

1990

# Nucor Corporation, Nucor Steel - Utah Division v. Utah State Tax Commission : Brief of Respondent

Utah Supreme Court

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IN THE SUPREME COURT OF THE STATE OF UTAH

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NUCOR CORPORATION	)	
NUCOR STEEL - UTAH DIVISION	)	
	)	
Petitioner/Appellant,	)	Case No. 900328
	)	
vs.	)	
	)	
UTAH STATE TAX COMMISSION,	)	Priority No. 14A
	)	
Respondent/Appellee.	)	

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BRIEF OF RESPONDENT/APPELLEE

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	)	Priority No. 14A
UTAH STATE TAX COMMISSION,	)	
	)	
Respondent/Appellee.	)	

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INTRODUCTION

The Utah State Tax Commission hereby submits this brief in support of the Utah State Tax Commission's final decision entered June 7, 1990. The Utah State Tax Commission held that Nucor Steel's purchase and use of lance pipes, stirring lances, and mill rolls are subject to the sales and use tax and are not exempt under Utah Code Ann. § 59-12-104(28) (1987).

STATEMENT OF JURISDICTION

This Court has jurisdiction of this appeal pursuant to Utah Const. art. VIII, § 3 of the Utah Constitution and Utah Code Ann. § 78-2-2(3)(e)(ii) (1987 & Cum. Supp. 1990) and § 63-46b-16(1) (1989).

STATEMENT OF THE ISSUE PRESENTED FOR REVIEW

Whether Nucor's purchase and use of lance pipes, stirring lances, and mill rolls are exempt from Utah's sales and use tax pursuant to Utah Code Ann. § 59-12-104(28) (1987) in view of the fact that they are purchased as equipment to be used in the manufacturing process as well as to become a component part of the manufactured product of steel.

STATEMENT OF THE STANDARD OF REVIEW

In resolving the issues before the Court, the Administrative Procedures Act governs this Court's standard of review. The provisions of the Administrative Procedures Act apply to all agency adjudicative proceedings commenced by or before an agency on and after January 1, 1988.

The Act provides the standard of review appellate courts must use when reviewing an agency's formal adjudicative proceedings:

(4) The appellate court shall grant relief only if, on the basis of the agency's record, it determines that a person seeking judicial review has been substantially prejudiced by any of the following:

. . . .

(d) the agency has erroneously interpreted or applied the law;

. . . .

(g) the agency action is based upon a determination of fact, made or implied by the agency, that is not supported by substantial evidence when viewed in light of the whole record before the court;

Utah Code Ann. § 63-46b-16(4)(d), (g) (1989) (emphasis added). Therefore, this Court reviews the Utah State Tax Commission's (Tax Commission) record, primarily the Transcript of Formal Hearing and the Findings of Fact, Conclusions of Law and Final Decision (attached as Addendum A) to determine whether Nucor Corporation, Nucor Steel - Utah Division (Nucor) was "substantially prejudiced" by the Tax Commission's decision. For two reasons, the language of Utah Code Ann. § 63-46b-16(b) implies that deference should be given the Tax Commission's decision. First, the Act requires that appellate court make its determination only "on the basis of the agency's record." Second, the Act requires that mere prejudice is not enough; there must exist "substantial prejudice." Hence, this Court should only reverse the Tax Commission's decision if, after reviewing the Tax Commission's decision, it finds that Nucor has been "substantially prejudiced."

When reviewing the Tax Commission's Findings of Fact, this Court should uphold the Tax Commission's factual determinations unless they are "not supported by substantial evidence when viewed in light of the whole record before the

court." Utah Code Ann. § 63-46b-16(4)(g). This Court has defined "substantial evidence" as "that quantum and quality of relevant evidence that is adequate to convince a reasonable mind to support a conclusion." First Nat'l Bank v. County Bd. of Equalization, 145 Utah Adv. Rep. 8, 9 (Utah 1990).

In Chris & Dick's Lumber v. Tax Comm'n, 791 P.2d 511 (Utah 1990), this Court articulated the appropriate standard of review for cases arising in the Tax Commission, holding that in normal cases involving statutory construction the "correction of error standard" would be applied. However, the Court noted that in a limited number of circumstances an agency's interpretation of a statute or rule may be entitled to some deference. This occurs when an agency possesses expertise or practical, firsthand experience with the subject matter.

Additionally, in Boyd v. Department of Employment Sec., 773 P.2d 398 (Utah Ct. App. 1989), the Utah Court of Appeals ruled that the administrative agency decision would be given great weight in the agency's area of expertise so long as no clear misinterpretation of statutes or rules was evident.

#### DETERMINATIVE STATUTE AND RULE

The following statute and rule are controlling in this action:

Utah Code Ann. § 59-12-104(28) (1987 & Cum. Supp. 1990):

The following sales and uses are exempt from the taxes imposed by this chapter:

. . . .

(28) property purchased for resale in this state, in the regular course of business, either in its original form or as an ingredient or component part of a manufactured or compounded product;

Utah Admin. Code R865-19-2S (1988):

- A. The sales and use taxes are transaction taxes imposed upon certain retail sales and leases of tangible personal property, as well as upon certain services.
- B. The tax is not upon the articles sold or furnished, but upon the transaction, and the purchaser is the actual taxpayer.

STATEMENT OF THE CASE

A. Nature of the Case

This is an appeal by Nucor from the ruling of the Tax Commission holding that lance pipes, stirring lances, and mill rolls used by Nucor in its steel making process were not exempt from the imposition of the Utah use tax because they were principally used as machinery and only incidentally as an ingredient of a final product. Findings of Fact, Conclusions of Law and Final Decision at 9, Nucor Steel Corp. v. Auditing Div., State Tax Comm'n, (Case No. 88-2850). The Tax Commission requests that this Court uphold its decision and find that the lance pipes, stirring lances, and mill rolls are subject to the

Utah sales and use tax because they were consumed by Nucor in the manufacturing process, because they were purchased by Nucor for the principal use as machinery, and because Nucor has failed to meet its burden of proof as required when claiming an exemption from taxation.

**B. Statement of the Proceedings Below**

On October 27, 1988, the Auditing Division issued a Statutory Notice of Deficiency against Nucor for the period of October 1, 1984, through September 30, 1987, which concluded that Nucor's purchases of electrodes, lance pipes, stirring lances, and mill rolls were subject to sales and use tax. The Assessment issued to Nucor concluded that Nucor owed \$1,103,065.59 in back sales and use taxes for the purchases of graphite electrodes, lance pipes, stirring lances, and mill rolls without paying sales and use tax.

On November 23, 1988, Nucor timely filed a Request for Agency Action protesting the Tax Commission's audit report. Nucor asserted that its purchases were exempt from sales and use taxes pursuant to Utah Code Ann. § 59-12-104(28) (1987). The Auditing Division timely filed an answer on December 23, 1988, denying Nucor's claimed exemption and requesting the Tax

Commission to sustain the tax, penalty and interest of the assessment dated October 27, 1988.

A formal hearing was held on October 11, 1989. On June 7, 1990, the Tax Commission issued its final decision allowing the exemption for the purchase of graphite electrodes, but upholding the tax on the lance pipes, stirring lances, and mill rolls because Nucor's principal use of these items was as machinery and only incidentally as ingredients. Findings of Fact, Conclusions of Law and Final Decision at 5.

On July 9, 1990, Nucor paid the deficient sales and use tax for its purchases of lance pipes, stirring lances, and mill rolls and also filed its Petition for Review of Final Agency Action before this court.<sup>1</sup>

C. Statement of Facts

Nucor is engaged in the business of manufacturing steel and certain steel co-products such as slag, bag dust and scale, in a mini-mill process located near Plymouth, Utah. Nucor purchases lance pipes, stirring lances, and mill rolls to aid in

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<sup>1</sup> Thereafter, the Auditing Division filed a cross petition seeking reversal of the Tax Commission's ruling that graphite electrodes are exempt under Utah Code Ann. § 59-12-104(28). Nucor then moved to dismiss this petition claiming the Tax Commission could not seek reversal of a part of its own decision. The Attorney General's office subsequently moved to dismiss the cross petition, and that motion was granted on November 30, 1990.

the manufacturing process of steel. Findings of Fact, Conclusions of Law and Final Decision at 2.

