

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

Joseph Van Loon; Tyler Almeida;
Alexander Fisher; Preston Van Loon;
Kevin Vitale; and Nate Welch,

Plaintiffs,

- against -

No. 1:23-cv-312-RP

Department of the Treasury;
Office of Foreign Assets Control; Janet Yellen,
in her official capacity as Secretary of the Treasury; and
Andrea M. Gacki, in her official capacity as
Director of the Office of Foreign Assets Control,

Defendants.

PLAINTIFFS' MOTION FOR PARTIAL SUMMARY JUDGMENT

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Pursuant to Federal Rule of Civil Procedure 56, Plaintiffs Joseph Van Loon, Tyler Almeida, Alexander Fisher, Preston Van Loon, Kevin Vitale, and Nate Welch respectfully move for summary judgment on Counts 1 and 2 of their Amended Complaint, Dkt. 21, against Defendants Department of the Treasury; Office of Foreign Assets Control (OFAC); Janet Yellen, in her official capacity as Secretary of the Treasury; and Andrea Gacki, in her official capacity as Director of OFAC.

INTRODUCTION

Plaintiffs are United States citizens who have been prohibited from using decentralized, open-source software known as Tornado Cash. They are prohibited from using it because the Department of the Treasury has added the software to the Specially Designated Nationals and Blocked Persons (SDN) List. That designation is unprecedented. Because it exceeds the Department's statutory authority over foreign nationals' interests in property and violates the Free Speech Clause of the First Amendment to the United States Constitution, it should be held unlawful and set aside under the Administrative Procedure Act (APA).

Plaintiffs regularly transact crypto assets on the Ethereum blockchain. The blockchain is a public ledger of transactions that is maintained on a decentralized network of computers. Because the blockchain publicly records all transactions, it permits users to send and receive assets from their virtual wallets without the intervention of a third party, such as a bank. But with that feature comes the drawback that any person can easily trace another person's transactions.

The Tornado Cash privacy protocol affords Ethereum users an increased degree of privacy. It does so through a series of ownerless, immutable "smart contracts," which are open-source software applications that cannot be altered or removed from the blockchain and that function automatically without human control. Users deposit assets in a Tornado Cash smart contract and receive a secret "key." That key can later be used to withdraw an equivalent amount of the same

asset into a different wallet, thereby making it more difficult to connect spending from the second wallet with the owner of the first wallet.

This case involves two statutes. Under the International Emergency Economic Powers Act (IEEPA), the Department may take certain actions with respect to “any *property* in which any foreign country or *a national thereof* has any *interest*.” 50 U.S.C. § 1702(a)(1)(B) (emphases added). Under the North Korea Sanctions and Policy Enhancement Act of 2016 (hereafter the “North Korea Act”), the Department has the power to “block and prohibit all transactions in *property* and *interests in property* of a *person* designated” for engaging in certain activities involving North Korea. 22 U.S.C. § 9214(c)(1) (emphases added); *see also* 22 U.S.C. § 9214(c)(2).

The Department added a Tornado Cash “person” to the SDN List on August 8, 2022 (and revised that designation on November 8, 2022). As part of the designation, the Department listed several dozen Ethereum addresses, including the immutable smart contracts, as “identifiers” of the purported Tornado Cash person. By adding Tornado Cash to the SDN List, the Department has prohibited any person in the United States from sending funds to, or receiving funds from, the ownerless, immutable smart contracts.

The designation should be held unlawful and set aside under the APA for four independent reasons. *First*, the Department has not validly designated a foreign “national” under IEEPA or a “person” under the North Korea Act. The Department purported to designate an “entity” consisting of certain named Tornado Cash founders; associated Tornado Cash developers; and anyone who holds a digital asset called TORN. There is no such formal entity anywhere in the world, and the administrative record does not establish that this disparate group of people has formed an unincorporated association by manifesting agreement to cooperate in furtherance of a common pur-

pose. What is more, the Department simultaneously issued guidance explaining that it was expressly not designating the Tornado Cash founders, the Tornado Cash developers, or the TORN holders—a position that is irreconcilable with its reliance on those same people to define an “entity.”

Second, the Department has exceeded its statutory authority to regulate “property.” At least 20 addresses in the designation are ownerless, immutable smart contracts—open-source software that is no longer capable of being altered, removed, or controlled by anyone. Because no one can “own” those immutable smart contracts, they are not “property.”

Third, the Department has exceeded its statutory authority to prohibit transactions involving an “interest” in property. Under a plain reading of the statutes, an interest in property is some form of legal, equitable, or beneficial claim to it. The Department does not cite any evidence that the Tornado Cash person has any such claim to the immutable smart contracts. Instead, it asserts that the Tornado Cash person has an interest in those smart contracts because it “regarded” them as “having value” and “derived value” from them, A.R. 60, but those are not legal, equitable, or beneficial claims to property.

Fourth, even if the designation were within the Department’s statutory authority, it would still violate the Free Speech Clause of the First Amendment. The designation is not narrowly tailored, and even if it were, it is facially overbroad.

For all of those reasons, summary judgment in favor of Plaintiffs is warranted on Counts 1 and 2 of the Amended Complaint, and the designation should be held unlawful and set aside under the APA.

