DETERMINING WHETHER "SUBSTANTIAL TRANSFORMATION" OF COMPONENTS INTO A "MANUFACTURED GOOD" HAS OCCURRED IN THE U.S.: ANALYSIS, ROLES, AND RESPONSIBILITIES

Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA) requires that of the all iron, steel, and manufactured goods used in ARRA funded projects to construct public buildings or public works be produced in the U.S. This is the expected means of compliance. OMB published Guidance for Federal agencies subject to this provision on April 23, 2009 (at 74 FR 18452, found at http://edocket.access.gpo.gov/2009/pdf/E9-9073.pdf), elaborating on this ARRA requirement, including the provisions of Section 1605(b) and (c) for a waiver of this requirement under specified circumstances, and of Section 1605(d) that this requirement must be implemented "consistent with U.S. obligations under international agreements."

That Guidance includes at §176.140 the definition of a "manufactured good" as "[a] good brought to the construction site for incorporation into the building or work that has been processed into a specific form and shape, or combined with other raw material to create a material that has different properties than the properties of the individual raw materials." §176.70(a)(2)(ii) of the Guidance further states that "[t]here is no requirement with regard to the origin of components or subcomponents in manufactured goods used in the project, as long as the manufacturing occurs in the United States."

Thus, recipients of assistance from the Clean or Drinking Water State Revolving Funds (SRF) provided under ARRA must determine, have the goods to be used in this project been "manufactured" in the U.S.? This may be relatively simple to determine for many goods used in a water infrastructure project. However, many other manufactured goods used in ARRA SRF projects are brought together in the U.S. through a widely varying spectrum of activities. When such goods are comprised of any components produced in countries other than the U.S., SRF assistance recipients can use substantial transformation analysis to determine whether the activities in the U.S. by which a particular good is brought together do or do not enable it to be considered "manufactured" in the U.S. under §1605 and the Guidance.

The Concept of Substantial Transformation

To assess whether these varied activities do or do not enable the assistance recipient to consider a good as "produced in the U.S.", OMB included in a section of their Guidance on international agreements the concept of "substantial transformation". §176.160 provides that recipients need to inquire whether, "[i]n the case of a manufactured good that consists in whole or in part of materials from another country, [the good] has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed." This OMB Guidance term itself directly applies to and is binding on few if any SRF recipients, because it appears only in a term for international agreements. However, EPA believes the

substantial transformation concept provides necessary guidance on this issue. The origins and applications of the term are rooted in well-established Federal interpretations, particularly by the Customs Department and the Federal courts, and EPA is not aware of any alternative standard – particularly, any alternative appropriate for application under §1605 – to determine whether or not a manufactured good is U.S.-produced.

Applying Substantial Transformation Analysis – Roles and Responsibilities

Before exploring the principles and means to interpret and apply the substantial transformation concept, it is important to clarify the roles of ARRA assistance recipients, EPA, and the States in the process of applying this concept. These roles are, of necessity, a combination of the traditional responsibilities among these partners in the SRF programs, and the specific, new mandates imposed by §1605.

Assistance Recipients' Role: SRF assistance recipients bear the direct responsibility to comply with the Buy American requirement of §1605, because that section applies the requirement to each "project". The statutory expectation is that recipients will comply by buying U.S.-produced iron, steel, and manufactured goods. This expectation is illustrated by the characterization in the OMB Guidance (at §176.80) of waivers as "exceptions" to the general rule of Buy American. Recipients, in conjunction with consultants, contractors, suppliers/distributors, and others, thus are responsible to decide if products are U.S.-made, by applying the substantial transformation analysis specified by OMB.

Assistance recipients will make this determination for a finished good by obtaining information about the processes used and applying the questions set forth in the Section below, "*Analysis to Determine Whether Substantial Transformation Has Occurred in the U.S.*" To decide in unclear (marginal) cases, recipients should ask themselves: would we be confident to use information from the analysis to document our Buy American compliance – that this good is U.S.-produced – to our State or EPA in a compliance audit?