The lance pipes utilized by Nucor are steel pipes approximately one inch or one quarter inch in diameter, and of various lengths. The lance pipes are used to inject oxygen into the furnace as well as to open a tap hole in the furnace. Because of the intense heat to which the lance pipes are exposed, they melt and become a part of the molten metal. The average cost of each lance pipe is \$0.55 per pound. Amendment to Order on Pretrial Conference (attached as Addendum A) at 2, Nucor Steel Corp. v. Auditing Div., State Tax Comm'n, (Case No. 88-2850).

The stirring lances used by Nucor are steel pipes approximately 1.9 inches in diameter, composed of iron and surrounded by a 3.55 inch layer of ceramic material. The stirring lances are used to inject nitrogen and argon into the molten metal to aid in the removal of unwanted ingredients. Because of the intense heat to which the stirring lances are exposed, the metal components melt and become a part of the molten metal, and the ceramic coating on the lances become an ingredient of the slag. The average cost of each stirring lance is \$0.68 per pound. Id. at 3.

The mill rolls used by Nucor are cylindrical rolls composed of iron, varying from 11.8 inches to 70.8 inches in

length, and 14.9 inches to 27.1 inches in diameter. The mill rolls are used to reduce the size of and shape of the billets to form the desired finished products. The average cost of each mill roll varies from \$0.49 to \$5.23 per pound. Id. at 3.

The average cost per pound that Nucor receives for its steel ranges from \$0.15 to \$0.21 per pound. Id. at 4. The mill scale is sold for \$0.005 per pound. Id. at 11. The slag which Nucor produces is exchanged with a third party for services, which services consist of collecting the slag, removing it from the plant, and cleaning the slag depositories. Id. at 11.

If not exempt under Utah Code Ann. § 59-12-104(28) (1987), all of Nucor's purchases of lance pipes, stirring lances, and mill rolls are subject to Utah's sales and use tax.

#### SUMMARY OF THE ARGUMENT

Nucor's purchase of lance pipes, stirring lances, and mill rolls does not fall within the exemption of Utah Code Ann. § 59-12-104(28) (1987). Although they are property purchased "in the regular course of business" with the intent that they will be offered "for resale" as "an ingredient or component part of a manufactured or compounded product," they are also purchased as equipment to be used in the manufacturing product. Only property purchased where the principal use of the property is to enter it into and become an ingredient or component part of a manufactured

product are exempt from sales and use tax under § 59-12-104(28). Union Portland Cement Co. v. State Tax Comm'n, 170 P.2d 164, 172 (Utah 1946). Property purchased as equipment in the manufacturing process of a product are not exempt from the sales and use tax. Union Portland, 170 P.2d at 172. The dilemma in this case is that the items involved are not purchased solely as ingredients or solely as equipment, but rather are purchased primarily as equipment and as an ingredient or component part.

Nucor maintains that simply because the purchased equipment ends up in the final product (a so-called intended result) that it should get an exemption under the plain meaning of Utah Code Ann. § 59-12-104(28) (1987). This simplistic view of the statute is flawed. To allow an exemption for the items under discussion today would undermine the purpose of the statute and would conflict with prior Utah Supreme Court precedent. A more realistic interpretation of the statute is that determined by the Tax Commission in the proceedings below. Items purchased for dual purposes necessarily require analysis of the actual use of the items to determine whether or not an exemption will be allowed. Findings of Fact, Conclusions of Law and Final Decision at 7. To ignore this step will broaden the exemption far beyond its intended scope.

ARGUMENT

I. NUCOR'S PURCHASES OF LANCE PIPES, STIRRING LANCES, AND MILL ROLLS SHOULD BE TAXED WHEN THE TRANSACTION OCCURS.

Nucor is liable for the sales and use taxes on the purchases of lance pipes, stirring lances, and mill rolls because the sales and use tax is a tax on the transaction.

Administrative Rules and case law support the Tax Commission's position that the focus of the sales and use tax is at the point when the transaction occurs. Utah Admin. Code R865-19-2S (1988) reads as follows:

- A. This is a transaction tax imposed upon certain retail sales of tangible personal property . . . .
- B. The tax is not upon the articles sold or furnished, but upon the transaction, and the purchaser is the actual taxpayer. . . .

Id. In Union Stock Yards v. State Tax Comm'n of Utah, 71 P.2d 542 (Utah 1937) this Court upheld a sales tax levied against the plaintiff on the value of hay, grain and straw used in feeding and resting livestock in interstate commerce. The tax was imposed on the sales price of these materials and not the value of the service rendered by the taxpayer to the interstate carriers. This Court in upholding the tax concentrated upon when the transaction occurred by stating:

The Utah sales tax is a tax on a transaction. . . .  
Here the hay, grain, and straw did not become a part of

interstate commerce until after it had been fed to the livestock . . . . The tax was on the sale in this state and not on the use of these products in interstate commerce.

Id. at 543-44.

The sales and use tax should apply to Nucor Steel under the analysis in Union Stock Yards because the transactions in the present appeal involve tangible personal property (i.e. lance pipes, stirring lances, and mill rolls) that as manufacturing equipment becomes part of the steel during the meltdown and refining phases. Although there are certain exemptions to the sales and use tax, Nucor does not fit within any of them and, therefore, must be held liable for the sales and use tax deficiency assessed by the Tax Commission.

II. NUCOR IS NOT ALLOWED AN EXEMPTION FOR LANCE PIPES, STIRRING LANCES, AND MILL ROLLS UNDER UTAH CODE ANN. § 59-12-104(28).

Utah Code Ann. § 59-12-104(28) (1987) allows for an exemption on "property purchased for resale in this state, in the regular course of business, either in its original form or as an ingredient or component part of a manufactured or compounded product." Nucor's claimed exemption under this statute is unfounded. First, the statute does not allow an exemption for equipment, i.e. lance pipes, stirring lances, and mill rolls. Union Portland, 170 P.2d at 172. Second, prior case law

interpreting this or similar statutes does not allow an exemption for such items. See Kaiser Steel Corp. v. State Bd. of Equalization, 593 P.2d 864 (Cal. 1979); accord Union Portland, 170 P.2d 164 (Utah 1946). Third, the principal use of the items is as machinery and thus is does not qualify for an exemption. Findings of Fact, Conclusions of Law and Final Decision at 9, Nucor Steel Corp. v. State Tax Comm'n, (Case No. 88-2850); accord Union Portland, 170 P.2d at 172.

III. NUCOR SHOULD NOT BE ALLOWED AN EXEMPTION FOR PURCHASES OF LANCE PIPES, STIRRING LANCES, AND MILL ROLLS BASED ON THE UTAH SUPREME COURT CASE OF UNION PORTLAND CEMENT.

Nucor is required to pay a sales and use tax on the purchase of lance pipes, stirring lances, and mill rolls pursuant to the factually similar Utah Supreme Court case of Union Portland. The plaintiff in Union Portland claimed an exemption from the use tax for items purchased and used in the manufacturing process of cement, because they entered into and became a part of the cement. The items Union Portland sought to exempt included grinding balls, firebricks and coal.<sup>2</sup> Portions of each of these items entered into and became a part of the

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<sup>2</sup> Grinding balls were used in the grinding mills to grind up cement raw materials. Firebricks were used to line the rotating kilns to protect the metal kilns from the intense heat inside. Coal was used in the rotating kilns to provide the necessary heat to form cement clinkers. Union Portland, 170 P.2d at 170.

finished product of cement. Id. at 170. Interpreting Utah Code Ann. § 80-16-4(h) (1943),<sup>3</sup> the predecessor to § 59-12-104(28) (1987), this Court held that none of the items were exempt from the use tax and affirmed the deficiency tax assessment against Union Portland Cement Co. Union Portland, 170 P.2d at 172.

Similar to the facts of Union Portland, the plaintiff in the case at bar, Nucor, claims an exemption from the use tax for items purchased and used in the manufacturing process of steel because they enter into and become a part of the steel. The items Nucor seeks to exempt include lance pipes, stirring lances, and mill rolls.<sup>4</sup> Portions of each of these items also enter into and become a part of the finished product of steel. Just as this Court denied an exemption to Union Portland for the items it used in the manufacturing process of cement, so to should this Court deny an exemption to Nucor for the items it uses in the manufacturing process of steel.

