



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE:

SUBJECT: Request for a Time-Critical Removal Action and for Exemption from \$2 Million Statutory Limit at the Dededo Waste Piles Site, Dededo, Guam

FROM: Jason Musante, On-Scene Coordinator
Emergency Response Section II (SFD-9-2)

TO: Enrique Manzanilla, Director
Superfund & Emergency Management Division (SFD-1)

THROUGH: Lynn Keller, Acting Assistant Director
Emergency Response Planning & Preparedness Branch (SFD-9)

I. PURPOSE

The purpose of this memorandum is to request and document approval to spend up to \$4,500,000 in direct extramural costs and to request an exemption from the \$2 million statutory cost limit to mitigate threats to human health and the environment posed by the presence of uncontrolled hazardous substances at the Dededo Waste Piles Site (the Site). The Site is in the Ipapao District, in the Village of Dededo, on the island of Guam.

This memorandum will serve as approval for the expenditure required for the U.S. Environmental Protection Agency (EPA) to take actions described herein to abate an imminent and substantial endangerment to human health and the environment from waste piles contaminated by hazardous substances. The proposed removal of hazardous substances would be undertaken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), at 40 C.F.R. § 300.415. An exemption from the \$2 million statutory limit is justifiable under the criteria of Section 104(c) of CERCLA, 42 U.S.C. § 9604(c) and the NCP, at 40 C.F.R. § 300.415(b)(5)(i), which allows for an emergency exemption from the statutory requirements when: there is an immediate risk to public health or welfare or the environment; continued response actions are immediately required to prevent, limit, or mitigate an emergency; and such assistance will not

otherwise be provided on a timely basis. Conditions at the Site meet the criteria for the exemption from statutory limits, and if not addressed by implementing the immediate response action documented in this memorandum, may lead to additional human exposure to: lead and other metals, polychlorinated biphenyls (PCBs), pesticides and petroleum hydrocarbons, as well as the offsite migration of contaminated soils. The Site is not on or proposed for inclusion on the National Priorities List (NPL), and there are no nationally significant or precedent-setting issues associated with the response.

II. SITE CONDITIONS AND BACKGROUND

Site Status: Non-NPL
Category of Removal: Time-Critical
CERCLIS ID: GUN000903892
SITE ID: A9B7

A. Site Description

1. Physical Location

The Site is located northwest of the intersection of Marine Corps Drive and Bartolu Street in the Ipapao District of the municipality of Dededo, Guam (Figure 1). The Site occupies the northern half of Lot No. 10122-3-R1 (the Lot) and is approximately two acres in size. The coordinates of the Site are 13.516295°, 144.854264°.

2. Site Characteristics

The Site is bounded to the north by Global Recycling Center, a residential neighborhood lies ¼ mile to the east, unimproved land lies to the south, and an industrial/commercial area is located to the west. The Site appears abandoned, overgrown with vegetation, and vulnerable to unauthorized access. The Lot the Site is located on is owned by the Chamorro Land Trust Commission (CLTC). The CLTC manages land turned over to Guam by the U.S. military and other Government of Guam lands. In addition to returning lands to the native Chamorro people primarily through long-term leases, the CLTC also leases and licenses land to commercial entities. Historically, the Site and surrounding areas were used for typhoon debris staging, solid waste stockpiling, tire and white goods storage, garbage transfer and private recycling operations, and for the household hazardous waste collection program. The Guam Solid Waste Authority (GSWA) previously operated the Dededo Transfer Station Facility on the Lot, beginning operations in 1978. GSWA states that it is a public agency, autonomous from the government of Guam. A series of solid waste recycling entities also reportedly operated on the northern portion of the Lot. The GSWA has been under receivership in accordance with the requirements under the Consent Decree Order (U.S. District Court of Guam, Civil Case No. 01-00022). On March 19, 2014, the Receiver filed a Special Report (ECF No. 1321) titled, "Advising the Court of the Detection of Certain Hazardous Waste Near to the Dededo Residential Transfer Station" (DRTS), based on the findings of the Phase II Environmental Site Assessment (ESA). GEPA had previously decided to require upgrades to the island's residential

transfer stations as a condition of permitting for Layon Landfill. For the GSWA to bring the DRTS into permit compliance, the facility would have needed to be expanded. The northern area of the Lot, where the Phase II ESA identified contamination, had been identified as one of the proposed expansion areas. Eventually, the GSWA decided to close the DRTS rather than expand the facility. The waste piles areas on the northern portion of the Lot were not addressed.