STATEMENT OF THE CASE

A. Background

1. Ethereum is a public blockchain—a cooperative network that builds and maintains a transparent, distributed ledger. A.R. 816-817. After downloading an application called a wallet, which generates addresses for the user and a private key that functions as a password, Ethereum users can send and receive the cryptocurrency Ether (ETH), digital tokens, and other crypto assets without the involvement of any intermediary. A.R. 22, 546.

The public nature of that ledger is an essential feature of the blockchain. At its most basic, a blockchain is a list of transactions that anyone can view and verify. A.R. 77, 819. The blockchain creates an irreversible audit trail, allowing users to confirm transactions and permanently record the transfer of assets. A.R. 21-22. That transparency enables secure payments to be made without a trusted third party, such as a bank. But that transparency also compromises individual privacy because a user’s complete financial history can be identified when the accounts involved in a transaction are linked to the user’s identity. A.R. 825-826.

For example, if a user sends funds to a third-party vendor, that vendor could immediately view the user’s prior transactions on the public blockchain, obtaining sensitive information about the user’s crypto asset holdings, his potential net worth, and his past purchases. Similarly, a hacker or malicious actor could identify a user with substantial crypto assets and target him in a phishing campaign or home break-in. A hacker or malicious actor might also reveal sensitive information related to a user’s political donations, business investments, or other personal transactions.

In addition to permitting users to send and receive crypto assets, the Ethereum blockchain also stores “smart contracts.” A.R. 547, 818. Smart contracts are open-source software programs, which may be coded by anyone to perform a specific task when predetermined conditions are met. *Id.* Once a smart contract is deployed on the blockchain, it is assigned a public address with which

any user can interact. A.R. 547, 818. Those software programs operate like a vending machine; when an individual user sends a command to a smart contract, the smart contract automatically carries out a particular, predetermined task without additional human intervention. A.R. 818. By default, smart contracts are immutable—that is, they cannot be altered or controlled once they are uploaded to the blockchain. A.R. 548.

2. Tornado Cash is a decentralized, open-source software project made up of a subset of the smart contracts on the Ethereum blockchain. The most important feature of Tornado Cash is its “pool” contracts, which are immutable and allow users to deposit crypto assets from one wallet and later withdraw the same amount into another wallet. A.R. 550-551. Both the deposit and withdrawal through Tornado Cash are visible on Ethereum’s ledger. But the ledger does not reflect that the deposit and the withdrawal are linked to the same user because they involve different wallets. *Id.* The severing of that link means that an individual can make a withdrawal—and spend the assets—without exposing his financial history to third parties. A.R. 552-553. For that reason, the Tornado Cash protocol served a critical role for thousands of lawful users. A.R. 549.

Tornado Cash’s immutable smart contracts rely on “zero-knowledge proofs.” A.R. 34 n.41, 53; *see also* A.R. 552-556. A zero-knowledge proof permits one party (known as the prover) to demonstrate to another party (known as the verifier) that a given statement is true without revealing the statement itself. A.R. 553. To withdraw crypto assets from the immutable smart contracts, the user must input a zero-knowledge proof generated from information obtained when the user deposited the assets. *Id.* The immutable smart contract’s code automatically checks the proof and processes the withdrawal if the proof is valid. *Id.* Assets can thus be withdrawn without human intervention. A.R. 553-556.

Users of Tornado Cash maintain ownership of their funds throughout the entire process because they retain “sole control of [their] private keys, which in turn control [the] cryptocurrency and prove the funds are [theirs].” A.R. 28 n.21. Tornado Cash immutable smart contracts have no custodial operator. A.R. 552. In short, no individual or entity gains custody or ownership of the crypto assets deposited and withdrawn through the Tornado Cash privacy protocol. A.R. 560.

3. The creation of Tornado Cash was spearheaded by a handful of developers who initially retained the ability to update the source code. A.R. 16. Additional smart contracts were uploaded to the blockchain over the years by different contributors. A.R. 549.

In 2020, the developers who initially envisioned the Tornado Cash software project announced that they would hold a “trusted setup ceremony,” which is a decentralized process to make the smart contracts immutable. A.R. 356-357. The purpose of a trusted setup ceremony is to generate trustworthy cryptographic keys for the Tornado Cash privacy protocol. *Id.* The Tornado Cash trusted setup ceremony, completed in May 2020, created “prover and verifier keys” that were uploaded to the blockchain. A.R. 356. After those keys were uploaded, the smart contracts that form the backbone of the privacy protocol became perpetually self-executing and immutable; they cannot be altered, removed, or controlled, and no human intervention is required for them to continue operating. A.R. 61, 357, 538, 548, 951.

4. In June 2021, the original developers of Tornado Cash announced the creation of a decentralized organization (DAO). A.R. 718. Around the same time, those developers created a new crypto token called TORN, which can be transferred and sold on the blockchain like any other Ethereum-based token. A.R. 41. Early users of Tornado Cash received a voucher that they could redeem for TORN, and more TORN has been distributed over time. A.R. 125. Any person who owns TORN is entitled—though not obligated—to vote on a limited range of DAO governance

issues. *Id.* In addition to having that potential role in DAO governance, “TORN has been identified as an investment opportunity by multiple sources.” A.R. 38.

