IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

JOSEPH VAN LOON, et al.,	§	
	§	
Plaintiffs,	§	
	§	
v.	§	1:23-CV-312-RP
	§	
DEPARTMENT OF TREASURY, et al.,	§	
	§	
Defendants.	§	

ORDER

Before the Court are cross-motions for summary judgment filed by Plaintiffs Joseph Van

Loon, Tyler Almeida, Alexander Fisher, Preston Van Loon, Kevin Vitale, and Nate Welch (together,

"Plaintiffs"), (Dkt. 41), and Defendants Department of Treasury (the "Department"), Office of

Foreign Assets Control ("OFAC"), Janet Yellen, and Andrea M. Gacki (together, "Defendants" or

"government"), (Dkt. 80). Having considered the parties' arguments, the evidence, and the relevant

law, the Court will deny Plaintiffs' motion and grant Defendants' motion for summary judgment.

I. BACKGROUND

This case is about Tornado Cash—but the parties disagree on how to characterize Tornado

Cash. Plaintiffs contend that Tornado Cash is a decentralized, open-source software project

comprised of a subset of smart contracts, or "pools," on the Ethereum blockchain. (Pls.' Mot.

Summ. J., Dkt. 41, at 10). In contrast, the government argues that Tornado Cash is an organization

that runs a cryptocurrency mixing service. (Def's. Mot. Summ. J., Dkt. 80, at 10). It is undisputed

that the Department of Treasury's Office of Foreign Assets Control added Tornado Cash to the

Specially Designated Nationals and Blocked Persons ("SDN") List. Plaintiffs argue that the

designation exceeds the Department's statutory authority over foreign nationals' interests in

property and violates the Free Speech Clause.

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A. Technical Background

1. Cryptocurrency and Blockchain Technology

The government describes "cryptocurrency" as follows: Cryptocurrency is a type of virtual currency that can be traded and exchanged on blockchains, and that can be used for payment or investment purposes. (*See* Admin. Record ("A.R.") Vol. 1, Dkt. 91-1, at 22–23; A.R. Vol. 23, Dkt. 91-3, at 157–58). A "blockchain" is a decentralized ledger, or record of transactions, that relies on an online network of users to maintain the ledger's accuracy. (A.R. Vol. 1, Dkt. 91-1, at 23; A.R. Vol. 2, Dkt. 91-2, at 97). Cryptocurrency can be exchanged "directly person to person, through a cryptocurrency exchange, or through other intermediaries." (A.R. Vol. 1, Dkt. 91-1, at 23; A.R. Vol. 3, Dkt. 91-3, at 158). Cryptocurrency is typically stored within a digital "wallet," which functions like a virtual account integrated into the blockchain and is identified by a "wallet address." (A.R. Vol. 1, Dkt. 91-1, at 23–24; A.R. Vol. 3, Dkt. 91-3, at 158). Wallets can generate or store "keys" that are used to send and receive cryptocurrency. (A.R. Vol. 3, Dkt. 91-3, at 158). Those keys include public keys, which are analogous to bank account numbers, and private keys, which function like a personal identification number or password. (*Id.*).

Cryptocurrency users transmit funds between digital wallet addresses, after which the transactions are recorded into "blocks," or entries on the blockchain's ledger. (A.R. Vol. 1, Dkt. 91-1, at 24; A.R. Vol. 2, Dkt. 91-2, at 108). Blockchains do not record real names or physical addresses, but only the transfers between digital wallets, thus maintaining a degree of anonymity for users. (*Id.*). If the identity of a wallet owner becomes known, however, that owner's transactions can be traced. (A.R. Vol. 2, Dkt. 91-2, at 108).

Cryptocurrency can take the form of virtual coins or tokens, both of which are designed using blockchain technology. (A.R. Vol. 1, Dkt. 91-1, at 23; A.R. Vol. 2, Dkt. 91-2, at 48–50). Coins—including Bitcoin, traded on the Bitcoin blockchain, and Ether, on the Ethereum

blockchain—are the fundamental (or "native") medium of exchange on a blockchain, and imitate

traditional fiat currencies. (*See* A.R. Vol. 1, Dkt. 91-1, at 23; A.R. Vo1. 2, Dkt. 91-2, at 50). Tokens,

in contrast, are assets created through software developed on top of a blockchain, which have value

and therefore can be bought, sold, and traded. (A.R. Vo1. 2, Dkt. 91-2, at 50). In essence, crypto

tokens are akin to vouchers or coupons, whereas crypto coins are more like dollars and cents. (*Id.*).

Tokens can be created and distributed by the project developer for a particular purpose or intended

use, so there exist many different kinds of tokens. (*Id.*). For example, a particular blockchain

"protocol"—that is, the set of rules that govern the operation of the blockchain, or some subset of

transactions on the blockchain—can provide users with tokens that allow them to store data on the

protocol's network, to access certain benefits, or even to manage the protocol itself. (*Id.* at 50–52).

Once purchasers obtain tokens, those tokens can be used in accordance with their design limitations.

(*Id.* at 50).

One important kind of token is a governance token, which can represent a share of

ownership or voting rights in a decentralized autonomous organization ("DAO"). (*Id.*). A DAO is a

management structure that allows the holders of governance tokens to vote on organizational

decisions. (A.R. Vol. 1, Dkt. 91-1, at 151). Typically, to form a DAO, a core developer group creates

a protocol, layered on top of an existing blockchain, that allows for the distribution of governance

tokens to users, backers, and other stakeholders. (*Id.*). The protocol often specifies quorum

requirements to submit a voting proposal, as well as rules for voting. (*See id.* at 153). Each token

typically corresponds to a set amount of voting power within the organization and also corresponds

to a variable price on a secondary market, where the token maybe bought and sold. (*Id.*). Although

DAOs often describe themselves as highly decentralized and democratized, (*see, e.g.*, A.R. Vol. 3,

Dkt. 91-3, at 151), the actual governance authority of DAOs is often highly concentrated, (A.R. Vol.

