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EDWARD R. KORMAN, *District Judge*:

Union Carbide Corporation (“UCC”) conducted three research projects at two production plants in Hahnville, Louisiana, during the 1994 and 1995 tax-credit years. The research was conducted on products that were in the process of being manufactured for sale and were in fact sold. Nevertheless, UCC requested a research credit not just for the additional costs of supplies associated with the research. Instead, it requested a research credit for the costs of all the supplies used in the production of the product even though those supplies would have been used regardless of any research performed. Indeed, the crux of UCC’s argument is captured in the following colloquy with UCC’s able counsel at oral argument:

- Q: But if I understand you correctly, you’re saying everything that was used to manufacture the [product], even though you were going to do that anyway and you presumably sold the product, you should still get the research credit?
- A: Absolutely your honor.
- Q: In its entirety? The entire amount spent for the supplies . . . all the supplies you paid for, in your view, are entitled to the credit even though . . . they were used to produce a product which you sold anyway?
- A: Yes.

Oral Argument at 11:06:46-11:07:28, *Union Carbide Corp. and Subsidiaries v. Comm’r* (2d Cir. No. 11-2552). The Tax Court held that UCC was not entitled to research credits for the entire amount spent for the supplies. Instead, as the Commissioner argues, it was entitled to a credit for only those additional supplies that were used to perform the research. We agree.

## **BACKGROUND**

We provide a only a brief description of the production projects on which the research was performed because of their complex and technical nature and because a full description is not necessary to the resolution of this appeal. The first is the Amoco anticoking project. This was conducted on industrial furnaces used to produce ethylene. Ethylene is made by applying very high temperatures to raw petroleum feeds as they are injected into cracking coils in a furnace. To combat the formation of coke, a harmful byproduct of this process that harms equipment and diminishes production yields, UCC twice pretreated the cracking coils with a compound developed by Amoco. The production process was fully completed on each occasion and yielded a normal amount of ethylene, after which UCC concluded that the anticoking pretreatment did not diminish the creation of coke in the furnace and discontinued the research.

The second project was the UCAT-J project, by which UCC attempted to lower costs in the production of high-grade polyethylene products. The project, run nineteen times, involved using UCAT-J instead of M-1 as a catalyst in the normal production process. Although the UCAT-J runs required less hydrogen than the M-1 runs, both runs required approximately the same amount of ethylene, hexene, and butene. Ultimately, the UCAT-J project was discontinued because it caused operational problems and resulted in a higher than normal production of off-grade polyethylene.

Finally, the sodium borohydride project attempted to determine whether using sodium borohydride during the manufacture of crude butadiene would reduce the presence of acetaldehyde, an unwanted byproduct. Normally, acetaldehyde is removed by a gas system that has to be periodically shut down for cleaning. UCC ran the sodium borohydride test for two weeks and concluded that it successfully reduced acetaldehyde in the crude butadiene product and would use

the treatment during future shutdowns of the gas system, although its use was discontinued several years later for unrelated reasons.

After a bench trial, the Tax Court judge held, in relevant part, that costs for supplies used by UCC for the anticoking project and for the UCAT-J project were not creditable as an “amount paid or incurred for supplies used in the conduct of qualified research” under 26 U.S.C. § 41(b)(2)(A)(ii) because they were “[r]aw materials used to make finished goods that would have been purchased regardless of whether [UCC] was engaged in qualified research.” *Union Carbide Corp. and Subsidiaries v. Comm’r*, 97 T.C.M. (CCH) 1207, 1273 (2009). Specifically, the Tax Court acknowledged that “the Amoco anticoking and UCAT-J projects could not have occurred if UCC had not purchased the raw materials it used in its production process, raw materials that UCC previously treated as inventory and deducted as costs of goods sold.” *Id.* Nevertheless, the Tax Court held that

this does not make the costs of these raw materials [qualified research expenses]. The definition of supplies [qualified research expenses] includes only amounts “paid or incurred for supplies *used in the conduct of qualified research*.” Sec. 41(b)(2)(A)(ii) (emphasis added). Petitioner now seeks to include as [qualified research expenses] amounts incurred during the production process upon which the qualified research was conducted, not during the conduct of qualified research itself. These costs are, at best, indirect research costs excluded from the definition of [qualified research expenses] under section 1.41–2(b)(2) [of the Treasury Regulations].

*Id.* The Tax Court also held that UCC’s sodium borohydride project did not fulfill “the process of experimentation test” as is required to show that it is qualified research because UCC did not perform any post-testing analysis or comparisons of the data collected. *Id.* at 1262. UCC now appeals.