The DAO has never had the power to modify or control the immutable smart contracts at the core of the Tornado Cash software. A.R. 951. To the contrary, those core smart contracts were immutable by the time the DAO was created. A.R. 957. The DAO could only develop new projects and interact with certain optional features of the Tornado Cash protocol. A.R. 16, 35, 953. Even if a glitch or failure were discovered, no one would be able to alter the immutable smart contract and fix the code.

One such optional feature is the registry of “relayers.” Relayers are operated by third parties, and they provide an optional, privacy-enhancing service for a fee. A.R. 57. Any transaction on the Ethereum blockchain requires payment of a “gas fee” that is earned by the operators of the Ethereum network. A.R. 23. When a user withdraws his assets from Tornado Cash without a relayer, he must have enough assets in the recipient wallet to pay that “gas fee” to the Ethereum network. A.R. 57. A relayer thus “allows users to process withdrawals without needing to pre-fund their withdrawal accounts.” *Id.* The Tornado Cash DAO maintains a registry of relayers for users’ convenience. A.R. 32. Relayers pay a fee to the DAO—which is separate from the gas fee—for every transaction they process while listed on the registry. *Id.* Because the use of relayers is optional, numerous transactions are processed by the Tornado Cash immutable smart contracts without the involvement of a relayer. A.R. 57.

5. Plaintiffs are among the thousands of Americans who used the Tornado Cash privacy protocol for lawful purposes. Although Plaintiffs are aware of other crypto privacy tools, they prefer Tornado Cash because it has the highest volume of users and transactions, which promotes greater anonymity. *See* Declaration of Joseph Van Loon, Ex. A (“J. Van Loon Decl.”);

Declaration of Tyler Almeida, Ex. B (“Almeida Decl.”); Declaration of Alexander Fisher, Ex. C (“Fisher Decl.”); Declaration of Preston Van Loon, Ex. D (“P. Van Loon Decl.”); Declaration of Kevin Vitale, Ex. E (“Vitale Decl.”); Declaration of Nate Welch, Ex. F (“Welch Decl.”).

Plaintiffs wish to use Tornado Cash for business or personal transactions without linking the transactions to their publicly known wallet addresses. For instance, Plaintiff Joseph Van Loon planned to run a blockchain service called a node in his own home, but was concerned that doing so could make him a target of physical or virtual attacks by malicious actors. J. Van Loon Decl. ¶ 15. Mr. Van Loon abandoned his plan because the Department imposed sanctions on his preferred privacy tool. *Id.* ¶ 16; *see also* Fisher Decl. ¶¶ 16-17.

Plaintiff Kevin Vitale similarly used Tornado Cash to reduce the risk that malicious actors might connect his online activities with his physical address and do harm to his family or property. Vitale Decl. ¶ 13. His concerns are not speculative; in 2021, a contractor working in the vicinity realized that he was engaging in the staking of Ether and asked how much money he had made. *Id.*

Other plaintiffs have used Tornado Cash to engage in political speech. For example, Plaintiff Tyler Almeida decided to donate funds to the Ukrainian government’s publicly posted crypto wallet address in March 2022, following Russia’s invasion. Almeida Decl. ¶¶ 14-15. To avoid reprisals from Russian state-sponsored hacking groups, Mr. Almeida sent funds to a Tornado Cash immutable smart contract and used a portion of those assets to make his donation. *Id.* ¶ 16.

Several Plaintiffs currently have funds trapped in the Tornado Cash smart contracts. For instance, Plaintiff Preston Van Loon has 1.3 ETH (approximately \$2,000) trapped in Tornado Cash. Because of the designations, Plaintiffs have been prevented from freely withdrawing funds

they deposited in Tornado Cash, have been deprived of their preferred privacy protocol, and have been chilled from engaging in speech protected by the First Amendment.

B. Procedural History

1. On August 8, 2022, the Department took the unprecedented step of imposing sanctions on open-source software by adding the Tornado Cash privacy protocol to the SDN List. The designation was made under Executive Order 13,694, as amended, which relates to cybersecurity. *See* A.R. 2200-2203.

On September 8, 2022, Plaintiffs filed this action to challenge the designation of Tornado Cash on the ground that it exceeds the Department’s statutory authority and was not in accordance with law. Dkt. 1; *see* 5 U.S.C. § 706(2)(A), (C). Plaintiffs also alleged that the Department’s designation violates the Free Speech Clause of the First Amendment and the Due Process Clause of the Fifth Amendment to the United States Constitution. *See* 5 U.S.C. § 706(2)(B). Plaintiffs requested declaratory and injunctive relief under the APA, 5 U.S.C. §§ 500 *et seq.*

2. On November 8, 2022, three months after the original designation and less than a week before the deadline for a responsive pleading, the Department “delisted and simultaneously redesignated Tornado Cash.” A.R. 9. In addition to the executive order relating to cyber activities, the Department now invoked Executive Order 13,722, which relates to North Korea. A.R. 7. In the new designation, the Department added 53 Ethereum addresses, removed one obsolete Ethereum address, and removed several Ethereum addresses that were listed more than once in the original designation. A.R. 1-4.