EPA Region 9 identified five areas of concern at the Site based on five waste pile locations, previous investigations, and publicly available satellite images. These areas of concern are referred to hereafter as the Areas and are identified as Area 1, Area 2, Area 3, Area 4, and Area 5 (Figure 2). The pile boundaries for Area 1 and Area 4 are approximately the same as the Area boundaries, while Area 2 has a large, distinct waste pile within the larger area, and Area 3 contains a smaller distinct waste pile within the larger area, which has variable depths of debris spread throughout. Area 5 is overgrown with vegetation and contains only tires.

3. Removal site evaluation

ARC Environmental Services (ARC) conducted a Phase I ESA at the Dededo Waste Transfer Station in September 2011 (EA 2014). Environmental concerns noted at that time were that portions of the western edge of the surveyed property limits within the transfer station contained a mixture of vegetation, soil, and co-mingled solid waste of various types including metallic waste, a derelict vehicle, garbage and numerous tires.

In March 2014, EA Engineering, Science, and Technology, Inc. conducted a Phase II ESA of the Lot (EA, 2014). The Phase II ESA was prepared on behalf of the Receiver, Gershman, Brickner, & Bratton, Inc., for the GSWA in accordance with the requirements under a Consent Decree Order (U.S. District Court of Guam, Civil Case No. 01-00022). Lead, barium, chromium, PCBs, and total petroleum hydrocarbons (TPH) contamination was identified in waste piles at the Site.

In November 2019, EPA conducted an assessment at the Site in coordination with the Guam Environmental Protection Agency (GEPA). The Superfund Technical Assistance and Emergency Response (START) contractor conducted a topographical survey of the waste piles to define areal extent and height for volume estimations (Figure 3). The START contractor collected samples from the waste piles to characterize concentrations of environmental pollutants and contaminants. A total of 34 discrete soil samples and four duplicate soil samples were collected from Areas 1, 2, 3, and 4. All samples were analyzed for Resource Conservation and Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) metals and Target Analyte List (TAL) metals by EPA Method 6010B, mercury by EPA Method 7471A, TCLP semi-volatile organic compounds (SVOCs) by EPA Method 8270C, TCLP volatile organic compounds (VOCs) by EPA Method 8260B, organochloride pesticides by EPA Method 8081A, PCBs by EPA Method 8082, TPH by EPA Method 8015M, and asbestos-containing material (ACM).

EPA planned to return to the Site in early 2020 to collect samples for a bench-scale treatability study to evaluate treatments with the goal of rendering the hazardous material at the Site non-hazardous for disposal. This event was postponed due to the global outbreak of COVID-19. GEPA assisted with the treatability study by collecting samples and shipping them to the mainland for the START contractor to conduct the study. The results of the study indicate that lead contamination in waste piles at the Site can be reduced to below the RCRA TCLP hazardous waste limit of 5 milligrams per liter (mg/L). All subsequent travel and removal planning has been postponed since 2020 because of the COVID-19 global pandemic and travel restrictions. No additional assessment or removal actions have been taken at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The uncontrolled waste piles at the Site containing heavy metals (lead, arsenic, chromium, copper, thallium, zinc), chlordane, TPH, and PCBs constitute a release of hazardous substances, resulting in potential harm to the public health or welfare or the environment. The fine-grained nature of the contaminated soils makes them highly mobile and subject to migration from wind and water erosion, resulting in a release to the environment. Fencing around the Site is in poor condition, allowing easy access to the contaminated areas. Signs of illegal dumping of solid wastes are present at the Site, indicating unauthorized access. Trespassers or children from nearby residences entering the Site may be physically exposed to hazardous substances through inhalation/ingestion or direct contact and may themselves become contaminated, potentially spreading the contamination offsite.