1, Dkt. 91-1, at 151), and the core developer group often remains closely involved in managing,

promoting, and proposing changes to the protocol to be voted upon by the DAO, (*see, e.g., id.* at 53; A.R. Vol. 2, Dkt. 91-2, at 125).

2. Ethereum

According to the government, Ethereum is a prominent virtual currency blockchain. (A.R. Vol. 1, Dkt. 91-1, at 27; A.R. Vol. 2, Dkt. 91-2, at 79). A transaction on the Ethereum blockchain generally involves the transfer of Ether ("ETH")—the native cryptocurrency of the Ethereum blockchain, (A.R. Vol. 2, Dkt. 91-2, at 65)—from one account to another, (*id.* at 80). An Ethereum account is a wallet with an ETH balance that can be used to execute transactions on the Ethereum blockchain. (A.R. Vol. 1, Dkt. 91-1, at 142). There are two kinds of Ethereum accounts: (1) "externally owned" accounts, which are effectively wallets that may be controlled by anyone with the corresponding private keys, and (2) "smart contracts," or "pools" which are software programs deployed directly onto the Ethereum network, and which may be run by Ethereum users who satisfy the program's conditions. (*Id.* at 143). Smart contracts allow users to route digital asset deposits and withdrawals by generating a randomized key upon deposit, which the depositing user can later use to withdraw the funds. (Blockchain Ass'n.'s Amici Br., Dkt. 49, at 12–13).

Externally owned accounts allow users to initiate transactions for ETH or token transfers. (*Id.*). When a transaction is initiated from an externally owned account, that request is broadcast to the entire Ethereum network. (A.R. Vol. 2, Dkt. 91-2, at 80). A person known as a "validator" will then execute the transaction by altering the balances of the sending and receiving accounts according to the request. (*Id.*). This transaction requires a fee, known as "gas," paid in ETH in an amount determined by the amount of computation required to complete the transaction request. (*Id.* at 65, 80). Upon completion of a transaction, the validator is rewarded by the network with a portion of the gas, for doing the work of verifying and executing the transaction and recording the transaction in the next block on the blockchain. (*Id.* at 65).

Unlike an externally owned account, a smart contract is computer code that is stored directly on the Ethereum blockchain, and which automatically executes all or parts of an agreement, pursuant to its specifications. (A.R. Vol. 3, Dkt. 91-3, at 228). The deployment of a smart contract to the blockchain has a cost, which is exacted in the form of gas. (*Id.*). Once deployed, authorized users (or other smart contracts) can execute the code. (*Id.*). The fee for executing a smart contract is determined by the complexity of the smart contract. (*Id.*).

3. Cryptocurrency mixers

According to the government, cryptocurrency mixing services, known as "mixers" or "tumblers," are designed to obscure the source or owner of particular cryptocurrency units, thereby allowing users to remain anonymous. (*Id.* at 211). A mixer customer typically directs mixer software to send a certain number of cryptocurrency units to a specific address that is controlled by the mixer, for a fee. (*Id.*). The mixer then takes the sender's cryptocurrency units and pools them together with the cryptocurrency of other users (*i.e.*, "mixes" the cryptocurrency) before delivering the specified number of units to the requested destination. (*Id.*). This renders it difficult to determine the link between a sender and recipient wallet account. (*Id.*).

Mixers are sometimes operated via smart contracts. (*See* A.R. Vol. 2, Dkt. 91-2, at 38). To initiate a transaction, a user sends the cryptocurrency to the mixer and, in return, receives a cryptographic "note," or password, proving that they are the depositor. (*Id.*). The deposited cryptocurrency is then mixed with cryptocurrency units of other users. (*Id.*). At a time of the user's choosing, the user sends the note back to the mixer and withdraws the designated amount to a specified recipient address. (*Id.*). The withdrawal transaction is typically initiated by the withdrawal wallet address alone, to ensure that no connection can be drawn between sender and recipient. (*See id.* at 123). However, because every transaction requires that the account initiating the transaction pay "gas," the withdrawal account must be prefunded with Ether to pay that fee. (*Id.*). Because pre-

funding the withdrawal account would allow the source of the pre-existing balance to be traced, transactions are often executed with the aid of service providers called "relayers," who both provide a fee to the mixer and collect a fee from the depositor, in exchange for initiating the withdrawal transaction. (*Id.*). Relayers provide an extra layer of anonymity by eliminating the requirement to pre-fund the recipient account. (*See id.*).

4. Tornado Cash

Plaintiffs describe Tornado Cash as a "decentralized, open-source software project made of the smart contracts on the Ethereum blockchain." (Pls.' Mot., Dkt. 41, at 10 (citing A.R. Vol. 2, Dkt. 91-2, at 8)). According to Plaintiffs, unlike mixing services, Tornado Cash is an autonomous software, and its users rely on smart contracts that are immutable, autonomous, and self-executing. (*Id.* (citing A.R. Vol. 2, Dkt. 91-2, at 8–11).

In contrast, the government describes Tornado Cash as "an organization that runs a cryptocurrency mixing service." (Pls.' Mot., Dkt. 80, at 20 (citing A.R. Vol. 1, Dkt. 91-1, at 34). According to the government, Tornado Cash's organizational structure consists of: (1) several developers who launched the mixing service and created the Tornado Cash DAO, and (2) the DAO, which votes on implementing new features. (*Id.*). The government claims that the DAO is made up of users who hold Tornado Cash's governance token, "TORN," which is also a virtual asset that may be bought and sold. (*Id.* (citing A.R. Vol. 1, Dkt. 91-, at 44–51)).

The parties also differ in their characterization of the smart contracts. It is undisputed that Tornado Cash uses smart contracts to provide a layer of privacy for its users by allowing them to deposit crypto assets in one wallet and then withdraw assets from a different wallet. Plaintiffs claim that as of 2020, the smart contracts are immutable, autonomous software applications with no custodial operator that automatically check the inputs necessary for a valid transaction, allowing withdrawals without human intervention. (Defs.' Mot., Dkt. 41, at 10–11 (citing A.R. Vol. 2, Dkt.

