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PROCUREMENT DEPARTMENT  
DESIGN AND CONSTRUCTION DIVISION**  
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January 22, 2016

**ADDENDUM No. 3**

**PROJECT: Tangerine Landfill Final Closure Plan**

**SOLICITATION NO.: IFB 198029**

**TO ALL CONTRACTORS:**

The following changes, clarifications and/or additions shall be incorporated to the above-referenced Invitation for Bid.

**See questions and answers on pages 2-9 of this Addendum**

Bidders must acknowledge receipt of this Addendum on the bid form provided in the project specifications book. Failure to do so **will** render the bid non-responsive.

All other specifications, terms and conditions, not specifically changed by this Addendum, shall remain the same.

*Ana Wilber*

Ana Wilber, CASPP, CPPB  
Commodity / Contracts Officer

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## Questions and Answers:

Section 01025

Measurement & Payment

H. General Fill

States: "Measurement of in-place general fill will be made by comparing preconstruction topography with post construction topography of the taper of the 3 foot thickness of the final cover soil to the ultimate toe of slope."

Questions:

Please provide a detail depicting what is required for construction of the 3 foot thickness General Fill taper at the interface with the existing 60mil HDPE Liner and the constructed of the 36" Final Cover section, following along the existing toe of slope?

**Answer: A clarifying sketch showing the relationship between the final cover, existing liner system, and general fill taper is provided on the attached sketch SK-1.**

Will the removal of waste (trash) and exposure of the 60mil HDPE Liner be required along the 3 foot thickness General Fill taper construction? **Answer: No.**

What is required for preparation of the subgrade of the "General Fill Taper" ? **Answer: Comply with Sections 02222.3.5 (General Fill Preparation) and 02223 (Subgrade Preparation).**

Can the limits for construction of the "General Fill Taper" be shown on the "Final Cover Plans"? **Answer: The approximate limits of "General Fill Taper" construction are shown by a dashed line on Sheet 3 near the toe of the slope and outside the waste limits.**

Construction of the "General Fill Taper" will interface with existing fence and perimeter access roads.

What is the minimum required design slope (3:1?) of the taper from the point of interface with the 36" final cover to daylight?

**Answer: The taper is to be constructed at 3H:1V slope (as shown on the clarification sketch SK-1 attached to this addendum). In four locations, as shown on Sheet 3, concrete walls constructed to ADOT Standard Detail C-10.50 are used to accomplish this transition in lieu of the 3H:1V sloped General Fill to avoid conflict with existing features and allow a functional perimeter roadway (12' minimum width).**

States: "No payment will be made for additional general fill thickness greater than the taper quantity described in Section 02222".

Questions:

Please provide the portion of specification Section 02222 Earth Fills that describes the construction of 3 foot thickness General Fill Taper and quantities related to the taper construction?

**Answer: The following Paragraph E is added to Section 02222.3.6: "E. In locations where General Fill is used to taper from the Final Cover section to existing grade at the perimeter of the Final Cover, the Contractor shall grade the General Fill to provide a smooth transition with the Final Cover without an abrupt change in grade. If the Contractor has placed more than the required 3 feet of Final Cover, no additional payment shall be made for General Fill beyond that which would have been required to transition from a 3-foot final cover section."**

Is the entire General Fill quantity of 5250 CY shown on the bid schedule to be used in constructing the General Fill Taper? **Answer: No, the quantity also includes fill volume in four additional areas called out on Sheet 3.**

I. Downchute - States: Fence removal and replacement or fence relocation required to install the down chutes and the general fill area around the southwest down chute from the west disposal area is incidental to the unit price for this item."

Question:

Can a bid item for fence removal and replacement be established? The existing perimeter fence is in poor condition with posts bent, fence fabric damaged and buried with dirt. The quantity of fence removal and replacement required will extend beyond the limited area shown for constructing the down

chute. **Answer: No, the County is not requesting removal and replacement of existing fencing beyond that needed to construct the downchutes and the general fill area around the southeastern downchute, and therefore the fence removal and replacement is incidental to the unit price bid for Bid Item 9 (Downchute).**

Minimum Qualifications

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Minimum Qualification #1

Question:

Will Minimum Qualification #1 be amended by addendum reflecting the change to the wording "The Contractor shall employ an on-site supervisor with a minimum of three years of experience operating a Municipal Solid Waste Landfill" that was discussed at the prebid meeting on January 13th? **Answer: No modification will be made to the Minimum Qualifications listed in the Invitation to Bid. The discussion at the January 13<sup>th</sup> pre-bid meeting did not propose a new or revised qualification.**