Analytical results from the removal assessment were compared against the RCRA toxicity characteristic (40 C.F.R. § 261.24), EPA Region 9 Regional Screening Levels (RSL) for commercial/industrial soil and the Tropical Pacific Environmental Screening Levels (TPESL). The total volume of soils contaminated with hazardous substances is estimated at 4,680 cubic yards (yd³), of that an estimated 3,310 yd³ contain lead at concentrations up to 89 mg/L which is more than 17 times the RCRA hazardous waste level. Lead is the critical contaminant of concern at the Site, as the fine-grained soils in wastes piles are highly likely to migrate through wind or water erosion and pose an ingestion/inhalation hazard. Figures 4 through 8 (Attachment II) show sample locations and exceedances for all analytes; summary tables of the analytical data are provided in Attachment III. Exceedances by analyte are listed below:

- Lead exceeded RCRA levels for hazardous waste in three samples in Area 1, eight samples in Area 2, and one sample in Area 3.
- Total lead exceeded both EPA RSLs and TPESLs in five samples in Area 1, 11 samples in Area 2 and one sample in Area 3.
- Arsenic exceeded EPA RSLs in one sample in Area 1 and five samples in Area 3.
- Chromium exceeded TPESLs in one sample in Area 4.

- Copper exceeded TPESLs in eight samples in Area 2 and one sample in Area 3. Copper exceeded EPA RSLs in two samples in Area 2.
- Thallium exceeded both TPESLs and EPA RSLs in two samples in Area 1 and two samples in Area 4.
- Zinc exceeded TPESLs in three samples in Area 1, 13 samples in Area 2 and one sample in Area 3.
- Chlordane (an organochlorine pesticide) exceeded TPESLs and EPA RSLs in one sample in Area 1.
- TPH-diesel exceeded TPESLs in two samples at Area 1, seven samples in Area 2 and one sample in Area 3.
- TPH-motor oil exceeded TPESLs in one sample in Area 2.
- PCB Aroclors exceeded EPA RSLs in one sample in Area 1, 10 samples in Area 2 and two samples in Area 3. Total PCBs exceeded TPESLs in three samples in Area 2 and one sample in Area 3.
- No TCLP SVOCs (Table 6) or TCLP VOCs (Table 7) were detected in any of the samples collected at the Site.
- No ACM was detected in any of the samples collected at the Site.

5. National Priorities List (NPL) status

The Site is not currently on or proposed for inclusion on the NPL. The Site is not being referred to the NPL site assessment program. The Site has not received and is not expected to receive a Hazard Ranking System rating.

6. Maps

See Attachment II, Figures 1 through 8.

B. Other Actions to Date

1. Previous actions

To date, there have been no actions to stabilize or remove contaminated soils in the waste pile areas at the Site.

2. Current actions

No other government or private activities to address contamination at the Site are being performed. EPA Region 9 anticipates that the EPA removal action will mitigate all contamination in the waste pile areas at the Site.

C. State and Local Authorities' Roles

1. State and local actions to date

In December 2016, GEPA Administrator Walter Leon Guerrero made a formal request for EPA assistance to conduct a removal action at the Site. GEPA has assisted EPA with gaining Site access and the removal site evaluation sampling activities.

2. Potential for Continued State Local/Response

GEPA is providing support to EPA by arranging for a cultural resources inventory survey, biological assessment/survey, and property survey. GEPA has communicated to EPA that they do not have the ability to fund removal actions at the Site to address the contamination.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Current Site conditions constitute a release and the threat of continued releases of hazardous substances, namely: heavy metals (lead, arsenic, chromium, copper, thallium, zinc), chlordane, TPH, and PCBs. The likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of future releases and migration of those hazardous substances, pose an imminent and substantial endangerment to the public health or welfare or the environment based on the factors set forth in the NCP, 40 C.F.R. § 300.415(b)(2). These factors include:

1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain

As described in Section II.A.4, lead, arsenic, chromium, chlordane, and PCBs have been documented in soils at the Site. Analytical data shows that lead concentrations in waste piles at the Site exhibit the RCRA hazardous waste characteristic of toxicity under 40 C.F.R. § 261.24. Concentrations of lead, arsenic, chromium, chlordane, and PCBs in soils at the Site were documented by analytical results to exceed EPA Region 9 RSLs and TPESLs.