91-2, at 10–14)). However, the government states that these smart contracts are created by Tornado

Cash developers and then approved and deployed by the DAO, to provide customers with virtual

currency mixing services on multiple blockchains. (A.R. Vol. 1, Dkt. 91-1, at 52). According to the

government, although certain smart contracts are designed to be immutable, Tornado Cash

periodically develops new smart contracts to update its service, and the older smart contracts

become inoperative. (*See id.* at 62 (referencing upgrades to the "pools," which OFAC considers to be

a reference to smart contracts); A.R. Vol. 2, Dkt. 91-2, at 28 (showing outdated smart contracts)).

The parties also dispute Tornado Cash's use of relayers. Relayers withdraw funds from the

Tornado Cash pool on a user's behalf, to further obscure the source of funds. (A.R. Vol. 1, Dkt. 91-

1, at 57). The government argues that Tornado Cash collects fees through relayers, third parties who

have agreed to provide an extra layer of anonymity enhancement to avoid the need for users to pre-

fund a recipient account. (*Id.* at 56–60 & n.113, 951). Plaintiffs claim that relayers are an optional,

privacy-enhancing service, but according to the government, eighty-four percent of Tornado Cash

transactions use relayers. (*Id.*, Dkt. 91-1, at 58; *id.* at 58 n.11).

B. Legal Background

1. The International Emergency Economic Powers Act

The International Emergency Economic Powers Act ("IEEPA") authorizes the President to

declare national emergencies "to deal with any unusual and extraordinary threat, which has its source

in whole or substantial part outside the United States, to the national security, foreign policy, or

economy of the United States." 50 U.S.C. § 1701(a). Once a national emergency is declared, IEEPA

authorizes the President to:

> [R]egulate, direct and compel, nullify, void, prevent or prohibit, any . . .
> transfer . . . of, or dealing in, or exercising any right, power, or privilege
> with respect to, or transactions involving, any property in which any
> foreign country or a national thereof has any interest[,] by any person,
> or with respect to any property, subject to the jurisdiction of the United
> States[.]

Id. § 1702(a)(1)(B). Presidents have historically used this authority to impose economic sanctions on many countries, individuals, and entities, and those who provide support for malicious cyber-enabled activities. *See, e.g.*, Exec. Order No. 12,978, 60 Fed. Reg. 54,579 (Oct. 21, 1995) (blocking assets of persons who "play a significant role in international narcotics trafficking centered in Colombia"); Exec. Order No. 13,382, 70 Fed. Reg. 38,567 (June 28, 2005) (blocking assets of persons who have engaged in transactions that have materially contributed to the proliferation of weapons of mass destruction and their supporters).

Pursuant to IEEPA, the President issued Executive Order ("E.O.") 13694 on April 1, 2015. Exec. Order No. 13,694, 80 Fed. Reg. 18,077 (Apr. 2, 2015). The order explained the President's determination that "the increasing prevalence and severity of malicious cyber-enabled activities originating from . . . outside the United States constitutes an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States." *Id.* The President declared a national emergency to counter the articulated threat, blocking the property and interests in property of certain persons determined to be engaging in malicious cyber-enabled activities. *Id.*

On January 3, 2017, the President issued E.O. 13757, which amended E.O. 13694 to further address "the increasing use of [significant malicious cyber-enabled activities] to undermine democratic processes or institutions." Exec. Order No. 13,757, 82 Fed. Reg. 1 (Jan. 3, 2017). The order provides for blocking the property and interests in property of "any person"— i.e., any "individual or entity," 31 C.F.R. § 578.313—that the Secretary of the Treasury determines is "responsible for or complicit in" or has "engaged in, directly or indirectly, cyber-enabled activities originating from, or directed by persons located . . . outside the United States," where such activities (1) "are reasonably likely to result in, or have materially contributed to, a significant threat to the national security" or U.S. "foreign policy[] or economic health," and (2) "have the purpose or effect of . . . causing a significant misappropriation of funds or economic resources, trade secrets, personal

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identifiers, or financial information for commercial or competitive advantage or private financial gain." E.O. 13,757, § 1. The order also provides for blocking the property and interests in property of "any person" that the Secretary determines to have "materially assisted, sponsored, or provided financial, material, or technological support for" any such cyber-enabled activity. *Id.*

E.O. 13694, as amended by E.O. 13757, further authorizes the Secretary "to take such actions, including the promulgation of rules and regulations, and to employ all powers granted to the President by IEEPA as may be necessary to carry out the purposes of this order." E.O. 13,694, § 8. Subsequently, the Secretary delegated to the Director of OFAC the authority to block persons under E.O. 13694, as amended. *See* 31 C.F.R. § 578.802. Pursuant to that delegation, OFAC promulgated regulations to implement E.O. 13694, as amended. *See* 31 C.F.R. pt. 578. OFAC's regulations provide bases and procedures for any blocked person to challenge their designation and establishes procedures for OFAC's consideration of and response to any such challenge. *Id.* § 501.807. These regulations also allow for OFAC to issue general and specific licenses that would authorize transactions otherwise prohibited by the sanctions. *See id.* § 578.404.

2. Executive Order Providing for Sanctions with Respect to North Korea

Pursuant to IEEPA, the President issued E.O. 13722 on March 15, 2016. Exec. Order No. 13722, 81 Fed. Reg. 14,943 (March 18, 2016). The President explained that "the Government of North Korea's continuing pursuit of its nuclear and missile programs . . . increasingly imperils the United States and its allies." *Id.* The President therefore blocked the property and interests in property of the Government of North Korea and the Workers' Party of Korea. *Id.* § 1(a). In addition, the President blocked persons determined "to have materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of" the Government of North Korea. *Id.* § 2(a)(vii). E.O. 13694 authorizes the Secretary of the Treasury "to take such actions, including the promulgation of rules and regulations, and to employ all powers

granted to the President by IEEPA [and the United Nations Participation Act of 1945] as may be necessary to carry out the purposes of this order." E.O. 13694, § 8. The Secretary later delegated to the Director of OFAC the authority to block persons under E.O. 13722, and OFAC promulgated implementing regulations in response. *See* 31 C.F.R. pt. 510.