The Department once again asserted that “Tornado Cash” is “an entity that provides cryptocurrency mixing services through Tornado Cash and related smart contracts.” A.R. 16. For the first time, the Department identified two parts to the purported organizational structure of Tornado Cash. The first is “its founders—Alexey Pertsev, Roman Semenov, and Roman Storm—and other

associated developers, who together launched the Tornado Cash mixing service, developed new Tornado Cash mixing service features, created the Tornado Cash Decentralized Autonomous Organization (DAO), and actively promote the platform’s popularity in an attempt to increase its user base.” A.R. 1. The second is “the Tornado Cash DAO, which is responsible for voting on and implementing those new features created by the developers.” *Id.* Membership in the DAO is defined as anyone who holds a TORN token. A.R. 35. In guidance simultaneously posted with the redesignation, the Department explained that the designation of “Tornado Cash” does not include “Tornado Cash’s individual founders, developers, members of the DAO, or users, or other persons involved in supporting Tornado Cash.” OFAC, *Frequently Asked Questions* (Nov. 8, 2022) <tinyurl.com/OFAC-FAQ-1095> (FAQ 1095).

All but one of the Ethereum addresses listed by the Department as an “identifier” of Tornado Cash is a smart contract. A.R. 43-49. At least 20 of the smart contracts are immutable Tornado Cash pools that, at the time of designation, permitted users to engage in transactions in set increments of various cryptocurrencies. A.R. 563, 566. Those immutable smart contracts form the backbone of Tornado Cash, and they consist of open-source code that cannot be modified, deleted, or otherwise controlled by any person or country. A.R. 357, 538, 548. Twelve other addresses in the designation are smart contracts that apparently are obsolete, were rarely used, or were never used. A.R. 568-574. The remaining addresses in the designation perform optional tasks, including facilitating the use of relayers and the distribution of TORN tokens. A.R. 46-49.

In issuing the designation, the Department invoked authority under IEEPA and the North Korea Act. Under the relevant sections of those statutes, the Department’s power is limited to the regulation of “property” in which a foreign “national” or “person” has an “interest.” 50 U.S.C. § 1702(a)(1)(B); 22 U.S.C. § 9214(c)(1). Under IEEPA, the Executive Branch may “investigate,

block during the pendency of an investigation, regulate, direct and compel, nullify, void, prevent or prohibit, any acquisition, holding, withholding, use, transfer, withdrawal, transportation, importation or exportation 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.” 50 U.S.C. § 1702(a)(1) (emphasis added). Under the North Korea Act, the Executive Branch has the authority to designate “any person” engaged in certain enumerated conduct relating to North Korea and then “block and prohibit all *transactions in property and interests in property* of a person” so designated. 22 U.S.C. § 9214(a), (c) (emphasis added).

The Department has promulgated regulations defining “person,” “property,” and “interest.” The regulations define “person” to mean “an individual or entity,” 31 C.F.R. §§ 510.322, 578.322, and they define an “entity” as “a partnership, association, trust, joint venture, corporation, group, subgroup, or other organization,” 31 C.F.R. §§ 510.305, 578.305. The regulations further define “property and property interest” as follows:

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 regulations define an “interest” as “an interest of any nature whatsoever, direct or indirect.” 31 C.F.R. §§ 510.313, 578.309.

4. On November 22, 2022, Plaintiffs amended their complaint in response to the Department's redesignation. Dkt. 21. The Department filed an answer on December 9, 2022. Dkt. 25. The Department also moved to transfer the case to the Austin Division, and Judge Albright granted the Department's motion on March 20, 2023. Dkt. 35. This motion for summary judgment followed.

LEGAL STANDARD

“Summary judgment is required when the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” *Trent v. Wade*, 776 F.3d 368, 376 (5th Cir. 2015) (internal quotation marks and citation omitted). Under the APA, agency action must be “h[e]ld unlawful and set aside” if it is “not in accordance with law”; “contrary to constitutional right, power, privilege, or immunity”; or “in excess of statutory jurisdiction, authority, or limitations, or short of statutory right.” 5 U.S.C. § 706(2)(A)-(C). A court's review is limited to “the grounds that the agency invoked when it took the action.” *Department of Homeland Security v. Regents of the University of California*, 140 S. Ct. 1891, 1907 (2020) (internal quotation marks and citation omitted).

ARGUMENT

I. THE DESIGNATION OF TORNADO CASH IS CONTRARY TO LAW AND EXCEEDS THE DEPARTMENT'S STATUTORY AUTHORITY

Under IEEPA, the Department may take action only with respect to “*property* in which any foreign country *or a national thereof* has *any interest*.” 50 U.S.C. § 1702(a)(1)(B) (emphases added). Under the North Korea Act, the Department may take action with respect to the “property and interests in property” of “any person” who knowingly engages in certain enumerated conduct. 22 U.S.C. § 9214(c). The Department's authority is thus limited to prohibiting transactions involving “property” in which a foreign “national” or “person” has an “interest.”