Lead is a heavy metal that bio-accumulates in human tissues. Short-term exposure to large amounts of lead can cause harmful effects on the nervous system, gastrointestinal system, kidneys, and circulatory system. Long-term exposure to low levels, such as those that occur in the workplace, can cause damage to the central nervous system, kidneys, blood, gastrointestinal tract, and gingival tissues. Children are particularly sensitive to the chronic effects of lead, with slowed cognitive development, reduced growth, and disruption of neurological and neurobehavioral development in fetuses and children. The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen (ATSDR 2007a).

Arsenic is toxic and is commonly used as a poison to control pests. Exposure can occur via airborne dust, drinking water, incidental ingestion of soil, and direct contact with contaminated soils. Arsenic affects the skin, the respiratory system, the kidneys, the liver, the central nervous system, the gastro-intestinal tract, the reproductive system and is a possible teratogen. Exposure for shorter periods of up to a year can result in several non-cancer adverse health effects. Low levels of arsenic can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, and damage to blood vessels. At high levels, inorganic arsenic can cause death.

Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The DHHS and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans (ATSDR 2007b).

Chromium is an ecotoxic heavy metal that is an inhalation, ingestion, and dermal exposure risk. Chromium bioaccumulates and targets the liver, kidneys, reproductive organs, circulatory system, and gastrointestinal system. Acute exposure to chromium can cause harmful effects to the gastrointestinal system. Chronic exposure can cause harmful effects to the skin, lungs, mucous membranes, and possibly cancer.

The DHHS, the IARC, and the EPA have determined that chromium (VI) compounds are known human carcinogens. In workers, inhalation of chromium (VI) has been shown to cause lung cancer. Chromium (VI) also causes lung cancer in animals. An increase in stomach tumors was observed in humans and animals exposed to chromium (VI) in drinking water (ATSDR 2012).

Chlordane affects the nervous system, the digestive system, and the liver in people and animals. Headaches, irritability, confusion, weakness, vision problems, vomiting, stomach cramps, diarrhea, and jaundice have occurred in people who breathed air containing high concentrations of chlordane or accidentally swallowed small amounts of chlordane. Large amounts of chlordane taken by mouth can cause convulsions and death in people. Long-term exposure caused harmful effects in the liver of test animals (ATSDR 1994).

PCBs are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other

effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. The DHHS has concluded that PCBs may reasonably be anticipated to be carcinogens. PCBs have been classified as probably carcinogenic, and carcinogenic to humans (group 1) by the EPA and International IARC, respectively (ATSDR 2014).

The waste piles at the Site are uncontrolled and persons accessing the Site are at risk for exposure to contaminants through direct contact. Much of the contaminated material at the Site is fine-grained and therefore likely to result in human exposure via inhalation or ingestion. The Site contamination is potentially accessible to nearby offsite residents. Persons occupying or traversing the Site may be exposed to contaminated dust by inhalation or ingestion of contamination sorbed to particulates. Site contaminants may be entrained in naturally and mechanically generated dust and/or transported on shoes and clothing of persons passing over contaminated areas, which should result in contamination spreading offsite, including to residential areas adjacent to the Site.

2. High levels of hazardous substances in soils largely at or near the surface that may migrate

High levels of lead exceeding the RCRA toxicity characteristic for hazardous waste are present in waste piles at the Site. Approximately 3,310 cubic yards of hazardous waste soils are present at the Site. The waste piles containing high levels of lead contamination are up to 17 feet high, some steeply sloped, and prone to wind and water erosion. Contamination documented in soils at the Site may migrate off-site via wind and water transport mechanisms.