C. OFAC's Designation of Tornado Cash

On August 8, 2022, OFAC designated Tornado Cash pursuant to E.O. 13694, as amended. *See* Press Release, U.S. Dep't of the Treasury, U.S. Treasury Sanctions Notorious Virtual Currency Mixer Tornado Cash, https://perma.cc/AY3X-Z8JG. The accompanying press release asserted that Tornado Cash "indiscriminately facilitates anonymous transactions by obfuscating their origin, destination, and counterparties, with no attempt to determine their origin." *Id.* OFAC noted that illicit actors often use mixing services like Tornado Cash to launder funds. *Id.* The press release claims that Tornado Cash has laundered hundreds of millions of dollars' worth of virtual currency since its creation in 2019, including hundreds of millions of dollars for the Lazarus Group, a North Korean state-sponsored hacking group. *Id.*

On November 8, 2022, OFAC rescinded its original designation and simultaneously re-designated Tornado Cash pursuant to E.O. 13694, as amended, and E.O. 13722, to include an additional basis for the designation regarding its North Korea (formally known as "Democratic People's Republic of Korea," or "DPRK") activities, and to consider additional information. (*See* A.R. Vol. 1, Dkt. 91-1, at 14–101); *see also* Press Release, U.S. Dep't of the Treasury, Treasury Designates DPRK Weapons Representatives: Tornado Cash Redesignated with Additional DPRK Authorities, New OFAC Guidance, https://perma.cc/TGD5-8MXH. In support of this designation, OFAC determined that Tornado Cash materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, an activity described in section 1(a)(ii) of E.O. 13694, as amended. (A.R. Vol. 1, Dkt. 91-1, at 68–74). OFAC

determined that the online theft of more than $600 million in cryptocurrency constituted a cyber-enabled activity covered by section 1(a)(ii) of E.O. 13694. (*Id.* at 68–72). OFAC determined that the DPRK's malicious cyber-enabled activities threaten the United States and the broader international community and pose a significant threat to the international financial system. (*Id.* at 71). OFAC also observed that the DPRK has increasingly relied on cybercrime to generate revenue for its weapons of mass destruction and ballistic missile programs. (*Id.*). Next, OFAC established that, because the Lazarus Group used the Tornado Cash software to launder illicit proceeds, Tornado Cash provided support to an activity described in section 1(a)(ii) of E.O. 13694, as amended. (*Id.* at 72–74). Specifically, OFAC explained that the main ETH address used by the Lazarus Group to conduct the heist sent 2,001 ETH to another ETH address, which in turn sent 2,000 ETH in batches of 100 ETH to Tornado Cash. (*Id.* at 61–62).

OFAC also designated Tornado Cash for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, the Government of North Korea, pursuant to section 2(a)(vii) of E.O. 13722. (*Id.* at 74–77). OFAC first determined that the Lazarus Group constituted an agency, instrumentality, or controlled entity of the Government of North Korea based on its relationship with the Reconnaissance General Bureau, North Korea's primary intelligence bureau. (*Id.* at 74). Furthermore, as discussed above, Tornado Cash is alleged to have facilitated the laundering of the $600 million proceeds stolen by the Lazarus Group. (*Id.* at 76). OFAC also asserted that Tornado Cash facilitated the laundering of $100 million in proceeds stemming from a separate virtual currency theft allegedly perpetrated by the Lazarus Group.. (*Id.* at 76–77).

D. Procedural History

Plaintiffs filed their original complaint on September 8, 2022. (Dkt. 1). They amended their complaint on November 22, 2022. (Dkt. 21). They bring claims under the Administrative Procedure

Act ("APA"), the First Amendment's Free Speech Clause, and the Fifth Amendment's Due Process Clause. (*Id.* at 23–26).

The parties filed competing motions for summary judgment. (Pls.' Mot., Dkt. 41; Defs. Mot., Dkt. 80). In their motion, Plaintiffs argue that OFAC's designation of Tornado Cash exceeds the Department's statutory authority over foreign nationals' interests in property and violates the Free Speech Clause. Specifically, Plaintiffs argue that: (1) Tornado Cash is neither a foreign "national" or "person" under IEEPA nor a "person" under the North Korea Act; (2) the smart-contracts components of the designation are not "property" that can be regulated under either of the acts; and (3) Tornado Cash cannot have a property interest in those components. (Pls.' Mot., Dkt. 41, at 17– 27). Plaintiffs further argue that the Department's actions violate their rights of free speech. (*Id.* at 27–29). The government, on the other hand, argues that Tornado Cash is an entity that may be designated and that it has a property interest in the smart contracts. (Defs.' Mot., Dkt. 18–35). The government also argues that the designation does not restrict Plaintiffs' protected speech, and that, in any case, any such restriction would be lawful under the applicable constitutional standard. (*Id.* at 36–40).

II. LEGAL STANDARD

"Summary judgment is [the] appropriate procedure for resolving a challenge to a federal agency's administrative decision when review is based upon the administrative record, even though the Court does not employ the standard of review set forth in the rule governing summary judgment motions." *Larson v. Geren*, No. SA-08-CA-722-FB, 2010 WL 11542078, at *4 (W.D. Tex. Apr. 14, 2010) (internal quotation marks omitted), *aff'd*, 432 F. App'x 356 (5th Cir. 2011). When judicial review is sought under 5 U.S.C. § 706, "the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court." *Camp v. Pitts*, 411 U.S. 138, 142 (1973) (per curiam).

The APA directs that a "court shall review the whole record or those parts of it cited by a party." 5 U.S.C. § 706. In APA cases, "[e]vidence cannot be submitted in the reviewing court and the parties are bound by the evidence in the administrative record." *Redmond v. United States*, 507 F.2d 1007, 1011 (5th Cir. 1975). As relevant here, an agency action may not be set aside unless it is "arbitrary" and "capricious," "not in accordance with law," or "unsupported by substantial evidence." 5 U.S.C. § 706; *see also Holy Land Found. for Relief & Dev. v. Ashcroft* ("*Holy Land II*"), 333 F.3d 156, 162 (D.C. Cir. 2003) (applying these standards to an OFAC designation). In such cases, "a reviewing court is bound by the findings of the administrative agency if those findings are supported by substantial evidence on the administrative record as a whole." *Redmond*, 507 F.2d at 1011. "The agency's decision does not have to be ideal so long as the agency gave at least minimal consideration to relevant facts contained in the record." *Wright v. United States*, 164 F.3d 267, 268–69 (5th Cir. 1999) (per curiam).

