budget request for the tasks described above is **\$160,033.75**; and the task budget details are summarized in the attached price proposal. This work will be performed on a Time and Materials (T&M) basis under the existing **Arizona Superfund Response Action Contract (ASRAC) between Tetra Tech and ADEQ – No. CTR045160**. As per the terms and conditions of this contract, the work described herein will not exceed the authorized budget without prior authorization from ADEQ.

Tetra Tech is prepared to begin work immediately upon receipt of a signed Task Order for the project. We anticipate completing this assignment within 8 weeks of project award subject to contractor availability.

Tetra Tech is pleased to have the opportunity to serve the ADEQ on this project. Our project team is ready to commence work upon approval from ADEQ.

Sincerely,  
Tetra Tech, Inc.



Mekaela Bennett, EIT  
Project Manager



# Project Cost Summary

23-Feb-22

Humboldt Smelter - Posi-Shell Repair

ADEQ

Attention: Joey Pace

Phases / Tasks	Project Total		Task 1 - Posi-Shell Repair - 2 Acres	Task 2 - Posi-Shell Repair Contingency Costs - Additional 1 Acre
	131 hrs	\$ 160,033.75		

Tetra Tech Labor	Hrly Rate	Tot Est. Hrs	Total Est. Cost	Hours	Cost	Hours	Cost
Professional Level V	\$167.00	36.0	\$ 6,012.00	28.0	\$ 4,676.00	8.0	\$ 1,336.00
Professional Level IV	\$140.00	12.0	\$ 1,680.00	6.0	\$ 840.00	6.0	\$ 840.00
Professional Level III	\$125.00	3.0	\$ 375.00	3.0	\$ 375.00	-	\$ -
Professional Level II	\$112.00	80.0	\$ 8,960.00	50.0	\$ 5,600.00	30.0	\$ 3,360.00
<b>Subtotal Tetra Tech Labor</b>		<b>131.0 hrs</b>	<b>\$ 17,027.00</b>	<b>87.0</b>	<b>\$ 11,491.00</b>	<b>44.0</b>	<b>\$ 5,536.00</b>
<b>--Total Tetra Tech Labor</b>			<b>\$ 17,027.00</b>		<b>\$ 11,491.00</b>		<b>\$ 5,536.00</b>

Subcontractors	Total Est. Cost	Cost	Cost
Unspecified Sub (ERI - Subcontractor)	\$ 134,615.00	\$ 92,123.00	\$ 42,492.00
<b>Subtotal Subcontractors</b>	<b>\$ 134,615.00</b>	<b>\$ 92,123.00</b>	<b>\$ 42,492.00</b>
	Markup \$ 6,730.75	5.00%	\$ 2,124.60
<b>--Total Subcontractors</b>	<b>\$ 141,345.75</b>	<b>\$ 96,729.15</b>	<b>\$ 44,616.60</b>

Other Direct Costs	Total Est. Cost	Cost	Cost
Per Diem	\$ 448.00	\$ 280.00	\$ 168.00
Hotel	\$ 768.00	\$ 480.00	\$ 288.00
Mileage Allotment	\$ 445.00	\$ 267.00	\$ 178.00
<b>Subtotal Other Direct Costs</b>	<b>\$ 1,661.00</b>	<b>\$ 1,027.00</b>	<b>\$ 634.00</b>
<b>--Total Other Direct Costs</b>	<b>\$ 1,661.00</b>	<b>\$ 1,027.00</b>	<b>\$ 634.00</b>

<b>Project/Task --Total</b>	<b>\$ 160,033.75</b>	<b>\$ 109,247.15</b>	<b>\$ 50,786.60</b>
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**PROJECT Total** **\$ 160,033.75**



# Project Cost Summary

23-Feb-22

Humboldt Smelter - Posi-Shell Repair

ADEQ

Attention: Joey Pace

## Phases / Tasks

Project Total		Task 1 - Posi-Shell Repair - 2 Acres	Task 2 - Posi-Shell Repair Contingency Costs - Additional 1 Acre
131 hrs	\$ 160,033.75		