## DISCUSSION

Whether UCC is entitled to prevail here turns on an interpretation of 26 U.S.C. § 41, which was enacted in 1981. *See* Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, § 221, 95 Stat. 172 (1981). Specifically, section 41 provides for a research credit for, in relevant part, “any amount paid or incurred for supplies used in the conduct of qualified research” prior to December 31, 2011. *Id.* at §§ 41(b)(2)(A)(ii), (h)(1)(B). The Tax Court judge held, and it is not disputed here, that UCC’s Amoco anticoking and UCAT-J projects were qualified research. *Union Carbide*, 97 T.C.M. (CCH) at 1260, 1266. The issue is whether UCC’s costs for the supplies used during these projects that would have been used in the course of UCC’s manufacturing process regardless of any research performed qualify as “an amount paid or incurred for supplies used in the conduct of qualified research.” We hold that the costs for such supplies are not creditable.

Whether a statute is plain or ambiguous is “determined by reference to the language itself, the specific context in which that language is used, and the broader context of the statute as a whole.” *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997); *see also United States v. Gayle*, 342 F.3d 89, 93 (2d Cir. 2003) (Katzmann, J.). “We have applied a similar approach in determining whether a provision of a contract is ambiguous. Specifically, we have held that ‘[l]anguage is ambiguous when it is capable of more than one meaning when viewed objectively by a reasonably intelligent person who has examined the context of the entire integrated agreement.’” *Frank G. v. Bd. of Educ. of Hyde Park*, 459 F.3d 356, 368 (2d Cir. 2006) (alteration in original) (quoting *O’Neil v. Ret. Plan for Salaried Emps. of RKO, Inc.*, 37 F.3d 55, 59 (2d Cir. 1994)).

UCC argues that, under the plain language of 26 U.S.C. § 41(b)(2)(A)(ii), it is entitled to the cost of all supplies “used in the conduct of qualified research.” Specifically, it argues that, “the plain

and ordinary meaning of the term ‘use’ is to ‘put into action or service,’ ‘employ,’ ‘carry out a purpose or action by means of,’ ‘make instrumental to an end or process,’ ‘utilize,’ ‘expend or consume by putting to use,’ ‘apply,’ and ‘any putting to service of a thing.’” Appellant’s Br. at 33-34 (citing *Webster’s Third New Int’l Dictionary* 2523-24 (2002)). This dictionary definition underlies UCC’s argument that it is entitled to a credit for supplies that it would not have purchased absent any research *and* for supplies that it would have purchased in any event and that were used to make a product for sale.

We find this argument unpersuasive for two reasons. First, consistent with Judge Learned Hand’s observation that “it is one of the surest indexes of a mature and developed jurisprudence not to make a fortress out of the dictionary,” *Cabell v. Markham*, 148 F.2d 737, 739 (2d Cir. 1945) (Hand, L., J.), *aff’d* 326 U.S. 404 (1945), the dictionary definition of a particular word does not necessarily constitute the beginning and the end of statutory construction. *See, e.g., Mayo Found. for Med. Educ. & Research v. United States*, 131 S. Ct. 704, 711 (2011) (Roberts, C.J.) (holding that the term “student” in a section of the Internal Revenue Code was ambiguous despite the fact that one party cited its dictionary definition); *The Colony, Inc. v. Comm’r of Internal Revenue*, 357 U.S. 28, 32-33 (1958) (Harlan, J.) (holding that notwithstanding the dictionary definition of the word “omit” in a section of the Internal Revenue Code, “it cannot be said that the language is unambiguous”); *Gayle*, 342 F.3d at 92-93 (Katzmann, J.) (holding that the phrase, “in any court,” is ambiguous notwithstanding the “all-encompassing nature of the phrase”).

Second, our task “is to determine whether the language at issue has a plain and unambiguous meaning with regard to the particular dispute in the case.” *Barnhart v. Sigmon Coal Co., Inc.*, 534 U.S. 438, 450 (2002) (quotation marks omitted). While UCC chooses to focus on the word “used”

in isolation, we look to the meaning of the phrase as a whole. The critical part of this phrase is “*in the conduct of qualified research*,” which specifies the type of use creditable supply costs may be put towards. At first blush, this suggests that the statute only covers costs for supplies purchased for the purpose of conducting qualified research. Indeed, until we considered UCC’s argument, it would not have occurred to us that this credit applies to costs of supplies that UCC would have purchased and used in any event.

Moreover, the phrase, “supplies used in the conduct of qualified research” appears in a statutory section titled, “Credit for increasing research activities,” 26 U.S.C. § 41, which would suggest that supplies that were used in the ordinary process for producing goods for sale are not to be credited. Indeed, as the Tax Court observed, section 41(d)(2)(C) “provides that when a taxpayer seeks a research credit related to its production process, the production process must be divided into two business components, one that relates to the process and another that relates to the product. This indicates that Congress intended to allow taxpayers research credits for research performed to improve their production processes, but Congress did not intend for all of the activities that were associated with the production process to be eligible for the research credit if the taxpayer was performing research only with respect to the process, not the product.” *Union Carbide*, 97 T.C.M. (CCH) at 1273.