III. DISCUSSION

A. APA Claims

1. Tornado Cash is an Entity that May Be Designated

Under IEEPA, the President may direct the Department to take action "with respect to or transactions involving, any property in which any foreign country or a national thereof has any interest by any person, or with respect to any property, subject to the jurisdiction of the United States." 50 U.S.C. § 1702(a)(1)(B). Similarly, under the North Korea Act, the Department may take action with respect to the "property and interest in property" of "any person" who knowingly engages in certain enumerated conduct. 22 U.S.C. § 9214(c). Pursuant to these statutes, the President issued two executive orders that authorize the designation of "any person" determined to meet the criteria set forth by the terms of those orders. *See* E.O. 13,722, § 2(a)(vii); E.O. 13,757, § 1(a)(ii), (iii)(B).

Plaintiffs argue that OFAC's designation of Tornado Cash exceeds these statutory powers because Tornado Cash is not a foreign "national" or "person." In matters of national security, "'an agency's application of its own regulations, receives an even greater degree of deference than the *Chevron* standard, and must prevail unless plainly inconsistent with the regulation.'" *Paradissiotis v. Rubin*, 171 F.3d 983, 987 (5th Cir. 1999) (citing *Consarc Corp. v. United States Treasury Dept., Office of Foreign Assets Control,* 71 F.3d 909, 914 (D.C.Cir.1995)). The Department has defined "person" to mean an "individual or entity." 31 C.F.R. §§ 510.322, 578.313. In turn, its definition of "entity" encompasses "a partnership, association, trust, joint venture, corporation, subgroup, or other organization."[1] 31 C.F.R. §§ 510.305, 578.305. Plaintiffs contend that Tornado Cash does not fit within this definition because, to the extent that Tornado Cash has any organizational structure, its structure does not even satisfy the definition of unincorporated association. (Pls.' Mot., Dkt. 41, at 19).

The Court finds that Tornado Cash is an entity that may be properly designated as a person under IEEPA. Where regulatory terms are "neither unusual, scientific, nor words of art," the Court applies their ordinary meaning. *Whirlwind Mfg. Co. v. United States*, 344 F.2d 153, 156 (5th Cir. 1965); *see Shah v. Azar*, 920 F.3d 987, 994 n.22 (5th Cir. 2019) ("[W]e should assume that the ordinary meaning of the regulation's language expresses its purpose and enforce it according to its terms." (internal quotation marks omitted)). The term "association" is neither unusual nor a term of art, and its ordinary meaning is "[a] body of persons who have combined to execute common purpose or

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[1] Amici curiae the Blockchain Association and DeFi Education Fund ask the Court to substitute this definition with Merriam-Webster's definition of "entity," which requires a "separate and distinct existence" from its members. (Amici Br., Dkt. 49, at 18). As OFAC has defined "entity" in its regulation, the Court declines to adopt the Amici's definition. *See, e.g.*, *Streber v. Hunter*, 221 F.3d 701, 722 (5th Cir. 2000) (rejecting dictionary definition for "a term of art defined by the tax code").

advance a common cause." *Association*, 2, Oxford English Dictionary Online (3d ed. 2022), https://www.oed.com/view/Entry/11981.

The record shows that Tornado Cash is an association within this ordinary definition. The entity is composed of its founders, its developers, and its DAO. (A.R. Vol. 1, Dkt. 91-1). The founders and developers "'mostly do[] research and publish[] the code to GitHub.'" (*Id.* at 40 (citing Tornado Cash co-founder Roman Semenov)). The DAO, on the other hand, is responsible for governing the platform, which includes "'[a]ll deployments, protocol changes, and important decisions.'" (*Id.*; *see also id.* at 40–41 (describing Tornado Cash's governance as "controlled, and governed by its DAO.")). Utilizing this structure, Tornado Cash has been able to place job advertisements, maintain a fund to compensate key contributors, and adopt a compensation structure for relayers, among other things. (*See id.* at 41–43). Substantial evidence supports the argument that founders, developers, and DAO constitute "[a] body of persons who have combined to execute [the] common purpose" of developing, promoting, and governing Tornado Cash.

Plaintiffs disagree with this definition on three main grounds. First, Plaintiffs argue that Tornado Cash is not an entity but an autonomous software. However, as the Court notes above, OFAC identified both the software known as Tornado Cash and an entity formed by certain individuals. The record sufficiently supports OFAC's determination that the founders, the developers, and the Tornado Cash DAO have acted jointly to promote and govern Tornado Cash and to profit from these activities.

Second, Plaintiffs argue that there is no evidence that the individual members of the DAO "have manifested any agreement to a common purpose." (Pls.' Mot., Dkt. 41, at 19–20). Specifically, Plaintiffs note that the Tornado Cash DAO is composed of anyone who owns a TORN token, regardless of how it was acquired or whether the owners ever intended to vote or otherwise actively participate in the governance structure. (*Id.*). This argument fails because the DAO is an entity unto

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itself that, through its voting members, has demonstrated an agreement to a common purpose. As the government notes, the structure is not unlike that of stockholders of a corporation who may not intend to vote in a shareholder meeting, without this affecting the structure of the entity. (Defs.' Mot., Dkt. 80, at 32). Furthermore, an express agreement is not necessary. Plaintiffs import the "manifesting agreement" requirement from other, unrelated areas of law. (*See id.* at 19 (citing cases applying RICO, evaluating contract liability, and Fifth Amendment protections, respectively)). Based on the plain meaning of "association," OFAC need only show: (1) that Tornado Cash consists of a body of individuals, and (2) that this body furthers a common purpose. OFAC has done so.