For recipients considering use of goods claimed to be U.S.-produced, if a competing manufacturer, bidder or supplier protests such claim, you can ask such competitors to frame any concerns in the form of specific responses to these questions, both as to their product and that of another competing company. This information can equip recipients to ask further questions of their intended manufacturers, to better inform the recipient's decision, and to preemptively address the subject of potential bid protests later on that might otherwise complicate an ARRA project's timely contracting. In other words, if a competitor states a complaint – that its goods are U.S.-produced, but the other company's claim that their goods comply with §1605 is false – then the assistance recipient should request this response be framed in the format of appropriately detailed answers by the competitor to the substantial transformation questions, both as to their product and that of another competing company.

Upon applying a substantial transformation analysis through these questions, many assistance recipients will determine that a good to be used in their project is substantially

transformed in the U.S. Because it is thus manufactured in the U.S., such recipients can comply with §1605 by using the good in their projects and retaining appropriate documentation in their files. This documentation will include (1) appropriately detailed answers from the manufacturer to the substantial transformation questions, as described in the "*Analysis to Determine Whether Substantial Transformation Has Occurred in the U.S.*" section of this paper, below; (2) any additional material the recipient may have from the manufacturer that provides detail supporting the answers; and, (3) upon procurement of the good, documentation from the manufacturer verifying that the product originated in a U.S. plant where substantial transformation occurred as demonstrated by the answers above. **This information and documentation will be such assistance recipients' basis for demonstrating compliance with the Buy American requirement of §1605(a).**

After receiving information to answer the substantial transformation questions as to an intended manufacturer's product, an assistance recipient may have continuing, reasonable doubt as to the adequacy of the answers to establish the U.S. origins of that product. By requesting and analyzing substantial transformation information, a recipient will also be better equipped to understand other potential options. This analysis may provide a basis to see whether a competing manufacturer's U.S.-made product does meet, or can be timely adapted to meet the recipient's justified specifications. If the U.S.-made product does not meet those specifications, and other U.S.-made goods that do meet them are not available, then the recipient should have sufficient information to apply for a waiver from EPA. While assistance recipients assisted by the engineering community and others will use best professional judgment in making determinations as to substantial transformation, such determinations must be supported by appropriately detailed information from manufacturers describing the specific operations in their manufacturing process that warrant a determination that substantial transformation has occurred in the U.S.

EPA Role: **EPA does not and will not make determinations as to substantial transformation** or the U.S. or foreign origin of manufactured goods. EPA's role under §1605 is to review waiver requests when an assistance recipient believes it cannot comply by buying U.S.-made goods, and to undertake compliance oversight. The limitations on EPA's role in this issue are driven by responsibilities assigned by ARRA.

ARRA's SRF appropriations heading requires that if all funds allotted to each State are not under contract or construction within 12 months of enactment (February 17, 2010), EPA must reallocate such un-contracted-for funds to States that have placed all their funds under contract by that date. OMB's Guidance (at §176.120), reflected also in EPA's April 28, 2009 Memorandum on the "Implementation of Section 1605" (found at http://www.epa.gov/water/eparecovery/docs/04-29-2009_BA_waiver_process_final.pdf, "Application by Assistance Recipient" section), stresses the importance of ascertaining the U.S.-produced origins of goods or securing any necessary waivers before signing construction contracts. In light of these requirements and SRFs-specific time constraints, EPA must view the role assigned to Federal agencies by §1605 itself – to decide on requests for waivers – as the Agency's central focus in implementing §1605.

However, EPA does recognize that, for assistance recipients, these issues may be as novel, complex, and demanding as they are for EPA, and that prior to contracting, they are at risk of losing ARRA funding provided to them by their State if it is not under contract by February 17, 2010. Thus, **at the discretion of the EPA Region and upon the direct request of an assistance recipient only, EPA may undertake informal "anticipatory" oversight.**

As per the preceding paragraph, EPA will not itself make any substantial transformation determinations. However, where an assistance recipient has made at least a tentative determination that substantial transformation of a specific good has occurred in the U.S., EPA may review detailed information about substantial transformation that the assistance recipient believes is or may be sufficient to support its determination, and will in such cases, as a matter of "anticipatory" oversight, advise the recipient as to whether in EPA's judgment the supporting information is sufficient.