Section 01010

Summary Of Work

1.5 Description Of Work

4. Delivery Escalator

Questions:

Will this clause be amended to reflect the actual cover material delivery rates discussed at the prebid meeting on January 13<sup>th</sup>? **Answer: Yes, see Addendum #2**

Will the bid schedule be amended to provide line items for escalator factors described in the "delivery escalator" clause? **Answer: See Addendum #2**

Will the 120 calendar day completion time for this project be amended to reflect changes to the delivery rate of Pima County provided materials? **Answer: Yes, the completion time has been extended to 180 days in Addendum #2.**

Section 02221

Excavating And Stockpiling

3.2 Landfill Shaping

A. States: "Excavate soil as required to the lines, grades and elevations to construct the landfill grades as shown on the drawings."

Question:

Can a bid item for "Landfill Shaping" be established? **Answer: Landfill shaping is included in Bid Item 4 (Waste Relocation).**

Question:

The existing landfill surface especially the landfill surface side slope areas are irregular and eroded, displaying rilling and un-compacted soils in washed out areas. Waste (trash) can be seen at the surface in these areas. Also there are several areas along the landfill side slopes have been surfaced with loose river rock varying in sizes from minus 6" to minus 3" material.

Under which bid item will the repairs of surface irregularities, erosion rilling, loose rock removal and the excavation of unsuitable/ un-compacted surface soils be paid for? **Answer: The work described in this question is part of subgrade preparation and is incidental to the unit price bid for the particular fill placed over the subgrade (Bid Item 6 (Final Cover Soil), Bid Item 7 (Engineered Fill), or Bid Item 8 (General Fill).**

Is the quantity of excavation needed to conduct "Landfill Shaping" included in the 1750 CY of bid item 10 Excavation/Stockpiling, identified in the bid schedule? **Answer: No, it is Bid Item 4 (Waste Relocation).**

C. States: "Waste shall be relocated and compacted"

Question:

Under which bid item will the removal and relocation of waste (trash) generated from "Landfill Shaping" be paid for? **Answer: Bid Item 4 (Waste Relocation).**

Is the quantity of waste removal and relocation needed to conduct "Landfill Shaping" included in the 13,990 CY of bid item 4 Waste Relocation, identified in the bid schedule? **Answer: Yes**

E. States: "Correct areas over-excavated by placing Engineered Fill per Section 02222."

Question:

Under which bid will the requirement for the placement of engineered fill needed from "Landfill Shaping" be paid for?

**Answer: Overexcavated areas would be areas excavated beyond the grades shown on Sheet 2 and would be unauthorized excavation. Remediation of this overexcavation would be at the Contractor's expense – no additional payment would be made for this fill.**

Is the quantity of engineered fill needed to conduct "Landfill shaping" included in the 8,030 CY of bid item 7 Engineered Fill, identified in the bid schedule?

**Answer: No – engineered fill is not expected to be required for landfill shaping – see response to previous question.**

Section 01010

Summary Of Work

1.5 Description Of Work

9. Re-vegetation Of Final Cover

Question:

Can you provide a copy of the written specification for the hydro-seeding and mulching scope of work for bid item 18 Re-Vegetation?

**Answer: Hydroseeding and mulching are to be installed in accordance with PC/COT Standard Specification 805, as indicated in the section noted (Section 01010.1.5.A.9).**

A question was raised at the prebid concerning which amended version of PC/COT Section 805 was to be used?

**Answer: As indicated in the section noted (Section 01010.1.5.A.9), Seed Mix 1 is to be utilized. The discussion at the prebid meeting was a question as to which seed mix to use, and the answer given was that the seed mix was identified in the specifications (Section 01010.1.5.A.9).**

Plan Sheet 5 Final Closure Plan Details

Detail 7/5 Top Deck Berm

Questions:

The "Top Deck Berm" detail 7/5 shows the construction of a 12" thickness of D50=6" Rip Rap on the interior slope of the berm and is noted "where shown on the plans".

The noted installation requirement for D50=6" Rip Rap is not shown on the plans. **Answer: It is noted on the plans on Detail 1, Sheet 6 as extending 10 feet upstream of the top deck inlet.**

Will the entire length of all "Top Deck Berms" require D50=6" Rip Rap lining? **Answer: No – see response to previous question.**

Will the D50=6" Rip Rap installed on the "Top Deck Berms" be paid for under bid item 12, 6" Rip Rap?