Finally, Plaintiffs argue that Tornado Cash cannot be an association because the designation explicitly "excluded" "Tornado Cash's individual founders, developers, members of the DAO, or users, or other persons involved in supporting Tornado Cash," but this overstates the purpose of the designation. (Defs.' Mot., Dkt. 20–21). OFAC may designate entities without concurrently designating their individual owners or officers (and vice versa), as it has routinely done so in the past. (*See* Pls.' Mot., Dkt. 80, at 35 n.10 (collecting examples)). Doing so does not undermine the designation.

In summary, the Cout finds that Tornado Cash is an association within the ordinary meaning of the term and is therefore an entity that may be designated per OFAC regulations.

2. Tornado Cash Has a Property Interest in the Smart Contracts

Next, Plaintiffs argue that, even if Tornado Cash is a properly designated entity, it does not have a property interest in the smart contacts that have been blocked. Plaintiffs ask the Court to adopt the ordinary meaning of "interest in property": a "legal or equitable claim to or right in property." (Pls.' Mot., Dkt. 41, at 24); *Interest*, BLACK'S LAW DICTIONARY (11th ed. online 2019). However, ordinary meanings should not replace terms of art that have been defined by regulation. *See, e.g.*, *Streber v. Hunter*, 221 F.3d 701, 722 (5th Cir. 2000) (rejecting dictionary definition for "a term

of art defined by the tax code"). Here, OFAC has already defined the terms "property" and "interest in property" within its implementing regulations, giving them a broad reach that has been upheld by other courts, as the Court will discuss below. 31 C.F.R. §§ 510.323, 578.314.

Plaintiffs urge the Court to reject broad definition, claiming that OFAC is not entitled to deference when defining unambiguous statutory terms. But "interest in property" is hardly an unambiguous term. For example, the Supreme Court has already interpreted the word "interest" to encompass interests that are not legally enforceable. *Regan v. Wald*, 468 U.S. 222, 224, 225–26, 233–34 (1984). Therefore, the Court will reject Plaintiffs' definition and evaluate whether Tornado Cash has a property interest in the smart contracts based on OFAC's regulatory definitions.

a. The Smart Contracts are Property Within the Meaning of the Statute

Plaintiffs contend that the smart contracts are not property because they are incapable of being owned, and that, even if they were, Tornado Cash does not have a "legal or equitable claim or right in property" to them. But OFAC's regulations define "property" and "interest in property" as follows:

> The terms property and property interest include money, checks, drafts, bullion, bank deposits, savings accounts, debts, indebtedness, obligations, notes, guarantees, debentures, stocks, bonds, coupons, any other financial instruments, bankers acceptances, mortgages, pledges, liens or other rights in the nature of security, warehouse receipts, bills of lading, trust receipts, bills of sale, any other evidences of title, ownership, or indebtedness, letters of credit and any documents relating to any rights or obligations thereunder, powers of attorney, goods, wares, merchandise, chattels, stocks on hand, ships, goods on ships, real estate mortgages, deeds of trust, vendors' sales agreements, land contracts, leaseholds, ground rents, real estate and any other interest therein, options, negotiable instruments, trade acceptances, royalties, book accounts, accounts payable, judgments, patents, trademarks or copyrights, insurance policies, safe deposit boxes and their contents, annuities, pooling agreements, services of any nature whatsoever, contracts of any nature whatsoever, and any other property, real, personal, or mixed, tangible or intangible, or interest or interests therein, present, future, or contingent.

31 C.F.R. §§ 510.323, 578.314.

The Court finds that OFAC's determination that the smart contracts constitute property, or an interest in property, is not plainly inconsistent with the regulatory definition of those terms. Plaintiffs argue that the smart contracts cannot be considered property because they are immutable and therefore cannot be owned. However, OFAC's definition of property encompasses "contracts of any nature whatsoever," and—as other courts have recognized—smart contracts are merely a code-enabled species of unilateral contracts. *See, e.g.*, *Rensel v. Centra Tech, Inc.*, No. 17024500-CIV, 2018 WL 4410110, AT *10 (S.D. Fla. June 14, 2018) ("Smart contracts are self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code"). *In re Bibox Grp. Holdings Ltd. Sec. Litig.*, 534 F. Supp. 3d 326, 330 (S.D.N.Y. 2021) ("A smart contract allows the parties to define the terms of their contract and submit the crypto-assets contemplated in the contract to a secure destination," and may also "function[] as an automated, secure digital escrow account."); *Williams v. Block one*, No. 20-CV-2809, 2022 WL 5294189, at *2 n.19 (S.D.N.Y. Aug. 15, 2022) (citing plaintiff's explanation that smart contracts "are programs that verify and enforce the negotiation or performance of binary contracts"); *Snyder v. STX Techs.*, Ltd., No. 19-6132, 2020 WL 5106721, at *2 (W.D. Wash. Aug. 31, 2020) (breach of contract action for violation of a smart contract term). Even if not every smart contract can be considered a contract, the record shows that Tornado Cash promoted and advertised the contracts and its abilities and published the code with the intention of people using it—hallmarks of a unilateral offer to provide services. (*See, e.g.*, A.R. Vol. 1, Dkt. 91-1, at 62–63 (discussing blog post's advertising Tornado Cash's features and services)).

In fact, Plaintiffs acknowledge that smart contracts are "like a vending machine" because "the smart contract automatically carries out a particular, predetermined task without additional human intervention." (*Id.* at 10). This reinforces the Court's point. Vending machines are examples of unilateral contracts. And like vending machines, a smart contract is a tool that carries out a

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particular, predetermined task. The fact that smart contracts do so without additional human intervention, like a vending machine, or that they are immutable, does not affect its status as type of contract and, thus, a type of property within the meaning of the regulation.

b. Tornado Cash Has a Property Interest in the Smart Contracts

Plaintiffs further argue that Tornado Cash does not have a property interest in the smart contracts. Plaintiffs urge the Court to instead adopt the "ordinary meaning" of "interest," which would restrict the definition to a "legal or equitable claim or right in property." *Interest*, BLACK'S LAW DICTIONARY (11th ed. online 2019). But OFAC's definition of "interest" is expansive. 31 C.F.R. §§ 510.323, 578.314. The regulations define the word "interest" as "an interest of any nature whatsoever, direct or indirect." *Id.* The phrase "any interest" should be construed broadly, and it includes even interests that are not legally enforceable. *Regan*, 468 U.S. at 224, 225–26, 233–34 (recognizing that the phrase "any interest" should be construed broadly); *Holy Land Found. for Relief & Dev. v. Ashcroft*, 219 F. Supp. 2d 57, 67 (D.D.C. 2002), aff'd, 333 F.3d 156 (D.C. Cir. 2003) ("IEEPA does not limit the President's blocking authority to the existence of a legally enforceable interest."). The beneficial interest Tornado Cash derives from the smart contracts falls within this definition.