In this effort, EPA will review only information provided by the recipient, or on its behalf by another party (e.g., a manufacturer or consulting engineer) with the recipient's express consent. This will ensure that any EPA review of a recipient's substantial transformation determination and supporting information is undertaken because the assistance recipient considers it to be genuinely in its own interest, and is not primarily for the benefit or convenience of any other party.

State Buy American Role: §1605 does not authorize or provide a role for States in the consideration or granting of waivers. However, as with the typical situation pertaining to oversight of SRF assistance, States do have a lead oversight role – particularly through their conduct of oversight audits – in ensuring assistance recipients comply with all applicable requirements. This includes §1605, as the terms and conditions in the SRF capitalization grant agreements for ARRA require that applicable provisions be placed in all assistance agreements. Applying Buy American information posted on www.epa.gov/water/eparecovery, States can advise assistance recipients to help ensure that the documentation in recipients' project files is appropriate for review of any applicable means of compliance with §1605.

- For the procurement of U.S.-made iron, steel, and manufactured goods (the preferred approach), this would include verification of U.S. production (as stated in sample certification point 2 in Appendix 5 of EPA's April 28, 2009 Buy American memo, cited above, and as referred to in point (3) of "Assistance Recipients' Role", above), in conjunction with, where necessary, the information provided and determination made that substantial transformation occurred in the U.S., as indicated in this paper.

- For items covered by a categorical (e.g., nationwide) waiver, the documentation must include all elements specified in and required by the waiver for an item or project to be covered. For any individual project component that has been granted a waiver, documentation will include a copy of the Federal Register notice of the project specific waiver.

- For items subject to an international agreement, the recipient documentation will include a communication from the applicable state or municipal party to the agreement that the recipient and any specific components are covered, a substantiated estimate that the value of the project is $7,443,000 or more, and verification of the components' origin from a country covered by the agreement.

Substantial Transformation Concerns for States and EPA

Both EPA and States should recognize that, if they wish to provide technical assistance in areas of Buy American activities beyond the scope of the above responsibilities, there is a tension between the State or EPA role for compliance oversight on the one hand, and the discretionary provision of technical assistance with respect to that compliance on the other. Both EPA and States should be cautious regarding recipient requests to consult on substantial transformation, keeping in mind their primary responsibility for ensuring compliance.

However, like EPA, States can provide their own "anticipatory oversight" to their assistance recipients. States can choose to review detailed information and analysis provided by or on behalf of the recipient that presents a case about the potential substantial transformation of a product the recipient wishes to procure for an ARRA project. While this review by the State is purely discretionary and, like any EPA may do in this regard, is not a formal decision-making process under ARRA, such review also would recognize the reality faced by ARRA's SRF assistance recipients: of complying with new, unfamiliar, and complex Buy American requirements prior to a tight deadline for signing contracts. Both EPA and States, in undertaking this role, should inform recipients seeking such review of those recipients' obligation to scrutinize and analyze to the best of their ability the information proffered by manufacturers asserting U.S. production of their goods, and to consider information put forward by competing manufacturers who may be contesting such assertions. Under these circumstances, neither EPA nor States are compelled to provide an "anticipatory" oversight review, and should concur in such requests only if the State or EPA believes they have a sufficient basis to be able to determine whether substantial transformation had occurred if they were undertaking a direct oversight audit.

Some Basic Principles of Substantial Transformation Analysis

With the widely diverse conditions of production in the water infrastructure industry, circumstances of creating a finished good may range from production lines that are nearly or entirely integrated vertically, to the bringing together of components from dispersed sources. The challenge for substantial transformation analysis is to determine whether – on the spectrum from :"minimal assembly required" in a simple kit (such as an IKEA box) to heavy machining involving high value labor and sophisticated equipment – the U.S.-based production process for each specific finished good reached a point where one

could fairly say that substantial transformation has occurred. The simple assembly case is clearly not substantial transformation, the heavy machining clearly is. The focus of substantial transformation analysis is on the many, individualized, more complex cases in between these two, obvious poles.