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<sup>3</sup> Utah Code Ann. § 80-16-4(h) (1943) exempted "[p]roperty which enters into and becomes an ingredient or component part of the property which a person engaged in the business of manufacturing, compounding for sale, profit or use manufactures or compounds, or the container, label or the shipping case thereof." Union Portland, 170 P.2d at 170.

<sup>4</sup> Lance pipes are used to inject oxygen into the furnace to supply the necessary heat. Stirring lances are used to inject nitrogen and argon into the molten metal to remove unwanted ingredients. Mill rolls are used to cut the billets to reduce them to the desired shape and form of the finished product. Amendment to Order on Pretrial Conference at 2-3.

The dilemma in both cases is identical: What items are exempt from the sales and use tax under the "ingredient or component part" exemption? In answering this question, the Union Portland Court realized that some limit had to be put on the exemption or unintended results would follow. The solution was a two-step test: 1) Did the item actually enter the finished product or was it consumed by the manufacturer; and 2) if the item did enter the finished product, was its principal use as machinery or ingredient. Under step one, if the item was consumed by the manufacturer then there is no exemption. Under step two, if the item's principal use was as machinery then there is no exemption. Union Portland, 170 P.2d at 171. Nucor fails both steps, because the lance pipes, stirring lances, and mill rolls are consumed and their character destroyed in the manufacturing process, and because the principal use of the lance pipes, stirring lances, and mill rolls is as machinery in the manufacturing process and only incidentally as ingredients in the finished product. This analysis used in Union Portland supports the Commission's conclusion that Nucor should not be allowed an exemption for its purchases of lance pipes, stirring lances, and mill rolls.

- A. NUCOR SHOULD NOT BE ALLOWED AN EXEMPTION FOR THE PURCHASE OF LANCE PIPES, STIRRING LANCES, AND MILL ROLLS BECAUSE IT CONSUMES THESE ITEMS IN THE MANUFACTURING PROCESS.

In determining whether the lance pipes, stirring lances, and mill rolls are exempt from the use tax, we must first ask if Nucor has consumed these items in the manufacturing process.<sup>5</sup> As the Union Portland Court held, the exemption as an "ingredient or component part" of a manufactured product does not apply to items which are consumed by the manufacturer. Union Portland, 170 P.2d at 171. This conclusion is based on the policy that while the sales and use tax should not be exacted more than once, it should be paid at least once. Purchases of articles which are consumed in the manufacturing process should be taxed to the manufacturer because such articles are not passed on to other users and therefore are not taxable to anyone else down the line. The manufacturer is the last user of consumed items and should be taxed for such use. Under this reasoning, Nucor is not entitled to an exemption for its purchases of lance pipes, stirring lances, and mill rolls because it consumes these items as the last user in the manufacturing process, and to allow the exemption would avoid taxation of a taxable use.

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<sup>5</sup> Accord E.C. Olsen Co. v. State Tax Comm'n, 168 P.2d 324, 330 (Utah 1946) stating "[t]he test is: Are the articles involved consumed by the processor as the last user? If they are so consumed, the tax must be paid thereon by the processor."

Consume means "'to use up, expend, waste, devour . . .  
'" and consumer is defined as "'one who uses economic goods and  
so diminishes their utilities . . . .'" Id. at 171 (citing 9  
Words and Phrases, Permanent Edition, 10). Under these  
definitions, the Union Portland court found that Union Portland  
Cement Co. had consumed the iron grinding balls, the firebricks  
and the coal used in the manufacturing process of cement. The  
Court noted the items were "used up," "worn away," "not passed on  
to other users," and "used until they no longer could serve  
the[ir] purpose." Union Portland, 170 P.2d at 171.

All of these definitions are true of Nucor's use of the  
lance pipes, stirring lances, and mill rolls. All three items  
are used up until they no longer serve their purposes as lance  
pipes, stirring lances, and mill rolls. All three items are used  
up until they have no more utility as lance pipes, stirring  
lances, and mill rolls. The mill rolls are worn away gradually  
in the process of pressing and forming the billets, while the  
lance pipes and stirring lances are worn away in the heating  
process. Nucor is the ultimate user of the lance pipes, stirring  
lances, and mill rolls because such items are not passed on to  
other users as lance pipes, stirring lances, and mill rolls.  
Rather, they are used up and consumed by Nucor in the  
manufacturing process. Having thus consumed these items, Nucor

should pay the sales and use tax on them. To allow an exemption would frustrate the purpose of the statute to tax the consumer of the items.

Nucor contends that the lance pipes, stirring lances, and mill rolls are exempt from the use tax because they are a necessary and important ingredient of steel. Despite the fact that this equipment adds a necessary ingredient to the finished product, however, it is still not exempt under the teaching of Union Portland. The Court in Union Portland stated that all the iron particles resulting from the consumption of the iron grinding balls entered into and became an ingredient of the cement and were passed on to the purchasers of the cement. Union Portland, 170 P.2d at 172. Nevertheless, it correctly concluded that no exemption should be allowed. The Court rationalized:

[T]he property plaintiff seeks to exempt from the use tax under subsection (h) of 80-14-4 is iron grinding balls, firebrick and coal. It does not seek exemption on the use of elements and compounds left after the balls, brick and coal had been used and consumed until they had no value or use whatsoever as iron grinding balls, firebrick or coal. The Tax Commission did not assess the use of those resulting elements and compounds. The assessment was for the use and consumption of coal, iron grinding balls, and firebrick. These items were used and consumed by the plaintiff until they ceased to have any potential use as coal, iron grinding balls and firebrick.

Id. Similarly, the property Nucor seeks to exempt from the sales and use tax is lance pipes, stirring lances, and mill rolls.

These items are consumed until they no longer have any value whatsoever as lance pipes, stirring lances, and mill rolls. The assessment is for the use and consumption of these items. Such use is taxable and does not fall under the ingredient exemption of Utah Code Ann. § 59-12-104(28).

- B. NUCOR SHOULD NOT BE ALLOWED AN EXEMPTION FOR PURCHASES OF LANCE PIPES, STIRRING LANCES, AND MILL ROLLS BECAUSE THEY ARE USED PRINCIPALLY AS MACHINERY.

Even if this Court finds that Nucor did not consume the lance pipes, stirring lances, and mill rolls in the manufacturing process, and that the items did become an ingredient or component part of the finished product, Nucor is not entitled to an exemption for such items. As set forth in the second part of the Union Portland analysis, this Court should look into the principal use of the items to determine if an exemption is warranted. If the use of the items is principally as machinery to aid in the manufacturing process, then there can be no exemption. If the use of the items is principally as ingredient or component part of the finished product, then there can be an exemption. Union Portland, 170 P.2d at 171. In applying the Union Portland court decision to the facts at bar, and in analyzing the economic realities underlying the purchases, it is

apparent that Nucor purchased the lance pipes, stirring lances, and mill rolls for the principal use as machinery.

The plaintiff in Union Portland was attempting to get an ingredient exemption for its use of coal (among other things) in the manufacturing process of cement. The coal involved was "pulverized, mixed with air and forced into the rotating kilns." Id. at 170. The burning coal supplied the necessary heat to form cement clinkers. The ash from the coal did not burn and became an ingredient of the cement. This fact scenario is very similar to the lance pipes and stirring lances Nucor Steel uses in the manufacturing process of steel. The lance pipes are used to inject oxygen into the furnace to supply the necessary heat, and the stirring lances are used to inject nitrogen and argon. Both items melt into the steel bath and become an ingredient of the steel. Amendment to Order on Pretrial Conference at 2-3.

The Union Portland Court concluded that the principal use of the coal was as a heat source in the manufacturing process and only incidentally as ingredient in the finished product. "The principal use of coal was to supply heat. Only incidentally to that principal use did ash from the coal enter into the finished product." Id. at 171-72. Since the principal use was as a heat source, no exemption was allowed. Similarly, Nucor's principal use of the lance pipes and stirring lances is to aid in

the manufacturing process. Only incidentally to this principal use did iron from the machinery enter into the finished product. Since Nucor's principal use of the items is as machinery, no exemption should be allowed.