Tornado Cash has a beneficial interest in the deployed smart contracts because they provide Tornado Cash with a means to control and use crypto assets. The smart contracts generate fees in the form of TORN tokens for the DAO when users execute a relayer-facilitated transaction. Plaintiffs disagree on several grounds. First, they insist that the use of a relayer is entirely optional, but the record shows that almost eighty-four percent of Tornado Cash transactions use these relayer services. (A.R. Vol. 1, Dkt. 91-1, at 58; *id.* at 58 n.11).

Next, Plaintiffs argue that Tornado Cash may have an interest in the TORN tokens but not in the smart contracts themselves, because Tornado Cash does not have a "right or expectancy" in

the smart contracts. (Defs.' Reply, Dkt. 17). Plaintiffs' claim that a possibility of future indirect

profits is too remote because it depends on a "cascading economic causation" theory that could,

theoretically, increase the value of TORN. (*Id.* at 17–18). However, the benefits to Tornado Cash are

not hypothetical or remote. Tornado Cash receives a regular stream of revenue from the smart

contracts in the form of TORN tokens transferred to the DAO for relayer-enabled transactions,

which, as the Court noted above, encompass the vast majority of the transactions. (A.R. Vo. 1, Dkt.

91-1, at 33, 40, 57, 63). The D.C. Circuit has construed the IEEPA to encompass this kind of

economic potential. In *Holy Land Foundation for Relief & Development v. Ashcroft*, the D.C. Circuit

concluded that Hamas had a beneficial interest in Holy Land's property because the purported

charity acted as a fundraiser for the terrorist organization—that is, because Hamas would profit in

the future from the fundraising proceeds. 333 F.3d 156, 162–63 (D.C. Cir. 2003); *see also id.* (("The

language ['any interest' in IEEPA] therefore imposes no limit on the scope of the interest, and

OFAC has defined this statutory term, pursuant to explicit authorization from Congress, 50 U.S.C.

§ 1704, to mean, 'an interest of any nature whatsoever, direct or indirect.'"). *Holy Land* confirms that,

within the expansive regulatory meaning, Tornado Cash has a beneficial interest based on its

expectation that the smart contracts it deployed will continue to generate this revenue.

Defendants also cite *Centrifugal Casting Mach. Co., Inc. v. American Bank & Trust Co.* for the

proposition that interest must be a "legal or equitable claim to or right in property." 966 F.2d 1348,

1353 (10th Cir. 1992) (concluding that Iraq did not have a property interest in the proceeds of a

contract). However, the Court's analysis is not inconsistent with *Centrifugal Casting.* In that case, the

government argued that Iraq had a property interest in the money plaintiff received under a letter of

credit "because it was allegedly a contract payment made by Iraq" and plaintiff had allegedly

breached the contract. *Id.* However, as the Tenth Circuit noted, Iraq was an account party to the

letter of credit, and it had not even made an actual breach of contract claim against plaintiff. *Id.* The

government was essentially claiming breach on their behalf, but such an interest was not only too remote but antithetical to the nature of a letter of credit, in light of Iraq's status as an account party. *Id.* Here, in contrast, the stream of revenue Tornado Cash received, which was directly claimed by the Tornado Cash DAO, is a much more direct interest. Furthermore, while Iraq could have only claimed an interest by ignoring the basic structure of the financing device, Tornado Cash designed the compensation structure to generate this revenue for the DAO.

Plaintiffs' other proffered analogies are similarly unpersuasive. For example, Plaintiffs argue that the Tornado Cash DAO is like a power company, which may "profit from hot summer weather that causes increased use of air conditioning," but which could not claim to have a property interest in the weather. (Pls.' Mot., Dkt. 41, at 25–26). This analogy is misleading. Such a company may not have a property interest in the weather, but it would undoubtedly own interests in the physical infrastructure and equipment, and even more abstract rights, such as transmission rights, that allow it to produce and transmit energy. Likewise, Tornado Cash may not own the crypto-economy, but, within the meaning of the statute, it has a property interest in smart contracts, which are simultaneously contracts and tools that allow it to provide privacy to its users.

Finally, Plaintiffs argue that OFAC's definition is too expansive because "[i]f abstract and ownerless software code can be designated, it is hard to see why other intangible concepts could not be forbidden as well." (Pls.' Mot., Dkt. 41, at 23). This argument is circular, as it relies on the assumption that the smart contracts are indeed "abstract and ownerless," which the record does not support. Furthermore, unlike abstract ideas, deployed smart contracts convey an ongoing benefit for Tornado Cash, in the form of fees transmitted to the DAO. Tornado Cash has a property interest in this ongoing benefit.

In summary, the Court finds that OFAC's designation of Tornado Cash does not exceed its statutory powers and is not plainly inconsistent with its regulations. Tornado Cash is an entity that

may be designated by OFAC and it has a property interest in the smart contracts it has deployed. Accordingly, the Court will grant summary judgment for the government on this issue.

B. First Amendment Claims

Plaintiffs also raise a First Amendment claim and argue that Tornado Cash's designation fails constitutional scrutiny because it is overbroad and not narrowly tailored. The Court will grant summary judgment to the government and dismiss these claims. Plaintiffs have not shown that the government's action in any way implicates the First Amendment.