An oversimplified summary of this analysis is to ask whether the activities in the U.S. substantially transform the components that go into the completed item. EPA has relied on long-articulated Federal legal interpretations to provide more useful detail. Some basic principles in "substantial transformation" analysis include the following.

- First, the determination of whether "substantial transformation" has occurred is always case-by case, using questions and criteria well-established in administrative and judicial case law. [*SDI Technologies v. U.S.*, 977 F.Supp 1235 (C.I.T. 1997), at 1239 n. 2. *Customs Ruling* HQ 560427 (August 21, 1997)]

- Second, no good "satisfies the substantial transformation test by ... having merely undergone '[a] simple combining or packaging operation.'" [19 USC Sec. 2463(b)(2)(A), cited in *Uniden America Corp. v. U.S.*, C.I.T. Slip Op. 00-139, Court No. 98-05-01311 at 8, n. 4.]

- Third, "[a]ssembly operations which are minimal or simple, as opposed to complex or meaningful, will generally not result in a substantial transformation." [*Customs Ruling* HQ 734097 (November 25, 1991) (and Customs Cases cited therein)]

These principles are helpful in offering a basic framework and sideboards for more searching substantial transformation analysis, as described herein.

Analysis to Determine Whether Substantial Transformation Has Occurred in the U.S.

EPA has developed several questions for assistance recipients to ask when determining whether substantial transformation has occurred in the U.S. As EPA entered the work of ARRA implementation without current experience in the Office of Water with Buy American programs, these questions were derived directly from numerous Federal court cases, Customs Department administrative rulings, and interpretive rules for U.S. trade agreements.

In applying these questions to individual cases, "yes" answers must in all cases be documented by meaningful, informative, and specific technical descriptions of the activities in the actual process asked about in each question. These descriptions need not be of great length, but must be sufficiently detailed and clearly written to inform assistance recipients and agency reviewers about the activities that have occurred in the process(es), enough to understand their nature and purpose. They should not simply assert a conclusion, describe an end state, or essentially repeat the words of the question

as a statement. **Simple "yes" answers are always entirely insufficient to make a case that an item has been substantially transformed in the U.S.**

These questions all focus on processing work on and assembly/integration of the components into a finished good. Design, planning, procurement, component production, or any other step prior to the process of physically working on and bringing together the components into the item used in and incorporated into the project cannot constitute or be a part of substantial transformation.

Substantial Transformation has occurred in the U.S. if answer is "yes" to either Question 1, 2, or 3 below.

> 1. Were all of the components of the manufactured good manufactured in the United States, **and** were all of the components assembled into the final product in the U.S.? (If the answer is yes, then this is clearly manufactured in the U.S., and the inquiry is complete)

Question 2 addresses primarily the situations where important processing work is done on components of the complete item. While assembly is typically also involved, the focus of the question 2 steps is generally on that work prior to final assembly. Because each of the subquestions of 2 call for relatively significant and demanding steps, the answer to question 2 is "yes" if answer to any of 2a, 2b, or 2c is "yes."

> 2. Was there a change in character or use of the good or the components in America? (These questions are asked about the finished good as a whole, not about each individual component)
>
> a. Was there a change in the physical and/or chemical properties or characteristics designed to alter the functionality of the good?
>
> b. Did the manufacturing or processing operation result in a change of a product(s) with one use into a product with a different use?
>
> c. Did the manufacturing or processing operation result in the narrowing of the range of possible uses of a multi-use product?

Question 3 generally addresses situations where the most significant of the potentially transformative work is assembly. Because assembly is in most cases further down the spectrum towards non-transformative work, a more demanding standard is appropriate. Thus, if the answer to at least two of 3a, 3b, 3c, 3d, or 3e is "yes", then the answer to Question 3 is "yes". Manufacturers who wish to establish beyond a doubt that their product has been substantially transformed in the U.S. via answers to Question 3 will want to provide descriptions of their process(es) that support affirmative answers to as many of the subquestions as are applicable, to increase the likelihood that the answers to at least two of the questions are sufficient.