The Department’s designation exceeds that statutory authority for three reasons. *First*, Tornado Cash is not a foreign “national” or “person.” Although the power to designate nationals and persons includes the power to designate entities, the Department has not established that the most basic requirement for an unincorporated entity—an agreement to cooperate in furtherance of a common purpose—exists here. And even if it had, the Department has not actually designated an entity because it purported to exclude from the scope of its sanctions every single member of the purported entity. *Second*, more than 20 of the smart contracts are not “property.” Those contracts are not property because they are immutable and therefore incapable of being owned by anyone. *Third*, the Department’s designation exceeds its statutory authority because no foreign national or sanctioned person has any “interest” in property in the immutable smart contracts.

In each of the foregoing respects, the Department’s designation dramatically exceeds the powers given to the Executive Branch by Congress. The designation should thus be held unlawful and set aside.

A. Tornado Cash Is Not A Foreign ‘National’ Or A ‘Person’

1. The words “national” in IEEPA and “person” in the North Korea Act should be “interpret[ed] . . . according to their plain meanings” and “ordinary usage.” *Connecticut Bank of Commerce v. Republic of Congo*, 309 F.3d 240, 260 (5th Cir. 2002). A “national” refers to a person who resides in a particular country. *See, e.g., American Heritage Dictionary* 874 (1st ed. 1969). A “person” is a “human”—that is, a natural person—or a “corporation, organization, partnership, association, or other entity deemed or construed to be governed by a particular law.” *American Heritage Dictionary* 1317 (5th ed. 2016). The Department has further defined “person”

to mean an “individual or entity,” 31 C.F.R. §§ 510.322, 578.313, and “entity” to mean “a partnership, association, trust, joint venture, corporation, group, subgroup, or other organization,” 31 C.F.R. §§ 510.305, 578.305.

The administrative record contains no suggestion that there is a formally incorporated entity known as Tornado Cash anywhere in the world. Instead, the Department relies on the theory that the founders, developers, and the Tornado Cash DAO—defined as anyone holding a TORN token—have formed some kind of unincorporated association. *See* A.R. 20, 23, 32. They have not.

Collections of people do not become a legal “person” (or foreign “national”) simply because they have something in common or because someone places them on a list. Status as an unincorporated entity is instead defined by an agreement to pursue a common purpose. For example, the Supreme Court has explained that an association-in-fact under the Racketeer Influenced and Corrupt Organizations Act is “a group of persons associated together for a common purpose of engaging in a course of conduct.” *Boyle v. United States*, 556 U.S. 938, 944 (2009) (citation omitted). Other courts have recognized that an unincorporated association is defined as “a voluntary group of persons . . . formed by mutual consent for the purpose of promoting a common objective.” *Southern California Darts Association v. Zaffina*, 762 F.3d 921, 927 (9th Cir. 2014) (internal quotation marks and citation omitted); *see also Karl Rove & Co. v. Thornburgh*, 39 F.3d 1273, 1289 (5th Cir. 1994); *Heinold Hedge Hog Market, Inc. v. McCoy*, 700 F.2d 611, 615 (10th Cir. 1983).

The Department’s definition of the purported Tornado Cash “entity” fails to satisfy that requirement. The Tornado Cash DAO, which is listed as part of the sanctioned entity, is broadly defined to include anyone who owns one of the 1.5 million outstanding TORN tokens, whether or

not they have manifested any agreement to a common purpose. *See* A.R. 23, 333. TORN tokens are freely transferrable on the Ethereum blockchain, and a person could hold TORN without ever using the Tornado Cash protocol, contributing to its development, or agreeing to join the DAO. For example, a person might have purchased TORN on the secondary market as an investment, *see* A.R. 35-38, or received it as an unsolicited “airdrop” from a stranger on the Internet, *see* A.R. 227; OFAC, *Frequently Asked Questions* (Nov. 8, 2022) <tinyurl.com/OFAC-FAQ-1078> (FAQ 1078). The Department’s broad definition includes anyone who holds TORN, regardless of why they hold it or whether they have manifested an agreement to advance a common purpose of the supposed Tornado Cash “entity”—the essential requirement for establishing an entity.

The Department seems to rely on the fact that TORN tokens conferred the right to vote in certain online forums. A.R. 16, 24. But the Department has defined the purported Tornado Cash entity to include even TORN holders who never used their TORN to vote on a governance proposal or even intended to use their TORN for that purpose. *See* A.R. 23-24, 38. Mere possession of a digital ballot does not create agreement to further a common purpose. If the Taylor Swift Fan Club decided to choose its next president by e-mailing electronic ballots to millions of Americans, merely possessing that e-mail would not make someone a member of the fan club. Like mere possession of that e-mail, mere possession of TORN does not show agreement to pursue a common purpose.

2. The Department failed to identify a “national” or “person” for another reason as well. In guidance posted simultaneously with the designation, the Department explained that it did not designate “Tornado Cash’s individual founders, developers, members of the DAO, or users, or other persons involved in supporting Tornado Cash.” FAQ 1095. In other words, the Department did not designate any of the individuals who supposedly manifested an agreement to

pursue a common purpose. It is incoherent to designate a group of people while taking the unprecedented step of explicitly excising the people who supposedly constitute that group.

