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IN REPLY REFER TO:

1.A.1

September 20, 2018

Memorandum

To: Stan Austin, Regional Director, Pacific West Region

From: Superintendent, Sequoia and Kings Canyon National Park

Subject: Action Memo – Approval for Comprehensive Environmental Response, Compensation, and Liability Act Non-Time-Critical Removal Action at the Grant Grove Dumpsite Solid Waste Management Unit No. 38, Sequoia and Kings Canyon National Parks

1. PURPOSE AND AUTHORITY

The purpose of this Action Memorandum (AM) is to request approval of and document the basis for the proposed non-time-critical removal action (NTCRA) described herein for the Grant Grove Burn Dumpsite Solid Waste Management Unit (SWMU) No. 38 (Site) located within the Sequoia and Kings Canyon National Parks (SEKI), Fresno County, CA, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 U.S.C. §§ 9601 et seq. The President has delegated response authority under CERCLA Section 104 to the Secretary of the United States Department of the Interior (DOI) by Executive Order 12580, 52 Fed. Reg. 2923 (1987), as amended by Executive Order 13016, 61 Fed. Reg. 45871 (1996), to respond to the release or substantial threat of release of hazardous substances on or from land under the jurisdiction, custody, or control of the DOI. The National Park Service (NPS) Pacific West Regional Director, through further delegations, has CERCLA Section 104 response authority for the Site. If this action is approved, on-Site work is anticipated to start in Summer 2019.

2. SITE CONDITIONS AND BACKGROUND. The following sections provide the Site description (2.1), previous and current actions to date (2.2), and State and local authority's role and actions to date (2.3). The Site description includes the removal Site evaluation, physical location, site characteristics, and the potential release of hazardous contaminants.

2.1 SITE DESCRIPTION. The Site is located within SEKI in Fresno County, California, north of the community of Wilsonia and Grant Grove Village, west of Generals Highway and northeast of the horseback riding facility (see Figure 1). The Site was used as a domestic waste

burn pit from 1929 to 1965. A former incinerator was built at the Site in the 1960s but was never used and was dismantled in 1975. The Site is currently being used by the NPS as a staging area for construction materials. NPS personnel frequently visit the area. Although road access to the dump is restricted to authorized vehicles, the perimeter of the area is crossed by trails used by an adjacent horseback riding concession and is not secured from trespassers and park wildlife. Two drainage swales extend from the Site perimeter downslope to the northwest and to the southwest.

2.1.1 Removal Site Evaluation

A removal action is appropriate for this site to address the contamination of soil due to unrestricted disposal and burning of waste. Evaluation of fill and debris areas in this assessment has identified elevated concentrations of metals and dioxin in ash and soil within the dump, and in soil within the debris apron surrounding the dump to the north, west and southwest.

A 2013 Preliminary Assessment (PA) determined that complete exposure pathways of potential contaminant exposure to human and ecological receptors existed for soil, sediment, and surface water in the vicinity of the Site and recommended a Site Inspection (SI) be conducted.

In June 2015, Environmental Cost Management (EMC) performed a SI to quantify the concentrations of contaminants of potential concern (COPCs) in soil and sediment at the site and in three separate drainages to assess the impacts to the drainages from potential off-Site migration. Soil samples upgradient of the Site were collected using an Incremental Sampling Methodology (ISM) to obtain background concentrations of metals in native surface soil near the Site. The SI Report recommended the preparation of an Engineering Evaluation/Cost Analysis (EE/CA) for the selection of an NTCRA alternative for the Site.

The EE/CA report was prepared in July 2018 to summarize the field activities conducted in 2016 and 2017, and to present removal action alternatives (RAAs) and a recommended alternative.

The Site and background sampling locations for the SI investigation are presented on Figure 2. Additional field investigation sampling was conducted as part of the EE/CA process in 2016 and 2017 to quantify the area and depth of waste dump material and adjacent impacted soil, as well as to conduct background soil sampling. Those sampling locations are shown on Figures 2 and 3.

The refuse area was characterized by composited samples comprising subsamples of visually-homogenous layers having a volume of less than 1,000 cubic yards (cy). The debris area was characterized via samples composited from subsamples within an area of less than one acre. Both areas were sampled for 17 metals, total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), pesticides and herbicides, and dioxins/furans.

As shown in Tables 1 and 2, the EE/CA Site soil concentrations exceeded background concentrations and both human health and ecological screening levels were exceeded for several contaminants. The human health risk assessment concluded that there were no unacceptable Site soil risks to reasonably anticipated current and/or future human health receptors. However, the ecological risk assessment resulted in Site metals and dioxin concentrations in soil posing an unacceptable risk to ecological receptors. Based on the depth to groundwater and the upgradient location of groundwater wells to the Site, the groundwater exposure pathway was considered

incomplete and was therefore not evaluated in the EE/CA. Although potential contaminant migration to downstream drainages exists, no unacceptable human health or ecological Site risks were found for the downgradient Site drainages.

2.1.2 Physical Location

The Grant Grove Burn Dumpsite SWMU No. 38 is located north of the community of Wilsonia and Grant Grove Village, west of Generals Highway and northeast of the horseback riding facility (see Figure 1). The Site is located at latitude 36°44'46.97"N, longitude 118°58'1.46"W, at an elevation of approximately 6,620 feet above mean sea level (amsl).