3. Weather conditions that may cause hazardous substances to migrate or be released

Guam has two distinct seasons: wet and dry. Most of the average annual rainfall of 96 inches falls during the wet season from July through November. Heavy rains and tropical storms are common during the wet season. An average of three tropical storms and one typhoon pass within 180 nautical miles of Guam each year. Typhoons occur year-round, but the highest risk is in October and November. Extreme rainfall and wind events common on Guam may lead to transport of the contamination from the Site. High soil erosion rates may indicate transport of contamination from the Site, constituting a release of hazardous substances and resulting in secondary contamination sources. In addition, contaminants may migrate during high wind events due to the propensity for contaminants to adhere to windborne dust particles.

4. Availability of other appropriate federal or state response mechanisms to respond to the release

GEPA has informed EPA that it does not have the resources to address contamination at the Site. As noted above, the GEPA sent EPA a formal written request for federal action to address this Site.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of hazardous substances from the Site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

EPA is requesting \$4,500,000 in direct extramural cleanup costs, which is above the \$2 million statutory limit. Subject to exceptions, 42 U.S.C. § 9604(c)(1) states that removal actions should not continue after \$2 million has been obligated for response actions or 12 months have elapsed from the date of initial on-site response. Pursuant to EPA delegations 14-2 and R9 1290.03A, the Director to the Superfund Division is authorized to determine whether an exception from this statutory limitation is warranted. EPA Region 9 believes that, consistent with the standards for exception stated in 42 U.S.C. § 9604(c)(1)(A) and 40 C.F.R. § 300.415(b)(5), an exception to the cost limit for removal actions is warranted for the following reasons:

1. There is an immediate risk to public health or welfare or the environment

Hazardous substances documented at the Site present an immediate risk of exposure to lead, arsenic, chromium, chlordane, and PCBs contamination to nearby residents, transient residents, and wildlife. The waste piles at the Site are uncontrolled and persons accessing the Site are at risk for exposure to contaminants through direct contact. Typhoons occur year-round, but the highest risk is in October and November. A significant typhoon or tropical storm event will exacerbate the situation by transporting the hazardous substances off-site resulting in a higher potential for human and environmental exposures. Exposures to these contaminants pose an increased risk of toxic effects including cancer. See Section III.1 for more information and other health risks related to exposures to these hazardous substances.

2. Continued response actions are immediately required to prevent, limit or mitigate an emergency

If immediate actions are not taken to reduce, abate, and prevent discharges from the Site, then further damage to human health and the environment will continue from the release of hazardous substances at the Site. As discussed in Section III, contaminated soils at the Site are present in uncontrolled piles exposed to wind and water erosion, which presents an emergency. As also discussed in Section III, weather conditions, including typhoons, may cause further migration of hazardous substances. Moreover, if EPA delays approval of this removal action, EPA will incur additional costs as contamination is likely to migrate past current Site boundaries, increasing the total affected area.

3. Assistance will not otherwise be provided on a timely basis

The GEPA does not have the capabilities or resources to carry out this effort in a timely manner. The EPA investigation into potential liability at the Site has yielded no viable Potentially Responsible Parties. If EPA does not begin the proposed removal action immediately, the risk of exposure to hazardous wastes and contaminants will continue unabated.

An exemption from the \$2 million statutory limit is justifiable under 40 C.F.R. § 300.415(b)(5)(i), which provides that the exemption is appropriate when: there is an immediate risk to public health or welfare or the environment; continued response actions are immediately required to prevent, limit, or mitigate an emergency; and such assistance will not otherwise be provided on a timely basis. As stated in this Memorandum, there is an immediate risk posed by the conditions at the Site and an emergency exemption to the \$2 million statutory limit is necessary to abate these threats.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA proposes to mitigate the imminent and substantial threats to human health and the environment by taking steps to prevent the release of lead, arsenic, chromium, chlordane, and PCBs. The removal action will include the excavation, treatment, and disposal of contaminated soils. The following activities are proposed, but not limited to:

- 1) Archeological clearance of all areas impacted by removal activities,
- 2) Development and implementation of an effluent dust monitoring program to prevent offsite release of contaminated particulate,
- 3) Separation of solid waste debris from contaminated soils in waste piles,
- 4) On-site treatment of hazardous waste to reduce toxicity,
- 5) On-island disposal of solid waste and non-hazardous wastes, in compliance with the Off-Site Rule, CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440,
- 6) Marine shipping of hazardous wastes to the mainland for disposal in compliance with the Off-Site Rule, and
- 7) Development and implementation of a confirmation survey and sampling plan.