The Department did not cite any previous designation of an unincorporated association defined to exclude all of its supposed members. Nor are Plaintiffs aware of any. That apparently novel maneuver contradicts the very definition of an unincorporated association, which at minimum must be a “group of persons . . . formed by mutual consent for the purpose of promoting a common objective.” *Southern California Darts Association*, 762 F.3d at 927 (internal quotation marks and citation omitted). Without the founders, developers, and TORN holders, there is no one left in the Department’s own definition of the purported Tornado Cash “entity.” All that the Department will have accomplished is prohibiting the use of open-source, immutable software, which cannot be what Congress meant when it gave the Executive Branch power to impose sanctions on “nationals” and “persons.” Because the Department thus exceeded its authority under IEEPA and the North Korea Act, Plaintiffs are entitled to summary judgment on Count 1.

B. The Immutable Smart Contracts Are Not ‘Property’

Even if the Department had properly designated a “national” or “person,” it would still have exceeded its statutory authority by listing immutable smart contracts as “identifiers” of that national or person. The Department has prohibited any person subject to United States jurisdiction from sending crypto assets to the immutable smart contracts or receiving crypto assets from them. A.R. 1-4. Because an immutable smart contract is incapable of being owned, it is not property and the Department lacks authority under IEEPA and the North Korea Act to prohibit transactions with those smart contracts.

Neither IEEPA nor the North Korea Act defines the word “property,” and the applicable regulations circularly define property to include “any . . . property.” 31 C.F.R. §§ 510.323,

578.314. Dictionaries supply more specificity, defining property to include “everything which is or may be the subject of ownership, whether a legal ownership, or whether beneficial, or a private ownership.” *Black’s Law Dictionary* 1095 (5th ed. 1979). The Supreme Court has likewise explained that “property” refers to “all objects or rights which are susceptible of ownership.” *Meyer v. United States*, 364 U.S. 410, 413 n.3 (1960). Indeed, every example of property given by the Department in its regulation listing examples of property is something that is capable of being owned or confers the powers of ownership.*

Immutable smart contracts—which are open-source software code on the Ethereum blockchain—are not property because they are not capable of being owned by anyone. No one has the right to alter them. *See* A.R. 61, 357, 538, 548, 951. No one has the right to delete them. *See id.* And no one has the right to exclude another person from using them, which is “one of the most essential sticks in the bundle of rights that are commonly characterized as property.” *Dolan v. City of Tigard*, 512 U.S. 374, 384 (1994) (internal quotation marks and citation omitted). Those smart contracts are permanently accessible—even while the sanctions are in place—to anyone who wishes to use them. Because immutable smart contracts plainly do not fall under the definition of “property,” they cannot be designated.

* That list includes “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, [and] contracts of any nature whatsoever.” 31 C.F.R. §§ 510.323, 578.314.

IEEPA and the North Korea Act grant broad powers to the Department, but those powers are limited to blocking “property.” If abstract and ownerless software code can be designated, it is hard to see why other intangible concepts could not be forbidden as well. A particular physics equation, a public-domain image, or any idea or public good would all be fair game. Congress did not intend for the Department to have that nearly limitless power. As with the Department’s attempt to remove all limits on the meaning of “national” and “person,” this Court should reject the Department’s bid to redefine “property.” *See* pp. 13-14, *supra*.

Finally on this point, the Department may not sidestep the question whether the immutable smart contracts are “property” by labeling them “identifiers.” A.R. 1. The Department has statutory authority to prohibit transactions involving property of foreign nationals and persons, not “identifiers.” *See* pp. 12-13, *supra*. Some identifiers listed by the Department in other designations, such as “the physical address of a real estate property that is owned by a blocked person,” A.R. 60 n.122, may be subject to prohibitions because they identify sanctionable property. But identifiers are not subject to prohibitions if they simply “assist the public in identifying” a blocked person. A.R. 18. The blanket assertion that the immutable smart contracts are “identifiers” of Tornado Cash is thus insufficient. Because the immutable smart contracts are not “property,” Plaintiffs are entitled to summary judgment on Count 1 on this ground as well.

C. The Purported Tornado Cash Person Does Not Have An ‘Interest’ In Property In The Immutable Smart Contracts

The Department’s action is also contrary to law because the purported Tornado Cash person has no “interest” in property in the immutable smart contracts. IEEPA limits the Department’s power to “property in which any foreign country or a national thereof has any interest,” 50 U.S.C. § 1702(a)(1), and the North Korea Act limits the Department’s power to “all transactions in prop-

erty and interests in property of a person” on the SDN List, 22 U.S.C. § 9214(a), (c). The administrative record fails to show that the purported Tornado Cash “person” has any kind of interest in property in the immutable smart contracts.