Plaintiffs argue that the government is prohibiting some of them from engaging in socially valuable speech because they, if not for the designation, they would use the Tornado Cash software to make donations to important political and social causes. (Pls.' Mot., Dkt. 41, at 28–29). Indeed, the First Amendment protects the right of individuals to donate money to social causes of their choosing. *See, e.g.*, *McCutcheon v. Fed. Election Comm'n*, 572 U.S. 185, 191 (2014) ("The right to participate in democracy through political contributions is protected by the First Amendment, but that right is not absolute."); *NAACP v. Alabama ex rel. Patterson*, 357 U.S. 449, 462 (1958). However, it does not protect the right to do so through any particular bank or service of their choosing, and Plaintiffs do not cite any case to the contrary.

In fact, Plaintiffs' evidence does not sufficiently support their arguments. Plaintiffs claim that "[w]ithout the privacy afforded by Tornado Cash, users such as [Plaintiff] Almeida are hindered in expressing their views" of the Ukranian conflict. (Pls.' Mot., Dkt. 41, at 29 (*citing See Citizens United v. Federal Election Commission*, 558 U.S. 310, 351 (2010)). But Mr. Almeida's affidavit does not describe such a hindrance, nor does it state that he has stopped donating to his preferred causes, that he would be unable to donate through other services, or that his speech has otherwise been chilled. Furthermore, Plaintiffs do not explain how the designation prevents them from using other services that may allow them privacy for their transactions.

Instead, Plaintiffs insist that the government may not interfere with their "liberty of

expression . . . on the plea that it may be exercised in some other place," simply because Plaintiffs

"have alternate forums' available to them." (Pls.' Reply, Dkt. 88, at 17–18 (citing *Schneider v. New

Jersey*, 308 U.S. 147, 163 (1939); *Chicago Area Military Project v. City of Chicago*, 508 F.2d 921, 926 (7th

Cir. 1975); *see also Hobbs v. Hawkins*, 968 F.2d 471, 481 (5th Cir. 1992)) (cleaned up). While true, this

principle applies primarily to public spaces. *Schneider*, 308 U.S. at 148, 151. Tornado Cash, however,

is not a public place or public forum; the cases Plaintiffs cite are inapposite.

Plaintiffs also claim that the designation chilled "the right to publish . . . source code," which

other circuits have held is protected speech. (Pls.' Mot., Dkt. 41, at 29 (citing A.R. Vo. 2, Dkt. 91-2,

at 130); *see also id.* (citing *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 447 (2d Cir. 2001); *Junger v.

Daley*, 209 F.3d 481, 485 (6th Cir. 2000). Similarly, amicus curiae Electronic Frontier Foundation

argues that OFAC's designation has had a chilling effect on certain code developers. (Amicus Br.,

Dkt. 82, at 13–14). However, OFAC's designation blocks only transactions in property in which

Tornado Cash holds an interest, such as the smart contracts. It does not restrict interaction with the

open-source code unless these interactions amount to a transaction. Plaintiffs claim that using the

code is impossible, since its sole function is to perform transactions. (Pls.' Reply, Dkt. 87, at 22).

Plaintiffs' characterization is misleading. Developers may, for example, lawfully analyze the code and

use it to teach cryptocurrency concepts. They simply cannot execute it and use it to conduct

cryptocurrency transactions. Finally, to the extent that the designation could serve to create a chilling

effect, Plaintiffs have not claimed, let alone sufficiently demonstrated, that any Plaintiff in this suit

has felt inhibited to use the open-source code. Accordingly, the Court will grant summary judgment

for Defendants on this claim.

C. Takings Claims

Plaintiffs Almeida, Van Loon, and Welch also allege that they are unable to access Ether that belongs to them because it is trapped in a Tornado Cash smart-contract pool. Accordingly, they raise Fifth Amendment Takings claims, claiming that they did not receive any process prior to the deprivation. (Compl., Dkt. 21, at 26). However, Plaintiffs did not move for summary judgment on this ground. (Pls.' Mot. Summ. J., Dkt. 41, at 8, 30). The government moved for summary judgment on all counts. (Defs.' Mot. Summ. J., Dkt. 80, at 25–26, 52).

"The Fifth Circuit has found when a plaintiff fails to pursue a claim or defense beyond the party's initial complaint, the claim is deemed abandoned." *Weaver v. Basic Energy Servs., L.P.*, No. MO-13-CV-022, 2014 WL 12513180, at *2 (W.D. Tex. Jan. 8, 2014), *aff'd*, 578 F. App'x 449 (5th Cir. 2014); *Black v. Panola Sch. Dist.,* 461 F.3d 584, 588 n.1 (5th Cir. 2006) (plaintiff abandoned retaliatory abandonment claim when she failed to defend claim in response to motion to dismiss). The parties agreed to resolve the claims through the administrative record and cross-motions to dismiss. (Joint Mot. Entry Sched. Order, Dkt. 23). However, Plaintiffs did not pursue their Fifth Amendment claim, even after the government raised the issue of waiver in its cross motion. (Defs.' Mot. Summ. J., Dkt. 80, at 25–26). Because Plaintiffs failed to pursue their Fifth Amendment claim, they have waived it. Accordingly, the Court will grant the government's motion for summary judgment as to this claim.

IV. CONCLUSION

For these reasons, the Court **ORDERS** as follows. **IT IS ORDERED** that Plaintiffs Joseph Van Loon, Tyler Almeida, Alexander Fisher, Preston Van Loon, Kevin Vitale, and Nate Welch's Motion for Partial Summary Judgment, (Dkt. 41), is **DENIED.**

IT IS FURTHER ORDERED that Defendants Department of Treasury, Office of Foreign Assets Control, Janet Yellen, and Andrea M. Gacki's Motion for Summary Judgment, (Dkt. 80), is

GRANTED. The government is entitled to summary judgment as to all of Plaintiffs' claims against it.

IT IS FURTHER ORDERED that Plaintiffs' Motion for Oral Argument, (Dkt. 89), is **DENIED**.

The Court will enter Final Judgment in a separate order.

SIGNED on August 17, 2023.

ROBERT PITMAN
UNITED STATES DISTRICT JUDGE