2. Contribution to remedial performance

EPA has identified imminent and substantial threats posed by heavy metals (lead, arsenic, chromium, copper, thallium, zinc), chlordane, TPH, and PCBs contamination at the Site. This removal action should remove the immediate and substantial threats posed by uncontrolled hazardous substances at the Site.

The long-term cleanup plan for the Site:

It is expected that this removal action will eliminate any threat of direct or indirect contact with hazardous substances at the Site. Final reporting of this removal action will be provided to the GEPA for consideration in any further activities.

Threats that will require attention prior to the start of a long-term cleanup:

There is no EPA long-term cleanup planned for this Site. The immediate threats that have been identified in this Action Memorandum will be addressed by the proposed removal action.

The extent to which the removal will ensure that threats are adequately abated:

The removal of soil contaminated with hazardous substances by soil excavation and disposal will abate the threats described in Section III.

Consistency with the long-term remedy:

As stated above, final reporting of this removal action will be provided to the GEPA for consideration in any future activities at the Site.

3. Applicable or relevant and appropriate requirements (ARARs)

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility citing laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site. It further provides that only those state / territory standards that are identified by a state / territory in a timely manner and that are more stringent than federal standards may be applicable.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility citing laws that, while not “applicable” to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site. It further provides that only those state / territory standards that are identified by a state / territory in a timely manner and that are more stringent than federal standards may be applicable.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping, and enforcement are not ARARs for the CERCLA actions confined to the site.

Federal ARARs determined to be practicable for the Site are:¹

- Archeological Resources Protection Act of 1979, 16 USC §§ 470aa *et seq.* and its implementing regulations, 43 C.F.R. Part 7.
- The RCRA Land Disposal Restrictions (LDRs), 40 C.F.R. Part 268, Subpart D (Land Disposal Treatment Standards) and Subpart C (Waste-Specific Prohibitions on Land Disposal), and 40 C.F.R. § 268.3 (dilution prohibited as a substitute for treatment).
- Toxic Substances Control Act (TSCA) disposal requirements for PCB-contaminated waste, 40 C.F.R. § 761.60.

Territorial ARARs (Guam ARARs)²:

EPA enforcement staff conducted a review of potential Guam ARARs and found the following to be practicable for the Site:

- Soil Erosion and Sedimentation Control, 22 Guam Rules & Regulations § 45103(1).
- Fugitive Dust reasonable precautions, 22 Guam Rules & Regulations § 1304(a).

No Permits Required for On-Site Activities:

CERCLA Section 121(e), 42 U.S.C. § 9621(e), provides that no federal, state, or local permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this Section. The NCP at 40 C.F.R. § 300.400(e) further states that no federal, state, or local permits are required for on-site response actions conducted pursuant to CERCLA Sections 104, 106, 120, 121, or 122. The term on-site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action. Permits, if required, shall be obtained for all response activities conducted off-site.

4. Project schedule

It is estimated that it will take approximately 30 working days to complete excavation, segregation, treatment, and on-island disposal activities. Marine shipping of

¹ Endangered Species Act, 16 USC §§ 1531-1544, and its implementing regulations, 50 C.F.R. Part 17 (applicable if protected species or their critical habitat are identified in the subject area).

² EPA has requested Guam to identify its ARARs, and EPA will evaluate after receipt.

hazardous wastes to the mainland for disposal may take as long as six months due to COVID-19 pandemic interruptions of the global supply chain. Initiation of removal activities are dependent on COVID-19 travel restrictions by the Government of Guam and EPA travel policies but are expected to begin no later than late winter/early spring of 2022.