We agree with the Tax Court that the costs for which UCC seeks a research credit are “at best, indirect research costs excluded from the definition of [qualified research expenses] under section 1.41-2(b)(2) [of the Treasury Regulations].” *Id.* The Tax Court’s reference to the Treasury Regulations is consistent with the principle that “if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a

permissible construction of the statute.” *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843 (1984). The Treasury Regulations explain section 41(b) by stating that “[e]xpenditures for supplies or for the use of personal property that are indirect research expenditures or general and administrative expenses do not qualify as inhouse research expenses.” Treas. Reg. § 1.41-2(b)(1) (as amended in 2004). This regulation, however, does not clearly resolve whether the supplies at issue here were “used in the conduct of qualified research” because it is not clear how one distinguishes between direct and indirect research expenses.

Nevertheless, the Commissioner argues in his brief that “[s]upply costs are ‘indirect research expenditures’ if they would have been incurred regardless of any research activities.” We ordinarily give deference to an agency’s interpretation of its own ambiguous regulations, even if that interpretation appears in a legal brief. *Auer v. Robbins*, 519 U.S. 452, 461-62 (1997). The interpretation advanced here does not fall into any of the enunciated categories where we would withhold such deference as it is not “plainly erroneous or inconsistent with the regulation,” does not “conflict with prior interpretation” of the same regulation, and is not merely a “convenient litigating position” or a “*post hoc* rationalization advanced by an agency seeking to defend past agency action against attack.” *Christopher v. SmithKline Beecham Corp.*, 132 S. Ct. 2156, 2166 (2012) (internal quotation marks and citation omitted).

On the contrary, the Commissioner’s interpretation is entirely consistent with the purpose of the research tax credit, which is to provide a credit for the cost that a taxpayer incurs in conducting qualified research that he would not otherwise incur. Indeed, the House Ways and Means Committee explained that this “substantial tax credit for incremental research and experimentation expenditures will overcome the resistance of many businesses to bear the



significant costs of staffing, supplies, and certain computer charges which must be incurred in initiating or expanding research programs.” H.R. Rep. No. 97-201, at 111 (1981). The purpose of overcoming “the resistance of many businesses to bear the significant costs of,” among other things, “supplies . . . which must be incurred in initiating or expanding research programs” is served by affording the taxpayer the credit for the substantial costs *that it would not otherwise have incurred* to conduct qualified research. Affording a credit for the costs of supplies that the taxpayer would have incurred regardless of any qualified research it was conducting simply creates an unintended windfall. Even if the latter interpretation may be encompassed within the language of section 41(b)(2)(A)(ii), the Commissioner is hardly compelled to adopt the construction that would not necessarily be consistent with the purpose of the credit for increasing research activities. *See Cabell*, 148 F.2d at 739 (“[S]tatutes always have some purpose or object to accomplish, whose sympathetic and imaginative discovery is the surest guide to their meaning.”) (Hand, L., J.) (quoted with approval in *Pub. Citizen v. United States Dep’t of Justice*, 491 U.S. 440, 455 (1989)).

In sum, as Judge Katzmann has observed, “Agencies are charged with implementing legislation that is often unclear and the product of an often-messy legislative process. Trying to make sense of the statute with the aid of reliable legislative history is rational and prudent.” Robert A. Katzmann, Madison Lecture: *Statutes*, 87 N.Y.U. L. Rev. 637, 659 (2012). We are satisfied that in formulating and construing Treasury Regulation § 1.41-2(b)(1), the Commissioner reached a result that is rational, prudent, and consistent with the legislative history and congressional purpose.

## **CONCLUSION**

The decision of the Tax Court is affirmed with respect to the anticoking and UCAT-J projects. We also affirm the Tax Court's holding that UCC's sodium borohydride project was not qualified research under 26 U.S.C. § 41(d) for the reasons stated in its comprehensive review of the record. *Union Carbide*, 97 T.C.M. (CCH) at 1262.

**AFFIRMED.**

POOLER, *Circuit Judge*, concurring:

While I join fully in the majority opinion, I write separately to note my view that Congress may well have intended to give a tax credit for those supplies which would have been purchased absent any qualified research. In reaching this conclusion, I am reminded that Section 41 has long been the subject of much industry lobbying. *See, e.g.*, Mark Crawford, *Industry Lobbies Hard for R&D Tax Credit*, *Science*, February 19, 1988, at 859; Kim Dixon, *Companies Lobby for U.S. R&D Tax Credit*, *Reuters*, Oct. 21, 2009 (“Companies with big research and development spending, including CA (CA.O) and Dow Chemical Co (DOW.N), are lobbying U.S. lawmakers to extend and broaden a multibillion-dollar tax credit they say will preserve Americans jobs.”).

If Congress intended the supplies at issue here to be creditable, however, it failed to write the statute in such precise terms so as to preclude either the Commissioner’s regulations or his interpretations. Accordingly, I join the majority opinion.