1. Under a plain reading of the statutes, to act with respect to property, the Department must demonstrate that a foreign national has an interest in it. When “interest” is used in conjunction with “property,” its ordinary meaning is a “legal or equitable claim to or right in property.” *Interest*, *Black’s Law Dictionary* (11th ed. online 2019); *see also Centrifugal Casting Machine Co. v. American Bank & Trust Co.*, 966 F.2d 1348, 1353 (10th Cir. 1992). Consistent with the plain meaning, courts have recognized that the term “interest” also includes a beneficial interest. *See Holy Land Foundation v. Ashcroft*, 333 F.3d 156, 163 (D.C. Cir. 2003), *cert. denied*, 540 U.S. 1218 (2004); *Global Relief Foundation v. O’Neill*, 315 F.3d 748, 753 (7th Cir. 2002), *cert. denied*, 540 U.S. 1003 (2003). The legal or equitable claim to property may be of “any nature whatsoever, direct or indirect.” 31 C.F.R. §§ 510.313, 578.305.

The Department does not cite any evidence suggesting that the purported Tornado Cash person has any claim to the immutable smart contracts as a legal, equitable, or beneficial owner. Rather, the Department argues that the Tornado Cash person has an “interest” in property because (1) “Tornado Cash regarded smart contracts created on its behalf as having value” and (2) Tornado Cash “derived value from smart contracts created on its behalf.” A.R. 60. But neither establishes a property interest in the smart contracts.

The first asserted interest—that the purported Tornado Cash person “regarded smart contracts created on its behalf as having value,” A.R. 60—is not a legal, equitable, or beneficial interest in property. The Department emphasizes that several individuals created the smart contracts and “expend[ed] time and effort” to perform the trusted setup ceremony to make them immutable.

See A.R. 60-61. But performing steps to relinquish control of a smart contract, or creating a smart contract over which control is later relinquished, does not create a legal, equitable, or beneficial interest. If anything, those steps would sever any such interest that might have existed.

The Department also mentions the efforts of some individuals to advertise Tornado Cash’s services, *see* A.R. 61-62, but those activities do not create, or prove the existence of, an interest in property. Voluntarily advertising the features of a public space does not establish a legal, equitable, or beneficial interest in that public space. A gift shop next to a national park that advertises the park to increase traffic does not have an interest in property in that public space.

The second asserted interest—that the Tornado Cash person “derived value from smart contracts created on its behalf,” A.R. 60—fares no better. One version of that theory is that TORN holders (including the Tornado Cash “person” itself) may profit if the smart contracts are frequently used, because “the price of TORN tokens appear[s] to correlate with” the “success of the smart contracts.” A.R. 61. Another version of that theory relies on the fact that some third-party relayers—which provide an optional service to Tornado Cash users—pay a commission to the Tornado Cash DAO in exchange for being listed on the relayer registry. A.R. 63-64. According to the Department, the more users of the Tornado Cash protocol, the greater the use of third-party relayers, and the larger the potential commissions back to the DAO. A.R. 64.

Under either version, the ways in which the Tornado Cash “person” purportedly “derived value from” the immutable smart contracts do not involve any legal, equitable, or beneficial interest in property in the immutable smart contracts. A.R. 60. The administrative record does not explain how holding TORN conveys a legal, equitable, or beneficial interest in property in the immutable smart contracts or the third-party relayers. At most, the administrative record suggests TORN holders were well-positioned to profit from increased use of the immutable smart contracts.

But being well-positioned to profit from others using something does not create or prove a property interest in that thing. The power company may be well positioned to profit from hot summer weather that causes increased use of air conditioning, but it does not own the weather.

2. No court has ever read the term “interest” in IEEPA or the North Korea Act as broadly as the Department does here. In *Global Relief Foundation*, all parties appeared to agree that foreign nationals had a beneficial interest in the assets of a domestic entity, and the Seventh Circuit simply rejected the entity’s argument that a beneficial interest was inadequate. *See* 315 F.3d at 753. And in *Holy Land Foundation*, the D.C. Circuit concluded that Hamas had an interest in the assets of a domestic entity because there was evidence that it “acted on behalf of Hamas,” “operated as a fundraiser for Hamas in the United States,” and received funds from “Hamas officials.” 333 F.3d at 161, 163. The administrative record is devoid of any evidence that such a relationship existed here.

If the Department’s interpretation of “interest” were correct, the term—and the Department’s sanctions authority—would be nearly limitless. For example, the distance Americans commute for work and the speed at which they drive affects the demand for oil, and higher demand for oil creates an economic benefit for certain sanctioned Russian firms. Under the Department’s theory, that fact would be enough for the Department to designate Americans’ cars as property in which the Russian firms have an interest—a bizarre result for a statute “intended to *limit* the President’s emergency power in peacetime.” *Dames & Moore v. Regan*, 453 U.S. 654, 672-673 (1981) (emphasis added).

* * * * *

The undisputed facts in the administrative record show that the Department’s prohibition on interactions with the smart contracts at the core of Tornado Cash exceeds the agency’s statutory

authority. The Department has not validly identified a foreign “national” or “person”; the immutable smart contracts are not “property”; and the purported Tornado Cash person has no “interest” in the immutable smart contracts. To the extent the Court finds any of those statutory terms ambiguous, they should be interpreted to avoid the serious First Amendment concerns with the designation that are discussed in more detail below. *See Mexican Gulf Fishing Co. v. United States Department of Commerce*, 60 F.4th 956, 971 (5th Cir. 2023); pp. 22-24, *infra*. For each of those reasons, the Court should grant summary judgment to Plaintiffs on Count 1 of their Amended Complaint, hold the designation unlawful, and set it aside under the APA.