**Answer: No, it is part of the inlet to the downchute and is included in the unit price for Bid Item 9 (Downchute). Bid Item 12 (6" Riprap) is intended for payment for the 18-foot by 20-foot riprap pad at the inlet to the channel entering the northeast corner of Basin 4.**

Plan Sheet 5 Final Closure Plan Details  
Detail 1/5 Downchute

Questions:

Please confirm that the design rip rap material required for installation for bid item 9 Downchute is D50=6" RIP Rap? **Answer: Yes, as shown on Detail 1/5, the D<sub>50</sub> size for the downchute riprap is 6 inches.**

Please confirm the installation thickness for the D50=6" Rip Rap shown in detail 1/5 is a 12" thickness? **Answer: Yes, as shown on Detail 1/5, the thickness of the riprap is 12 inches (double the D<sub>50</sub> size).**

Also confirm that the D50=6" Rip Rap material for the project shall conform to specification section 02275 Rip Rap and that the rip rap shall be "angular in shape and shall be obtained from off-site source"?

**Answer: Yes, riprap material to be used on this project shall conform with Section 02275. As discussed at the pre-bid meeting on January 13, 2016, Contractors may salvage riprap material from the existing downdrains on the interim cover as long as it is cleaned of fine material and otherwise conforms with Section 02275. The shape of individual stones shall be angular to sub-rounded as indicated in Section 02275.2.1.A.**

Plan Sheet 3 Final Cover Plan  
Basin 5 Noted "Rip Rap Pad 4/5"

Question:

Will the construction of the Rip Rap Pad at Basin 5 be paid for under bid item 9 Down Chute.

**Answer: Yes – as indicated in Section 01025.2.8.1.2, the unit price payment for Bid Item 9 (Downchute) includes the riprap pad.**

Master Facility Plan 10007600.06 – MFPA

4.0 Closure And Post Closure Provisions

4.2 Landfill Final Cover Construction

a.2 states: "A 30 inch layer of soil with a minimum permeability of  $1.2 \times 10^{-4}$  cm/sec and a six inch erosion control layer capable of sustaining native vegetation".

Section 01010 Summary of Work

1.5 Description Of Work

3. Construction Of Landfill Final Cover states: "The lower 30 inches of cover soil shall meet the compaction required to achieve a maximum permeability of  $1.2 \times 10^{-4}$  cm/sec as required by the MFPA".

Question:

What is the required permeability specification for Final Cover Soil a "minimum permeability of  $1.2 \times 10^{-4}$  cm/sec" or a "maximum permeability of  $1.2 \times 10^{-4}$  cm/sec" ?

**Answer: Since the purpose of the lower 30-inches of cover soil is to limit infiltration through the cover, the required permeability for the final cover section is a maximum (i.e., soils that are less permeable than the value listed are acceptable).**

Master Facility Plan 10007600.06 – MFPA

Question:

Has the Tangerine Landfill Final Closure Plan (Cornerstone Environmental design) been approved by the ADEQ?

**Answer: ADEQ's regulatory structure does not have a process for approving construction plans prior to installation. The Tangerine Landfill Final Closure Plan was developed based on the MFPA and, following construction a Construction Completion Report will be submitted to ADEQ for approval of the closure of the landfill.**

Section 01025 Measurement and Payment

2.7 Rejected Materials

Questions:

As "particle size, plasticity and permeability" are inherent characteristics of the Final Cover Soil material that will be used to construct the infiltration layer, characteristics that directly impact the Contractors ability to construct the infiltration layer final cover according to the specifications. What are the testing

requirements currently being implemented (types of tests and frequency of testing) by the Owners final cover soil material supplier to assure that the final cover soil that is being delivered to the project meets the specification for final cover soil?

**Answer: Imported soils are being tested by the design/CQA engineer for density, grain size distribution, Atterberg limits, and permeability.**

Will the Contractor be require to test soil cover material delivered to the project site by the Owners final cover material supplier for "particle size, plasticity and permeability"? **Answer: No.**

Who is responsible for the disposal of "delivered" soil cover material that has been deemed as rejected?

**Answer: Reject or excess "delivered" soil cover materials can be left on site for the County's use during post-closure maintenance of the site.**

The following are questions submitted for answers for the Tangerine Landfill Final Closure project, additional questions pertaining to Addendum #1.