Nucor would have this tribunal view the decision in Union Portland as distinguishable on the factual findings by the court that the minute particles which entered the cement from the machines were incidental to the finished product. As Nucor contends, the iron from the lance pipes, stirring lances, and mill rolls are necessary elements in the finished product of steel. It would be erroneous, however, to assume that the court's language in its decision focused on whether the articles were essential or incidental ingredients to the finished product. The correct emphasis is on the principal or incidental use of the items. As quoted above, the court stated, "[t]he principal use of the coal was to supply heat. Only incidentally to that principal use did ashes from the coal enter into the finished product." Union Portland, 170 P.2d at 171-72 (emphasis added). Following this reading of Union Portland, Nucor should be denied the exemption because its principal use of the lance pipes, stirring lances, and mill rolls is as machinery to aid in the manufacturing process.

The conclusion that the principal use of the lance pipes, stirring lances, and mill rolls is as machinery is supported by an economic analysis of the use of these items. Although Nucor purchases lance pipes, stirring lances, and mill rolls with the intent that iron from the items will enter into and become part of the steel, this is not their primary use because there are far more economical ways to add iron to steel. The average cost of lance pipes is \$0.55 per pound. Amendment to Order on Pretrial Conference at 2. The average cost of a stirring lance is \$0.68 per pound. Id. at 3. The average cost of the mill rolls ranges from \$0.49 to \$5.23 per pound. Id. at 3. In contrast to these figures, the vast majority of the needed iron for steel comes from scrap metal at a cost of \$0.05 per pound. Id. at 5. Scrap metal as an iron source thus ranges from nearly ten to one hundred times less expensive than lance pipes, stirring lances, and mill rolls. It is obvious then, from a commercial perspective, that Nucor's principal purpose in purchasing lance pipes, stirring lances, and mill rolls is for their utility as manufacturing equipment and not as a source for iron. Proof of this principal use is fatal to Nucor's claimed exemption because machinery is not exempt from the sales and use tax.

IV. NUCOR SHOULD NOT BE ALLOWED AN EXEMPTION FOR PURCHASES OF LANCE PIPES, STIRRING LANCES, AND MILL ROLLS BECAUSE IT FAILS THE PRIMARY PURPOSE TEST.

Although this Court did not expressly adopt a "primary purpose test" in Union Portland, such a test is evident from the language of that case. As discussed above, the Court in Union Portland emphasized the "principal or incidental use" of the items as machinery or ingredient. This comparison of principal or incidental use sounds very similar to a primary purpose test.

Although the Tax Commission's case is not dependent on the adoption of the primary purpose test, the Commission urges this court to affirm its analysis.

Application of the primary purpose test as articulated demonstrates that Nucor should not be allowed an exemption for its purchases of lance pipes, stirring lances, and mill rolls. This is true even though both uses of the machinery were intended, and even though the machinery became ingredients in the final product, because the principal purpose for the items is as machinery.

First, Utah is among many states who recognize the primary purpose test. Other courts have also adopted the primary purpose test when faced with a similar dilemma.<sup>6</sup> The

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<sup>6</sup> See Mead Corp. v. Glander, 153 Ohio St. 539, 93 N.E.2d 19 (1950); See also, Traigle v. PPG Industries, Inc., 322 So.2d 777 (La. 1976).

California Supreme Court in Kaiser Steel Corp. v. State Bd. of Equalization, 593 P.2d 864 (Cal. 1979) held that the primary purpose test is applicable to manufacturing industries.

Kaiser Steel involved a dispute analogous to the one at bar. Kaiser was engaged in the manufacturing of steel and other products to be sold at retail. Pursuant to its manufacturing process, Kaiser purchased the disputed materials to charge its furnaces and to remove impurities from the molten metal. During this process, portions of the materials were incorporated into the steel to achieve a specific quality, other portions remained in the finished steel product, while some portions of the material became components of the slag. Id. at 865. The Kaiser Court, following the primary purpose test, accepted the Board's position "that Kaiser purchased the materials for a purpose other than resale, namely to aid in the manufacture of steel, and that therefore the purchases were not tax exempt." Id. at 866.

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<sup>7</sup> The relevant Regulation involved in the Kaiser Steel case, similar to Utah Code Ann. § 59-12-104(28), is "(b) Tax does not apply to sales of tangible personal property to persons who purchase it for the purpose of incorporating it into the manufactured article to be sold, as, for example, any raw material becoming an ingredient or component part of the manufactured article." (Reg. 1525.) Kaiser, 593 P.2d at 866.

Pertinent to the present appeal, the Kaiser Court stated:

Thus, if property is purchased as an aid in the manufacturing process, it is taxable despite the fact that some portion remains in the finished product or that an incidental waste or by-product results. . . .

. . . .

. . . [W]hen the entire unit is first utilized as an aid in processing or manufacturing and subsequently incorporated into a manufactured product to be sold, the entire unit is taxable. . . .

. . . Although Kaiser intended to eventually resell the materials in the form of slag, Kaiser first used all of the materials in question in a nonexempt manner, thereby determining their taxability.

Id. at 867-69 (emphasis added). Like Kaiser, Nucor's lance pipes, stirring lances, and mill rolls were to be used as an aid in the manufacturing process; a taxable use. Nucor Steel also intended for this equipment to become a component part of the finished product. However, the Tax Commission in its decision, using an analysis identical to that of the California Supreme Court in Kaiser Steel, found that the primary purpose of this equipment was its use as equipment in the manufacturing process; a taxable use. Tax Commission's decision has a solid basis in Utah's and other state's case law, and should be upheld.

Second, the primary purpose test should be affirmed because it is a practical test allowing an exemption when one is due and denying an exemption when one is not warranted. Without

such a test, unintended results could follow. For example, Nucor Steel's position is that the purchase of manufacturing equipment should be tax exempt merely because the equipment eventually becomes a component part of the finished product. This position, if taken to its logical extreme, would permit manufacturers to avoid sales and use tax on its purchases of anything made of iron or steel (i.e. tractor/trailers, forklifts, typewriters, etc.), by simply using such items until their primary usefulness is depleted and then using the items as a scrap source of iron in their manufacturing process.

Furthermore, to allow an exemption for the entire cost of the lance pipes, stirring lances, and mill rolls just because some percentage of iron from them enters into the finished product is economically ridiculous from a tax point of view. Such an exemption would frustrate the intended purpose of the ingredient exemption. The theory of the exclusion of ingredient or component parts is that the cost of such part is included in the price of the finished product, and collected when that product is sold. From the evidence it is clear that Nucor consumes nearly all of the value of the machinery in the manufacturing process. Were Nucor allowed an exemption for the total price of these items, their economic utility and use value would go untaxed. This cannot possibly be the intended

interpretation of the ingredient exemption under Utah Code Ann. § 59-12-104(28). This court should not allow Nucor an exemption for something that will not ultimately be taxed to the end user.

Finally, the Tax Commission's decision properly focused on the primary purpose test in determining whether or not to exempt the lance pipes, stirring lances, and mill rolls. As the Commission stated, "although both parties stipulated that such were the intention of [Nucor], those assertions must be measured against the actual use to which the items were put and a determination must be made to see what the primary purposes were." Findings of Fact, Conclusions of Law, and Final Decision at 7. The Commission further held:

While it is true that as the pipes and lances melted, and became a part of the finished product, there was insufficient showing this was anything more than an unavoidable consumption of the pipes that occurred when they were used in performing their essential functions. Furthermore, there was no showing that the slight amount of iron the pipes contributed to the steel was anything more than a fortuitous, incidental consequence, rather than an essential element upon which the success of the final product was dependent.

Id. at 8.

V. NUCOR SHOULD NOT BE ALLOWED AN EXEMPTION IN THIS CASE BECAUSE IT HAS NOT SATISFIED ITS BURDEN OF PROOF, AND THE REVIEWING COURT SHOULD GIVE DEFERENCE TO THE TAX COMMISSION'S RULING BELOW.