II. THE DEPARTMENT’S ACTION VIOLATES THE FREE SPEECH CLAUSE OF THE FIRST AMENDMENT

There is no dispute that the Department’s designation purports to prohibit Plaintiffs and thousands of other law-abiding American citizens from interacting with open-source code to engage in a wide range of speech protected by the First Amendment. The Department’s designation fails constitutional scrutiny for two reasons: (1) it is not narrowly tailored and (2) it is overbroad. Summary judgment is thus warranted on Count 2 of the Amended Complaint.

A. The Department’s Action Is Not Narrowly Tailored To Address A Compelling Interest

The Department’s action prohibits conduct, but it has a very real effect on speech. A prohibition on “conduct with incidental effects on speech” is permissible under the First Amendment only if “it is narrowly tailored to serve [a] substantial governmental interest[.]” *Doe I v. Landry*, 909 F.3d 99, 108 (5th Cir. 2018). Although the Department has a substantial interest in preventing money laundering and other illegal activity, a total ban on an Internet privacy protocol is not narrowly tailored to that interest.

The administrative record demonstrates the inadequacy of the ban’s tailoring. It is indisputable that money laundering and other illicit activity account for only a small fraction of the uses

of Tornado Cash and crypto mixers. The Department concedes that more than three-quarters of funds sent to mixers—a category in which the Department includes Tornado Cash—are lawful. A.R. 29; *see also* A.R. 578, 934, 936-940. More generally, money laundering accounted for only “0.05% of all cryptocurrency transaction volume in 2021.” A.R. 1623; *see also* A.R. 476 (acknowledging that “[m]ost virtual currency activity is licit”). In the 2,000-page record, the Department cites just three illicit uses of the Tornado Cash privacy protocol. *See* A.R. 68-77.

The Department’s total prohibition is thus grossly disproportionate. The Department has the authority to impose sanctions on individual money launderers and crypto thieves. Indeed, the Department exercised that authority to sanction the Lazarus Group, a hacking ring that is believed to be behind some of the theft cited in the designation of Tornado Cash. *See* OFAC, *Treasury Sanctions North Korean State-Sponsored Malicious Cyber Groups* (Sept. 13, 2019) <[ti-nyurl.com/Lazarus-Group](https://www.treasury.gov/press-releases/2019/09/19-09)>; A.R. 68-73. To ban all uses of Tornado Cash is akin to banning the printing press because a tiny fraction of users might publish instructions on how to build a nuclear weapon. Far from being narrowly tailored, the Department’s action is not tailored at all.

B. The Department’s Action Is Unconstitutionally Overbroad

The Department’s designation should also be set aside because it has a “substantial number of unconstitutional applications” relative to its “plainly legitimate sweep.” *Seals v. McBee*, 898 F.3d 587, 593 (5th Cir. 2018) (citation omitted). In addition to being insufficiently tailored, the Department’s action is also unconstitutionally overbroad because “the threat of enforcement . . . deters people from engaging in constitutionally protected speech, inhibiting the free exchange of ideas.” *United States v. Williams*, 553 U.S. 285, 292 (2008).

Thousands of law-abiding American citizens have been prohibited from using the Tornado Cash privacy protocol to engage in socially valuable speech. Tornado Cash allowed Americans

such as Mr. Almeida to make donations to support important political and social causes. *See* Almeida Decl. ¶¶ 14-16; *see also* *McCutcheon v. Federal Election Commission*, 572 U.S. 185 (2014). Without the privacy afforded by Tornado Cash, users such as Mr. Almeida are hindered in expressing their views on the Russian invasion by sending money to the Ukrainian government. *See* *Citizens United v. Federal Election Commission*, 558 U.S. 310, 351 (2010); *Zimmerman v. City of Austin, Texas*, 881 F.3d 378, 395 (5th Cir.), *cert. denied*, 139 S. Ct. 639 (2018).

In addition, by using the Tornado Cash open-source code, Americans such as Mr. Fisher and Mr. Vitale have developed code to facilitate improved uses of the Ethereum network. *See* Fisher Decl. ¶ 15; Vitale Decl. ¶ 14. Although the Fifth Circuit has not yet resolved the question, other courts of appeals have correctly held that code is protected speech. *See* *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).

The effect of the designation is not speculative. For example, an applied cryptography professor at the Johns Hopkins Information Security Institute observed that the designation chilled “the right to publish . . . source code.” A.R. 405. And users such as Mr. Almeida may not be comfortable making donations to support the Ukrainian government without the ability to use Tornado Cash to protect their identity. *See* Almeida Decl. ¶¶ 14-16. The Department’s designation thus has a real risk of prohibiting a substantial amount of protected speech relative to any legitimate sweep of the designation. *See* *Williams*, 553 U.S. at 292. Accordingly, Plaintiffs are entitled to summary judgment on Count 2 as well.

CONCLUSION

Plaintiffs' motion for partial summary judgment on Counts 1 and 2 should be granted, the designation should be held unlawful and set aside, and Defendants should be permanently enjoined from enforcing it.

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