From the Q&A

Question 11. Revised to read:

Questions:

Are the "Mid-Slope Berm" Detail 3/5 and "Top Deck Berm" Detail 7/5 shown on Plan Sheet 5 Final Closure Plan Details to be constructed using "engineered fill" as noted? **Answer: Yes.**

Is the quantity of "Engineered Fill" to construct the "Mid-Slope Berm" and "Top Deck Berm" included in the quantity of 8,030 CY for Bid Item 7 Engineered Fill? **Answer: Yes.**

Ninyo & Moore - Laboratory Test Report

Dated December 29, 2015

Question:

Master Facility Plan 10007600.06 – MFPA

4.0 Closure And Post Closure Provisions

4.2 Landfill Final Cover Construction

a.2 states: "A 30 inch layer of soil with a minimum permeability of  $1.2 \times 10^{-4}$  cm/sec and a six inch erosion control layer capable of sustaining native vegetation".

Based on the Permeability Test Results figure B-14 of the Ninyo & Moore Laboratory Test Results, will the soil cover material used in the permeability tests meet the MFPA requirement for a "minimum permeability of  $1.2 \times 10^{-4}$  cmsec" ?

**Answer: Since the purpose of the lower 30-inches of cover soil is to limit infiltration through the cover, the required permeability for the final cover section is a maximum (i.e., soils that are less permeable than the value listed are acceptable).**

Ninyo & Moore – Laboratory Test Report

Dated December 29, 2015

Questions:

Based on the Gradation Test Results (figures B-1, B-2, B-3, B-4, B-5 and B-6) of which show that all the tested soils had met the Final Cover Soils specification requirement of a "Maximum particle dimension of 3 inches".

Can the Contractor assume that all the delivered Final Cover Soils will be of the same consistency (gradation) as the soils presented in the Ninyo & Moore test sampling? **Answer: Yes.**

How will the removal of "oversized material"(greater than 3" dimension) such as rocks or hardened clods of soil from the delivered Final Cover Soil be handled?

**Answer: Very little material larger than the 3" dimension have been noted in excavations from the borrow site (over 1,000,000 CY have been excavated from that site). If observed, stones larger than 3" can be "handpicked" from the soil.**

Ninyo & Moore – Laboratory Test Results  
Dated December 29, 2015

Questions:

Based on the Atterberg Limits Test Results figure B-7 identifying the liquid limits, plastic limits and plasticity index for the tested soils, will these test results become the baseline values used to determine acceptance of delivered Final Cover Soils?

**Answer: The design/CQA engineer will monitor excavated soils at the borrow site for changes in consistency, along with geotechnical testing, as the basis for acceptance.**

Can the Contractor assume that all the delivered Final Cover Soils will be of the same consistency (LL, PL and PI) as the soils presented in the Ninyo & Moore test sampling?

**Answer: Yes**

Section 01400 Quality Control Testing

1.1 B Quality Control Testing By Contractor

1.5 Quality Control Testing A

A. states "Quality control testing of materials prior to their delivery from a manufacturer, or during construction, and such other tests as are specified in the various sections of the specifications to ensure compliance with the contract documents".

Questions:

Is the Contractor responsible for all Quality Control Testing for this project?

**Answer: Quality Control testing is the responsibility of the Contractor; Quality Assurance testing is the responsibility of the County's CQA engineer (Cornerstone).**

Is the Contractor responsible for the Quality Control Testing for the construction of the "Final Cover Soils Test Pads"?

**Answer: As described in Section 02210.3.1.E, the County's CQA engineer will perform monitoring and testing of the test pad construction.**

Is the Contractor responsible for the source Quality Control Testing associated with the import "Final Cover Soils" material at the material source?

**Answer: No. As the final cover soil is being provided to the project by the County, source testing is being provided by the County's CQA engineer.**

If "Quality Control Testing" is the responsibility of the Contractor, can a bid item be established for Contractor Testing?

**Answer: No, it should be included in the unit price bid for individual work items requiring quality control.**

Addendum #1

Ninyo & Moore Laboratory Test Report

Atterberg Limits Test Results Figure B-7

Permeability Test Results Figure B-14

Question:

With the varying test result values for Liquid Limit, Plastic Limit and Plasticity Index for Final Cover Soil tested and the varying values of Permeability for Final Cover Soil tested, will blending and processing of the delivered Final Cover Soil materials be required?

**Answer: Processing of delivered Final Cover Soil materials is not required.**

Section 02210

Test Pad Construction

1.1 Description Of Work A

States: "Work performed under this section is incidental to the construction of the Final Cover Soil (bid item 6.), no separate measurement and payment will be made for work under this section".