In reviewing this case and weighing the arguments for and against exempting the purchases of lance pipes, stirring

lances, and mill rolls, the Court should keep in mind the underlying and important fact that tax exemptions are strictly construed against the taxpayer. This Court stated in Parson Asphalt Products, Inc. v. Utah State Tax Comm'n, 617 P.2d 397, 398 (1980) "[e]ven though taxing statutes should generally be construed against the taxing authority, the reverse is true of exemptions. Statutes which provide for exemptions should be strictly construed, and one who so claims has the burden of showing his entitlement to the exemption." Id. at 398. If this Court has any doubt as to whether or not the exemption should be granted, the majority rule followed in Utah states that all doubts are to be resolved against exemption and in favor of taxation.<sup>8</sup>

In Kennecott Copper Corp. v. Anderson, 514 P.2d 217 (1973), this Court stated, "[a]lso having a bearing on our conclusion is the administrative interpretation which the Commission has given this statute. Although not controlling, in the event of doubt, such interpretation is entitled to some

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<sup>8</sup> In Bd. of County Comm'rs of the County of Johnson v. St. Joseph Hosp. of Kansas City, 738 P.2d 454 (Kan. 1987) the Supreme Court of Kansas states, "All doubts are to be resolved against exemption and in favor of taxation." Id. at 456; accord In the Matter of Townley, 417 N.W.2d 398, 400 (S.D. 1987) ("Exemptions are a matter of legislative grace and doubts are resolved in favor of taxation."); see also, Utah County v. Intermountain Health Care, 725 P.2d 1357, 1359 (Utah 1986) and Parson, 617 P.2d at 398.

consideration and may be regarded as persuasive." Id. at 220. With persuasive weight given to the Tax Commission's interpretation of the exemption sought here under Utah Code Ann. § 59-12-104(28), Nucor should be denied the tax exemption it seeks.

#### CONCLUSION

Nucor should not be given an exemption for its use of lance pipes, stirring lances, and mill rolls under Utah Code Ann. § 59-12-104(28) (1987). First, Nucor has used these items until they no longer have functional or economic utility as lance pipes, stirring lances, and mill rolls. By consuming this equipment, Nucor is the end user and should be required to pay the sales and use tax. Second, despite the fact that these items are purchased with the primary intent of being used as machinery in the manufacturing process and as an ingredient in the finished product, Nucor's principal use of the items is as machinery and is therefore taxable. Finally, this Court should strictly construe the exemption statute under consideration, and should give the Tax Commission's interpretation of Utah Code Ann. § 59-12-104(28) deference. This Court should deny Nucor an exemption for its purchases of lance pipes, stirring lances, and mill rolls

or in the alternative, only allow an exemption to the extent of the scrap value of the equipment.

DATED this 10<sup>th</sup> day of May, 1991.

R. PAUL VAN DAM  
Attorney General

By Rick Carlton  
Brian L. Tarbet  
Rick Carlton  
Assistant Attorneys General  
Attorneys for Respondent/Appellee

CERTIFICATE OF MAILING

I hereby certify that I caused four true and correct copies of the within foregoing Brief to be mailed, first class, postage prepaid, this 10<sup>th</sup> day of May, 1991 to the following:

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**ADDENDUM A**

BEFORE THE UTAH STATE TAX COMMISSION

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NUCOR CORPORATION,  
NUCOR STEEL - UTAH DIVISION,            )  
  ):  
  ) Petitioner,                                )  
  ):  
v.    ) FINDINGS OF FACT,  
  ): CONCLUSIONS OF LAW  
  ): AND FINAL DECISION  
AUDITING DIVISION OF THE                 )  
UTAH STATE TAX COMMISSION,             ): Appeal No. 88-2850  
  )  
  ):  
  ) Respondent.                                )

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STATEMENT OF CASE

This matter came before the Utah State Tax Commission for a formal hearing on October 11, 1989. Hearing the matter on behalf of the Tax Commission were Joe B. Pacheco, Commissioner, Roger O. Tew, Commissioner, Paul F. Iwasaki, Hearing Officer, and G. Blaine Davis, Commissioner and Presiding Officer. Present and representing the Petitioner were Murray Ogborn and Tim O'Neill, attorneys for the Petitioner. Present and representing the Respondent was Brian Tarbet, Assistant Attorney General.

The matter before the Commission involved a deficiency assessment for sales and use tax for the period October 1, 1984 through December 30, 1987 as determined by the Auditing

Division of the Utah State Tax Commission. That audit was consolidated with the Petitioner's claim for refund for sales and use tax dated December 23, 1987.

After a prehearing conference held before the Commission on January 27, 1989, the remaining issues to be determined by the Commission at the formal hearing involved the Petitioner's allegation that its purchase of certain items of personal property were exempt from sales and use tax pursuant to Utah Code Ann. § 59-12-104(28).

Based upon the evidence and testimony presented at the hearing, the Tax Commission hereby makes its:

FINDINGS OF FACT

1. The tax in question is sales and use tax.
2. The audit period in question is October 1, 1984 through September 30, 1987.
3. Petitioner is engaged in the business of manufacturing steel and steel related products in a minimill process located near Plymouth, Utah.
4. The steel manufacturing process consists of the melting and refining of scrap iron. The scrap iron is placed in charge buckets which, when loaded, weigh approximately 25 tons. The buckets are dumped into electric arc furnaces. Graphite electrodes, which are suspended above the furnace roof, are then lowered into the furnace and charged with electricity. This charging process creates intense heat which in turn melts the scrap iron.

5. The graphite electrodes utilized by the Petitioner consists of three sections connected by graphite nipples which form a column. Each section of the graphite electrode is approximately 1400 pounds, cylindrical in shape, 18 inches in diameter, 96 inches in length and composed of carbon.

6. As the scap iron melts, the graphite electrodes themselves become consumed by the molten metal. Approximately 55% of the elctrodes become a part of the final product.

7. The introduction of the graphite electrodes into the molten metal provides the metal with carbon which is essential in the manufacturing of steel.

8. Approximately 41% of the carbon content of the final steel product comes from the carbon introduced from the graphite electrodes consumed. The remaining percentage comes from carbon raisers or the carbon found in the items of scrap used in the melting process.

9. The consumption of the graphite electrodes in the metling process is unavoidable and necessary in that the Petitioner relies upon the carbon content of the electrodes as a source of carbon for the final steel product.

10. Lance pipes utilized by the Petitioner are steel pipes approximately one inch in diameter which vary in length. The lance pipes are used by the Petitioner to inject oxygen into the furnace as well as to open a tap hole in the furnace.

11. Because of the intense heat to which the lance pipes are exposed, the lance pipes melt and become a part of the molten metal. Approximately 75 to 100 pounds of lance pipe are consumed during each charge.

12. The stirring lance used by the Petitioner is a steel pipe, 1.9 inches in diameter, composed of iron and surrounded by a 3.55 inch layer of ceramic material. The stirring lance is used to inject nitrogen and argon into the molten metal thus removing unwanted ingredients. Because of the extreme temperature of the molten metal, the stirring lances melt and become a part of the molten metal.

13. The mill rolls utilized by Nucor Steel in its manufacturing process are cylindrical in shape, varying from 11.8 to 70.8 inches in length, varying from 14.9 inches to 27.1 inches in diameter and composed of iron. The cost of the mill rolls range from \$.49 to \$5.23 per pound. Each mill roll is used to produce between 1,000 and 160,000 tons of steel. Mill rolls are used by Nucor Steel (a) to reduce the size and shape of billets to form the desired finished products; and, (b) when their usefulness is depleted, as an iron source for its products.

#### CONCLUSIONS OF LAW

Property purchased for resale in this state, in the regular course of business, and resold either in its original form or as an ingredient or component part of a manufactured or

compounded product is exempt from sales or use tax. (Utah Code Ann. § 59-12-104(28).)

DECISION AND ORDER

In the present case, there are four categories of items of personal property that the Petitioner maintains should be exempt from sales and use taxes under the provisions of § 59-12-104(28). They are as follows: (1) Graphite electrodes; (2) lance pipes; (3) stirring lances; and (4) rolling mills. Because of the unique nature and use to which each type of property is put, they will be discussed separately.