B. Estimated Costs

Extramural Costs:

Regional Removal Allowance Costs

ERRS	\$ 3,500,000
START	\$ 250,000

Subtotal Extramural Costs	<u>\$ 3,750,000</u>
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Extramural Costs Contingency (20% Subtotal, Extramural Costs)	\$ 750,000
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TOTAL Removal Action Project Ceiling \$ 4,500,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances documented onsite, and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will present an imminent and substantial endangerment to public health or welfare or the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues with the Site identified at this time.

IX. ENFORCEMENT

The GEPA does not have the capabilities or resources to carry out this effort in a timely manner. The EPA investigation into potential liability at the Site has yielded no viable Potentially Responsible Parties (PRPs).

In addition to the extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

Intramural Costs³

U.S. EPA Direct Costs \$ 60,000

U.S. EPA Indirect Costs
(64.86% of spending \$4,500,000 + \$60,000) \$ 2,957,616

TOTAL Intramural Costs \$ 3,017,616

The total EPA extramural and intramural costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$7,517,616.

X. U.S. EPA RECOMMENDATION

This decision document represents the selected removal action for the Dededo Waste Piles Site, Village of Dededo, Guam, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a removal, CERCLA Section 104(c), and NCP Section 300.415(b)(5)(i) emergency exemption from the \$2 million statutory limitation, and EPA staff recommends your approval of the proposed removal action and \$2 million exemption. The total project ceiling if approved will be \$4,500,000, which will be funded from the Regional Removal allowance.

Approve:

Enrique Manzanilla, Director
Superfund Emergency & Management Division

Date

Disapprove:

Enrique Manzanilla, Director
Superfund Emergency & Management Division

Date

³ Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

Confidential Enforcement Addendum

Attachments:

- I. Index to the Administrative Record
- II. Figures
- III. Summary Tables of Soil Sample Analytical Results

cc: Walter Leon Guerrero, Guam Environmental Protection Agency

bcc: J. Owens, ORC-3-1
H. Allen, SFD-9-2
L. Keller, SFD-9-1
K. Lawrence, SFD-9-3
B. Lee, SFD-9-3
M. Matthews, SFD-9-3
C. Temple, SFD-9-3
K. Castro, SFD-2
F. Weber, SFD-9
Site File

ATTACHMENT I
INDEX TO THE ADMINISTRATIVE RECORD

1. Formal Removal Assistance Request. GEPA. December 21, 2016.
2. Phase II Environmental Site Assessment - Dededo Solid Waste Transfer Station in Dededo Guam. EA Engineering, Science, and Technology, Inc. March 2014.
3. United States of America v. Government of Guam Civil Case No. 02-00022 Government of Guam's Response to Receiver's March 19, 2014 Special Report Advising the Court of the Detection of Certain Hazardous Waste Near to the Dededo Residential Transfer Station. Cabot Mantanona LLP. April 2014.
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ATTACHMENT II FIGURES

1. Figure 1 : Site Location Map
2. Figure 2 : Site Layout and Vicinity Map
3. Figure 3 : Site Features Map
4. Figure 4 : Sample Location Map
5. Figure 5 : Sample Results Exceeding TCLP Lead
6. Figure 6 : Sample Results Exceeding Screening Levels for Total Lead
7. Figure 7 : Sample Results Exceeding Screening Levels for PCBs
8. Figure 8 : Sample Results Exceeding Screening Levels for TPH

ATTACHMENT III
SUMMARY TABLES OF SOIL SAMPLE ANALYTICAL RESULTS

1. Table 1 : Summary of TCLP Metals Analytical Data
2. Table 2 : Summary of Target Analyte List Metals Analytical Data
3. Table 3 : Summary of Organochlorine Pesticides Analytical Data
4. Table 4 : Summary of Total Petroleum Hydrocarbons Analytical Data
5. Table 5 : Summary of Polychlorinated Biphenyls Analytical Data
6. Table 6 : Summary of TCLP Semivolatile Organic Compounds Analytical Data
7. Table 7 : Summary of TCLP Volatile Organic Compounds Analytical Data