3. Was(/were) the process(es) performed in the U.S. (including but not limited to assembly) complex and meaningful?

a. Did the process(es) take a substantial amount of time?

b. Was(/were) the process(es) costly?

c. Did the process(es) require particular high level skills?

d. Did the process(es) require a number of different operations?

e. Was substantial value added in the process(es)?

Some Actions Are Not Substantial Transformation under Any Circumstances

Work that makes simply cosmetic or surface changes only in a component, e.g., painting, lacquering, or cleaning, cannot amount or contribute to a finding of substantial transformation. [One example of this: *Rules of Origin under the U.S.-Jordan Free Trade Agreement, Final Report*, at 4.9 (at http://www.jordanusfta.com/documents/chap4.pdf).] Similarly, simply cutting a material to length or width, e.g., cutting steel pipe to particular length, is considered a minor change that is not and does not advance the case for substantial transformation [*Rules of Origin* above, at 4.11.2].

Can Substantial Transformation Occur Onsite?

The OMB Guidance definition of "manufactured good" as a "good brought to the construction site" suggests a few general operating presumptions: (1) what occurs onsite is construction; (2) "manufacturing" occurs prior to the point at which a "good [is] brought to the construction site," and (3) the substantial transformation test is applied to determine the U.S. or non-U.S. origin of goods at that point, as they arrive onsite. On the other hand, the OMB Guidance also provided for "substantial transformation" analysis to determine where manufacturing has occurred. In such analysis, the principle is inherent and well-established that a good is manufactured at any site where substantial transformation occurs. (See, e.g., *Torrington v. U.S.* 764 F.2d 1563 (1985), at 1568: "a substantial transformation occurs when an article emerges from a manufacturing process [having met the applicable criteria for transformation]", cited at *SDI Technologies, Inc. v. U.S.* (977 F.Supp. 1235 (CIT 1977), at 1239.) Thus, substantial transformation can encompass onsite manufacturing. Because the OMB Guidance was signed April 6, 2009, less than seven weeks after enactment of ARRA, this did not allow time to coordinate or integrate the "manufactured goods" definition with the "substantial transformation" term.

Interpretation of these two terms can be coordinated by maintaining the distinctions made in each term. Under the "manufactured goods" definition, what occurs at the project site is presumed to be construction; under the "substantial transformation" analysis,

manufacturing may occur at the project site, but only if the process there is both substantial transformation and it occurs under conditions ordinarily and customarily associated with manufacturing at a conventional plant.

In other words, for an activity at the project site to be considered "manufacturing," the manufacturer must, first, bring all components of the good to the site and must always do so in normal course of business. This ensures that the U.S. company is not changing the terms of its customary operations in an attempt to game the Buy American requirements. In addition, the manufacturer does all the work onsite with its own personnel, and may use a subcontractor for this only if the manufacturer does so already in the normal course of business. Thus, by ensuring the manufacturer maintains essentially full custody and control at the project site to the point where the good is finished, this condition requires that the manufacturer customarily engages in work at project sites as the functional equivalent of a manufacturing plant for that particular good.

If the U.S. company that meets these "customary operation" conditions does retain custody through the onsite completion of the good and its installation into the project, the final issue is whether that onsite work amounts to substantial transformation under the Questions 1, 2, or 3 above. The U.S. company's case will be strongest if the transformative work must be done onsite. For example, the U.S. manufacturer may provide that onsite assembly and installation include sophisticated adjustments, calibration, etc., by the U.S. company or its authorized and customary subcontractors, which must necessarily be done onsite to meet project performance specifications and establish warranty conditions.

This discussion also explains why, in a "kit" situation, where all pieces are shipped by one company with the intent of providing all components necessary to be assembled into a functional good (e.g., pump station), their assembly by a contractor or third party is properly considered as "construction" and not substantial transformation.