Section 59-12-104(28) has three elements which must be met before that exemption can be applied. The property must be: (1) purchased for resale; (2) in the regular course of business; and (3) either in its original form or as an ingredient or component part of a manufactured product. The Tax Commission in prior cases has held this to require inquiry as to the primary purpose for which the item was purchased.

It is against those three elements and the prior cases that each category of property in the present case is analyzed.

With respect to elements two and three of § 59-12-104(28), there is no dispute that the different items of personal property in question were purchased in the regular course of business and that they became an ingredient of the steel that was manufactured. What is in issue, however, is whether those

items were purchased for resale and whether the primary purpose for which they were purchased was to become an ingredient of the final product.

#### GRAPHITE ELECTRODES

Respondent argued that because less costly sources of carbon were available to the Petitioner for use in the manufacturing of steel, the motivation of the Petitioner in purchasing the graphite electrodes was not economically sound. Therefore, the Respondent argued the motivation for the Petitioner's use of the graphite electrodes must be other than that of purchasing the electrodes as a source of carbon.

Although it may be true that less expensive sources for carbon may have been available to the Petitioner, it does not necessarily follow that the use of the graphite electrodes as a carbon source could not be one of the primary factors in the purchase of those items.

The use of electrodes in an electric arc furnace is essential just as carbon is an essential element of steel. Here, Petitioner has found and purchased an item that serves both purposes.

The graphite electrodes created the heat necessary to melt the scrap metal and in the process, were consumed by the very molten mass it was creating. The electrodes then provided approximately 41% of the carbon content of the finished steel,

thus reducing the amount of carbon required from other sources. From this set of facts and circumstances, it is clear that the graphite electrodes serve two essential purposes in the manufacturing of steel. Therefore, one of the primary purposes for which the graphite electrodes were purchased was as an ingredient of the manufactured product.

#### LANCE PIPES AND STIRRING LANCES

Although the use to which the lance pipes and stirring lances ("pipes" and "lances") were put were different, the basis for their claimed exemption by the Petitioner are the same. Therefore, they will be discussed together.

The Petitioner contended that the pipes and lances were intended to be used to inject oxygen into the furnace and nitrogen into the molten metal and were also intended to be an iron source for its products.

There is no question that the pipes served the purpose of injecting oxygen and nitrogen during the refining phase. There are, however, real doubts that such items were intended to be a source of iron in the steel making process at the time they were purchased by the Petitioner. Although both parties stipulated that such were the intentions of the Petitioner, those assertions must be measured against the actual use to which the items were put and a determination must be made to see what the primary purposes were.

Under the facts and circumstances surrounding the use of the pipes and lances, it is not accepted that a primary purpose for their purchase was as a source of iron in the steel manufacturing process. While it is true that as the pipes and lances melted, and became a part of the finished product, there was insufficient showing this was anything more than an unavoidable consumption of the pipes that occurred when they were used in performing their essential functions. Furthermore, there was no showing that the slight amount of iron the pipes contributed to the steel was anything more than a fortuitous, incidental consequence, rather than an essential element upon which the success of the final product was dependent.

Therefore, under the analysis used in the prior cases, the Tax Commission finds that the primary purpose for the use of lance pipes and stirring lances was to inject gases during the refining process and that the parts of the rods which ultimately became a part of the finished product was merely an incidental use of those items.

#### MILL ROLLS

Mill rolls are cylindrical, steel rollers through which the billets of hot steel pass to be reduced and shaped into the final product.

The Petitioner argued that because particles of the mill rolls fuse with the billets as they pass through or flake off as scale, and because the mill rolls are eventually scrapped and used

as an iron source for the making of steel, their purchase should be exempt from sales tax.

Here again, the Tax Commission finds that the primary and only purpose for the purchase of the mill rolls was their use as mill rolls and not as a component part of the finished product. The gradual erosion of the mill rolls into the steel billets was so minute and insignificant that it cannot be reasonably said that the Petitioner intended and relied upon that phenomena to occur in the making of its final product.

The argument that the mill rolls are used as scrap and, therefore, should be exempt is equally unpersuasive. It is only after the mill rolls have eroded to the point that their usefulness as mill rolls is gone that they are then utilized as an iron source. At that point, it only makes economic sense that they are "recycled" and used as scrap rather than disposed of without recovering any residual value they might have.

If one were to accept the Petitioner's argument, then anything purchased by the Petitioner which contained iron could be purchased tax exempt simply because the item could be scrapped once it had outlived its usefulness, was obsolete, or was beyond repair. This would include (as the Respondent's brief quite correctly points out) anything from a typewriter to train cars.

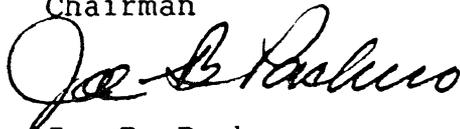
Based upon the foregoing, the Tax Commission finds that the purchase of the graphite electrodes by the Petitioner is exempt from sales or use tax as provided for by Utah Code Ann. § 59-12-104(28). The purchase of the lance pipes, stirring lances, and mill rolls, however, is not exempt from sales or use tax.

The Auditing Division is hereby ordered to amend its audit in accordance with this decision. It is so ordered.

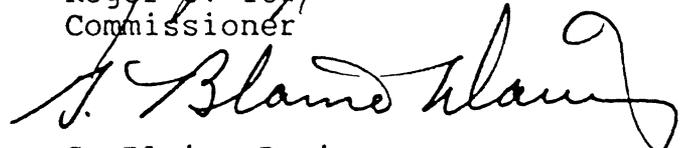
DATED this 7<sup>th</sup> day of June, 1990.

BY ORDER OF THE UTAH STATE TAX COMMISSION.

  
R.H. Hansen  
Chairman

  
Joe B. Pacheco  
Commissioner

  
Roger G. Few  
Commissioner

  
G. Blaine Davis  
Commissioner

NOTICE: You have ten (10) days after the date of the final order to file a request for reconsideration or thirty (30) days after the date of final order to file in Supreme Court a petition for judicial review. Utah Code Ann. §§ 63-46b-13(1), 63-46b-14(2)(a).

PFI/lgh/9101w



MAILING CERTIFICATE

I hereby certify that I mailed a copy of the foregoing  
Decision to the following:

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c/o Tim O'Neill  
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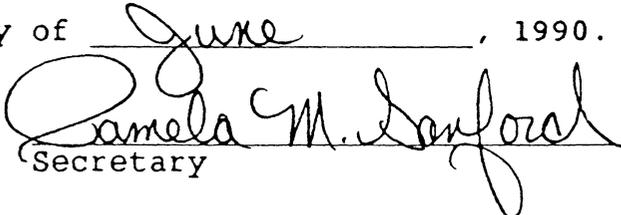
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Brian Tarbet  
Assistant Attorney General  
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Salt Lake City, UT 84114

DATED this 8<sup>th</sup> day of June, 1990.

  
Secretary

**ADDENDUM B**

SEP 19 1989

BEFORE THE STATE TAX COMMISSION OF UTAH

APPEALS SECTION  
STATE TAX COMMISSION

NUCOR STEEL, a division of Nucor Corporation,	)	Case No. 88-2850
	)	
Petitioner,	)	AMENDMENT TO
	)	ORDER ON PRETRIAL CONFERENCE
vs.	)	
	)	
AUDITING DIVISION, STATE TAX COMMISSION OF UTAH,	)	
	)	
Respondent.	)	

Petitioner Nucor Steel, a division of Nucor Corporation, by and through its attorneys of record, and Respondent Auditing Division, State Tax Commission of Utah, by and through the Assistant Attorney General for the State of Utah, jointly move the Commission to approve this amendment to the order On Pretrial Conference, dated March 30, 1989 ("Order"). All capitalized terms used herein and not otherwise defined shall have the meaning ascribed to them in the Order.

A. Additional Consolidation. Nucor Steel's second refund claim for sales and use tax, filed July 25, 1989, a copy of which is attached hereto, incorporated herein and marked as Exhibit 3 (the "Second Refund Claim"), shall be consolidated with this matter (which includes a proposed deficiency assessment for sales and use tax for the period October 1, 1984 through September 30, 1987, and the Refund Claim) for all purposes including, but not limited to, the uncontroverted facts, unresolved issues, witness lists, discovery, briefing and the hearing and findings. The parties

agree that the Second Refund Claim was timely and properly filed with the Auditing Division.