Question:

As the "Test Pads" (one test pad on the deck surface and one test pad on the landfill side slopes) will be constructed within the Tangerine Landfill surface, will payment be made for the quantity of Final Cover Soil material used in constructing the test pads if the constructed cover soil ends up meeting the project specifications?

**Answer: Yes, if the test pad is constructed within the landfill footprint, the pad area would be included within the area measured for Bid Item 6 (Final Cover Soil), and would be paid as such.**

Section 02210  
Test Pad Construction  
Part 3 Execution  
3.1 Sequence  
Questions:

Is the described sequence of construction (subsections A thru E) for the "test pads" and the resulting test results, the anticipated method specification for construction of the Final Cover Soil thus superseding the specification Section 02222 Earthfills Part 3 Execution 3.4 Final Cover Placement? **Answer: No, the primary purpose of the test pad construction is to determine whether the Contractor's proposed means and methods of construction will achieve the specified Final Cover Placement requirements.**

How will the Contractor be compensated for deviances from the execution specification of Section 02222 Earthfills after the "Test Pad" testing has been conducted and affirmed by the Engineer? Example: Resulting deviances being the "test pad" test results or test methods for construction determine the requirement for the use of additional equipment such as an additional compactor or the use of a pulverizer for processing final cover soil material?

**Answer: See answer to the previous comment. Since the primary purpose of the test pad construction is to determine whether or not the Contractor's proposed means and methods of construction will achieve the specified requirements, any additional effort to achieve the specifications will not be considered a justification for a modification of the unit price bid. If permeability results indicate that a higher degree of compaction, beyond that required to comply with Section 02222.3.4.C, is required to meet the MFPA requirements, that would be considered a justification for modification of the unit price bid. However, based on testing of the borrow source soils conducted to date, this is not expected.**

Section 02210  
Test Pad Construction  
Question:

Is it to be understood that all references to the word "Engineer" within the text of Section 02210 Test Pad Construction would refer to the Owners Engineer "Cornerstone Environmental" ?

**Answer: Yes**

Will the costs for conducting all the testing and reporting required in Section 02210 to be borne by the "Engineer" ?

**Answer: Yes**

Section 02210  
Test Pad Construction  
Question:

What are the desired locations for the construction of the "test pads"(deck surface and side slope locations) ?

**Answer: Specific locations will be identified during the pre-construction meeting as mutually agreed upon between the Owner, Contractor, and Engineer.**

Section 02210  
Test Pad Construction  
Part 2 Products  
2.1 Test Pad A 2

Questions:

As the compaction parameters mentioned in 2.1.2 "particle size, plasticity and permeability" for infiltration layer (final cover soils) are inherent to the "final cover soil" material provided by the Owner, what are the testing requirements currently being implemented (type of tests and testing frequency) by the final cover soil material supplier to assure that final cover soil being delivered to the project meets the project specification?

Has the final cover soil material already delivered to the project been tested for particle size, plasticity and permeability?

**Answer: This question has previously been asked in another set of questions from this prospective bidder.**

Section 02210

Test Pad Construction

Part 2 Products

2.1 Test Pad D.

Question:

As the "import borrow" final cover soil material is being provided by the Owner, will the Contractor be compensated for constructing additional test pads should the Owner acquire "import borrow" from another source or from another import borrow source stockpile at the current source location?

**Answer: Should test pad soils "fail" due to material deficiencies, as opposed to means and methods deficiencies that fail to achieve the specified requirements of Section 02222.3.4.C, the Contractor will be compensated for the test pad area at the unit price bid for Bid Item 6 (Final Cover Soil), prorated to the actual thickness constructed if less than the full specified 30-inch thickness is constructed.**

Section 02210

Test Pad Construction

Question:

How much contract time (in relationship to the construction schedule) should the Contractor anticipate using for construction of "Test Pads" and acquisition of testing results?

**Answer: The time to construct the Test Pad is under the control of the Contractor. Permeability test results can take up to 3 weeks.**

What color are the bollards supposed to be painted?

**Answer: Bollards are to be painted with reflective yellow coating as shown on Detail 3/6.**

Is there a rebar map for the road crossings?

**Answer: Reinforcement in the road crossing slab shall be #5 bars at 2'-0" OC each way located in the center of the slab thickness.**

Do the inside of the top deck berm get cut off walls.

**Answer: No cut off wall is required for the inside of the top deck berm.**

Is the road crossing poured separate? Or can it be monolithic poured?

**Answer: The road crossing can be constructed monolithically.**