B. Additional Uncontroverted Facts. In addition to the established facts set forth in Paragraph B of the Order, the parties agree that the following shall be accepted as established facts for purposes of this consolidated case only:

16. The Graphite Electrodes utilized by Nucor Steel in its manufacturing process consist of three sections connected by graphite nipples, which form a column. Each section of the Graphite Electrode is approximately 1400 pounds, cylindrical in shape, 18 inches in diameter, 96 inches in length, threaded at each end and composed of carbon. The average cost of the Graphite Electrodes is \$1.05 per pound. Approximately eight pounds of the Graphite Electrodes are used per ton of steel produced. Graphite Electrodes are used, and at the time of purchase were intended to be used, by Nucor Steel as (a) an electrical conductor; and (b) a carbon source for its products.

17. The two types of lance pipe utilized by Nucor Steel in its manufacturing process are steel pipe, one or one-quarter inch in diameter, varying in length, threaded at each end and composed of iron. The average cost of lance pipe is \$.55 per pound. Approximately 21 feet or 75 to 100 pounds of the lance pipe are used per heat. One inch lance pipe is used, and at the time of purchase was intended to be used, by Nucor Steel (a) to inject oxygen into the furnace and, thereby, enhance the carbon boil; and (b) as an iron source for its products. One-quarter inch lance pipe is used, and at the time of

purchase was intended to be used, by Nucor Steel (a) to open the tap hole in the furnace and increase the temperature of the heat and clean nozzles at the casting tower; and (b) as an iron source for its products.

18. The stirring lance utilized by Nucor Steel in its manufacturing process is a steel pipe, 1.9 inches in diameter, 72 inches in length, threaded at each end, composed of iron and surrounded by a 3.55 inch layer of ceramic material. Although it is not desirable in the steel products, the ceramic material is an ingredient of a co-product produced by Nucor Steel, which co-product is slag. The average cost of the stirring lance is \$.68 per pound. Approximately 510 pounds of the stirring lance are used per 700 tons of steel produced. Stirring lances are used, and at the time of purchase were intended to be used, by Nucor Steel (a) to inject nitrogen and argon into the molten metal; and (b) as an iron source for its products.

19. The mill rolls utilized by Nucor Steel in its manufacturing process are cylindrical in shape, varying from 11.8 to 70.8 inches in length, varying from 14.9 inches to 27.1 inches in diameter and composed of iron. The cost of the mill rolls range from \$.49 to \$5.23 per pound. Each mill roll is used to produce between 1,000 and 160,000 tons of steel. Mill rolls are used, and at the time of purchase were intended to be used, by Nucor Steel (a) to reduce the size and shape of billets to form the desired finished products; and (b) as an iron source for its products.

20. Nucor Steel produces approximately 500,000 tons of steel each year in various sizes and in the form of rounds,

flats, squares, angles, channels, rebar and specialty products. During the calendar year 1988, which is representative of the years audited, the number of tons produced, the carbon range and the average selling price for each type of steel product manufactured by Nucor Steel were as follows:

<u>Type of Steel Product</u>	<u>Tons Produced</u>	<u>Carbon Range</u>		<u>Average Selling Price Per Ton</u>
		<u>Min.</u>	<u>Max.</u>	
Angle	157,476	.10%	.26%	\$345.00
Flat	76,693	.10	.88	359.00
Channel	63,553	.10	.26	360.00
Rounds	64,013	.08	.88	326.00
Reinforcing Bar	174,144	.27	.41	293.00
Speciality Product	5,214	.10	.75	412.00

Approximately 85 percent of the production is cast to customers' specifications and 15 percent of the steel produced is placed into inventory. When a customer orders steel it does so in accordance with established standards, which identify the chemistry that is required in the end product. A specific order by number will indicate what content of carbon, manganese, phosphorus and sulfur is required in the steel to be produced. The carbon content is the most important ingredient among the four chemicals and is the main strengthening agent in steel. Nucor Steel's products contain from .08 percent to 1 percent carbon, depending on customer specifications. The products produced by Nucor Steel on average contain .25 percent carbon. Less than one-third of the steel produced by Nucor Steel has a carbon content of .15 percent or less. Both carbon and iron are essential ingredients of Nucor Steel's steel and

steel related products. Nucor Steel tests the composition of its products throughout its manufacturing process (i.e., during the meltdown phase and refining phase and after rolling).

21. A raw material used by Nucor Steel is scrap metal. The average carbon content of scrap metal is approximately .15 percent. Scrap metal, which has an average cost of \$.05 per pound, is deposited in electric arc furnaces for melting. Each furnace is filled with a "charge" or bucket load of scrap metal, weighing approximately 25 tons. The furnace roof and the electrode holder are moved over the top of the vessel much like the lid of a pan. The Graphite Electrodes are suspended above the furnace roof, arranged in a triangular fashion and protrude through the roof into the furnace. The electrical power source is connected to the Graphite Electrode by metal clamps. When in operation, each of the three Graphite Electrode columns in the triangle consist of three 96 inch Graphite Electrode sections connected together by graphite nipples.

22. The Graphite Electrodes are mechanically lowered into the furnace, until they reach a point approximately four to six inches above the scrap charge. Substantial amounts of electricity are passed through the Graphite Electrodes, forming an arc at the lower end of the electrode triangle. This arc immediately produces a tremendous amount of heat, which causes the scrap metal to melt. As the scrap melts, the Graphite Electrodes are lowered in such a fashion that they tunnel down through the center of the scrap. When the first load of scrap metal has been substantially melted, the Graphite Electrodes

are withdrawn, the roof swung away and a second charge dropped into the furnace. This process is repeated until approximately 70 tons of scrap metal have been loaded into the furnace and melted. This entire process is referred to as the "meltdown phase" and the resulting bath of molten metal is called a "heat." When the meltdown phase has been completed, a layer of slag, which consists of lime and unwanted ingredients that have risen to the top of the heat, covers the molten metal.

23. The second stage of the steel making process is known as the "refining phase." The general purpose of this procedure is to remove unwanted ingredients, add critical components and bring the carbon content to the level specified by the customer. To begin the refining process the Graphite Electrodes are lowered through the six inch liquid slag layer until the tips reach a point approximately one-half inch from the molten metal. At this point, the slag acts as a cap on the top of the molten metal and prevents the escape of gases. The electric arc continues to discharge, raising the temperature of the molten metal and together with the injection of oxygen through the lance pipe causes what is known as a "carbon boil." The carbon boil agitates the molten metal so that impurities rise to the surface and become absorbed by the slag. During both the meltdown phase and the refining phase, the molten metal is infused chemically with carbon from the Graphite Electrodes and additional sections of the Graphite Electrodes are connected to the electrode column in a continuous feed process, much like an endless pencil being continuously ground in a pencil sharpener.

24. During both the meltdown phase and the refining phase, pieces of Graphite Electrode also break off and fall into the molten bath. A small piece of Graphite Electrode (12 to 14 inches in size) remains in the bath, dissolves into the heat and becomes an integral part of the molten metal. A large piece of Graphite Electrode is retrieved by a clamp. If the piece of Graphite Electrode retrieved in this manner is large enough, it is rethreaded and connected to the electrode column. If the piece of Graphite Electrode is not large enough to be connected to the electrode column, it is used as a source of carbon by using it in a subsequent charge.

25. Graphite Electrodes are the most common type of electrode used in electric arc furnaces. Various metals, including an alternative steel electrode, are all better electrical conductors than graphite, but Graphite Electrodes are used by Nucor Steel because they are the most economical, contribute carbon to the steel, and are the most readily available. If metal electrodes were used or if the electrodes did not introduce carbon into the steel, it would be necessary to add carbon from another source. Graphite Electrodes allow a dual and simultaneous usage by Nucor Steel.

26. Samples of the molten metal are removed from the heat by the use of a long handled cup and tested in a spectrometer. This process is carried out at least three times during the refining phase and various actions are taken as a result of the testing. If it is determined by testing that the carbon content of the molten metal is low, carbon is manually added by using a raw carbon raiser, which is a substance similar to the

composition of Graphite Electrodes and which has an average cost of \$.10 per pound. If it is determined by testing that the carbon content of the molten metal is in excess of customer specifications, oxygen is introduced into the furnace to remove the excess carbon by the formation of carbon dioxide. When the carbon content is reduced, carbon from the scrap metal and carbon from the Graphite Electrodes are burned off proportionately. Whether the carbon content is reduced or not, 54.5 percent of the Graphite Electrodes remains in the molten bath, becomes a part of the billet and remains an integral part of the finished product. The other 45.5 percent of the Graphite Electrodes primarily burns off as gas with a minor amount remaining in the slag.

27. The oxygen is introduced into the furnace through the one inch lance pipe. When the carbon reduction process occurs, 100% of the lance pipe turns to liquid because of the tremendous amount of heat in the furnace and becomes a desirable ingredient of the molten metal. As both types of lance pipe becomes part of the heat, another lance pipe is connected to it, again much like an endless pencil being ground in a pencil sharpener.

28. When refining in the furnace vessel has been completed and the desired level of carbon established, the molten metal is poured from the furnace into the ladle, which is in turn transported to a casting tower for casting and additional refining. Prior to casting, the stirring lance is lowered into the molten steel for purposes of removing unwanted ingredients. Removal of the unwanted ingredients is

accomplished by injecting nitrogen and argon into the molten bath through the stirring lance, which causes the impurities to rise to the surface and become part of the slag. During this process, the stirring lance dissolves into the molten metal, because of the extreme temperature of the molten metal, and becomes an integral part thereof. Additional samples of the molten metal are tested during this ladle refining process. If it is determined by such testing that the carbon content is low, a wire is fed into the molten metal, which wire is composed of 98% carbon and costs \$1.58 per pound. The refining phase is completed when the molten metal meets customer specifications.

29. After the refining phase has been completed, the molten metal is poured from the ladle into the water cooled, continuous casting machine. The casting machine cools and shapes molten metal into billets, which are square pieces of steel ranging from 21 to 27 feet long. When the billets are formed, they are eventually transferred to the rolling mill.

30. The rolling mill reduces the size and shape of the billets to produce the desired finished product. Initially, the billets are heated to a rolling temperature between 2100 and 2350°. These hot billets are then driven through a series of horizontal and vertical mill stands that sequentially reduce the billets to form various sizes and shapes of the rounds, flats, squares, angles, channels, rebar and specialty products.

31. Each mill stand is driven by an electrical motor and consists of a series of gears and drive shafts that are the

power source for two mill rolls. Only the mill rolls come in contact with the billets. Prior to placement in the mill stand, each mill roll is cut by the Lathe to form the desired size and shape of the pass, through which the billets are drawn. The pass cut in the mill rolls placed on the first mill stand is the largest while the pass cut in the mill rolls placed on subsequent mill stands sequentially is smaller. The two mill rolls on each mill stand rotate in opposite directions drawing the billet into the pass, reducing the size of the billet and elongating the billet.

32. Frequent adjustments to the individual mill stands are required to compensate for the transfer of part of the mill rolls. During the rolling process, 11.8 percent of the mill rolls is transferred to and becomes an integral part of the steel product being rolled and the scale. This transfer is the result of physical and chemical reactions that occur when the billets are drawn through the two mill rolls. When a pass in a mill roll has been reduced by approximately 0.060 inch, the mill roll is redressed by using the Lathe and again placed in service. The iron shavings from the initial cutting of the pass and from the redressings are used as raw materials in a subsequent heat and ultimately become an integral part of the steel products. After the transfer of 11.8% of the mill roll, the remaining mill roll is used as a raw material in a subsequent heat and ultimately becomes an integral part of the steel products.

33. Scale is a co-product produced by Nucor Steel during the rolling process. Scale is composed primarily of

iron-oxide. Because the extreme temperature involved in the rolling process accelerates the formation of iron-oxide on the surface of the billet or the rolled product, scale continually is flaking off such surfaces as it is drawn through the mill stands. Scale is forced into a trough below the mill stands by high pressure water and collected in a scale pit. Scale is removed periodically from the scale pit, processed and sold to a broker, who in turn resells the scale to manufacturers of concrete. Concrete manufacturers use scale as an ingredient for their products. Approximately 8,500 tons of scale are produced annually. The sales price per ton of scale is \$10.55, which results in annual sales revenue of approximately \$90,000.

34. Slag is another co-product produced by Nucor Steel. Slag is produced during the meltdown and refining phases and consists of unwanted ingredients of the steel products, refractory material and ceramic material from the stirring lance. The slag produced by Nucor Steel is exchanged with a third party for services, which services consist of collecting the slag, removing it from Nucor Steel's plant and cleaning the slag depositories. The buyer of the slag processes and resells it as an improved gravel substitution or railroad ballast.

35. Once the rolling process is completed, the steel products are cut to the desired length, straightened, tagged, bundled for shipment and ultimately sold at retail.

C. Resolved Issues. With respect to the Unresolved Issues set forth in Paragraph C of the Order, the parties agree

that the following issues are resolved on the basis set forth below:

1. With respect to Issues 1, 2, 3, 4, 5, 6 and 11 (which is a denial of the Refund Claim relating to the dunnage), the parties agree, without admitting or conceding the position of the other, that such Issues are resolved and that the revised amounts of tax and interest (through August 31, 1989), which are applicable to such Issues and the uncontested items of the Assessment and payable by Nucor Steel, are as follows:

<u>Tax</u>	<u>Interest</u>
\$40,660.33	\$13,566.82

2. With respect to Issue 12, the Auditing Division admits, concedes and agrees that Nucor Steel did not negligently or intentionally disregard the rules of the Utah State Tax Commission and, therefore, is not subject to a penalty under Utah Code Ann. § 59-12-110(5).

D. Remaining Unresolved Issues. With respect to the Unresolved Issues set forth in Paragraph C of the Order, the parties agree that the following are the only remaining issues to be determined by the Commission:

1. Issue 7, which involves \$715,449.69 of tax, \$265,980.65 of interest through August 31, 1989 and \$235.22 of interest per day after August 31, 1989, pursuant to the Assessment;

2. Issue 8, which involves \$56,294.34 of tax, \$15,869.98 of interest through August 31, 1989 and \$18.51 of interest per day after August 31, 1989, pursuant to the Refund Claim;

3. Issue 9, which involves (i) \$5,892.88 of tax, \$1,967.67 of interest through August 31, 1989 and \$1.94 of interest per day after August 31, 1989, pursuant to the alleged deficiency and (ii) \$15,655.00 of tax, \$6,805.51 of interest through August 31, 1989 and \$5.15 of interest per day after August 31, 1989, pursuant to the Second Refund Claim; and

4. Issue 10, which involves (i) \$6,321.60 of tax, \$1,611.11 of interest through August 31, 1989 and \$2.08 of interest per day after August 31, 1989, pursuant to the alleged deficiency and (ii) \$7,653.80 of tax, \$2,625.54 of interest through August 31, 1989 and \$2.52 of interest per day after August 31, 1989, pursuant to the Second Refund Claim.

E. Revised Briefing Schedule. With respect to the briefing schedule set forth in Paragraph F of the Orders, the parties agree that such schedule shall be revised as follows:

1. Petitioner's Opening Brief on or before September 20, 1989;
2. Respondent's Brief on or before October 2, 1989; and
3. Petitioner's Reply Brief (optional) on or before October 6, 1989.

F. Revised Hearing Date. With respect to the hearing date set forth in Paragraph G of the Order, the parties agree that the hearing date shall be October 11 and 12, 1989, beginning at 9:00 a.m.

Dated this 7th day of September, 1989.

NUCOR STEEL, A Division of Nucor Corporation, Petitioner

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By: Brian L. Tarbet  
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The terms of the foregoing Amendment to Order on Pretrial Conference are hereby approved and adopted as the Order of the Utah State Tax Commission.

Dated this 8<sup>TH</sup> day of September, 1989.

R.H. Hansen  
R.H. Hansen, Chairman

Joe B. Pacheco  
Joe B. Pacheco, Commissioner

**ABSENT**

Roger O. Tew, Commissioner

G. Blaine Davis, Commissioner

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