2.1.3 Site Characteristics

The SWMU #38 measures 200 by 170 feet; the depth of the waste dump remains unknown. Several stockpiles of construction materials exist on-Site and consist of base rock, large boulders, asphalt for recycling, asphalt cold patch, and soil fill material on top. Significant amounts of waste material associated with the waste dump exist along the perimeter of the Site and on the downslope sides of the waste dump. The waste material consists of rusty metal, glass bottles, broken ceramic containers, a car battery, and some plastic debris. The refuse area is currently uncontained, and covered with a minimal amount of soil. The topography of the Site is generally a west-facing hillside, with slight to moderate drainage development.

2.1.4 Release or Substantial Threat of Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Table 2 summarizes the human health and ecological screening levels, the Site maximum detected concentration and the screening level exceedances. In making comparisons between Site data and screening values, it is important to note that screening values are 1) intended to identify COPCs and 2) are based on specific exposure assumptions that may or may not be appropriate for a Site. For example, residential screening levels assume full-time residential exposure at the Site for 24 hours per day and ecological screening values are based on the assumption that an ecological receptor is also exposed 24 hours per day at the Site. Once COPCs are identified, it is then important to consider how and when potential receptors may be exposed to Site contamination.

2.1.4.1 Human Health SRE

Based on the review of the current and potential land and water uses and the results of previous investigations, a Human Health (HH) Streamlined Risk Evaluation (SRE) was conducted. The exposure route evaluated for potential current and future human receptors included direct contact (soil ingestion and dermal absorption) with soils. Groundwater exposure was not quantitatively evaluated for human health receptors. During the 2015 SI investigation the soil sample with the highest lead concentration was sent to the laboratory for leachate testing via Solubility Threshold Limit Concentration (STLC) to assess the potential for leaching of metals to groundwater. STLC testing resulted in a non-detect, indicating that leaching of metals does not pose a threat to Site groundwater. Potential current and future human health receptors included NPS Park Workers (NPS staff and subcontractors) and child and adult recreational visitors/trespassers.

If the maximum detected concentration was less than the Residential Soil Regional Screening Level (RSL), the analyte was eliminated from further consideration in the HH SRE. If the maximum concentration exceeded the RSL, the contaminant was identified as a COPC. However, if an analyte was less than Site-specific background concentrations, it was eliminated from the COPC selection process. Based on the review of the current and potential land and water uses and the results of previous investigations, the primary exposure media of potential concern to human receptors at the Site consists of surface and subsurface soils.

Based on detected concentrations in exceedance of the Residential Soil RSL, Site COPCs for human health consist of lead, vanadium, 2,3,7,8-TCDD Toxic Equivalents (TEQ), and Total Petroleum Hydrocarbons Oil Range Organics (ORO). Note that barium, cobalt, and nickel were removed from consideration in the HH SRE based on detected concentrations being below background.

2.1.4.1.1 HH SRE Risk Results

The total soil cancer risks for the NPS park worker and the recreational visitor/trespasser were well below US Environmental Protection Agency's (USEPA) acceptable cancer risk range and NPS' cancer risk range of $1\text{E-}06$ to $1\text{E-}04$ and NPS' cancer risk goal of $1\text{E-}06$ with cancer risks of $2.1\text{E-}08$ and $2.7\text{E-}08$, respectively. Note that 2,3,7,8-TCDD TEQ was the only carcinogenic COPC and was the sole contributor to the total cancer risk. The total soil hazard indexes (HIs) were significantly less than the USEPA noncancer threshold of 1.0 with total HIs of 0.002, 0.006, and 0.0006 for the NPS park worker, child recreational visitor/trespasser, and adult recreational visitor/trespasser, respectively. Table 3 presents the cancer risk and noncancer HIs calculated for the HH SRE.

2.1.4.1.2 Lead

In order to address exposure to lead to the fetus of an exposed Site worker, the USEPA Adult Lead Model (ALM) (USEPA, 2009) was run. The ALM estimates fetal blood lead concentrations in women exposed to lead-contaminated soil in non-residential scenarios and estimates the probability that blood lead levels will exceed $10\text{ }\mu\text{g/dL}$. USEPA's risk reduction goal for lead is that individuals exposed would have no more than a 5% probability of exceeding the level of concern of $10\text{ }\mu\text{g/dL}$. The ALM estimated that the 95th percentile blood lead concentration among fetuses born to women NPS park workers and adult recreational visitors/trespassers exposed to soil at the Site would be $1.5\text{ }\mu\text{g/d}$. This estimate is less than USEPA's established level of concern of $10\text{ }\mu\text{g/dL}$. The probability that the fetal blood lead concentration exceeds $10\text{ }\mu\text{g/dL}$ is 0% for both the NPS park worker and adult recreational visitors/trespasser exposed to soil.

Because of recent scientific evidence that has demonstrated adverse health effects at blood lead concentrations below $10\text{ }\mu\text{g/dL}$ down to $5\text{ }\mu\text{g/dL}$, and possibly lower, the USEPA Office of Superfund Remediation and Technology Innovation (OSRTI) is developing a new soil lead policy to address this new information (USEPA, 2009). The results of the ALM indicate that adverse effects are not anticipated for fetuses of pregnant NPS workers or adult recreational

visitors/trespassers exposed to lead in soil at the Site assuming even the more conservative 5 µg/L level of concern.

In order to address child recreational visitor exposure to lead in soil at the Site, the USEPA Integrated Exposure Uptake Biokinetic (IEUBK) model was evaluated (USEPA, 1994c and 2007). The IEUBK Model estimates blood levels of lead in children (under 7 years of age). The model results estimated that the geometric mean blood lead concentration among child recreational visitors/trespassers exposed to soil at the Site would be 1.096 µg/dL. This estimate is less than USEPA's established level of concern of 10 µg/dL as well as the more conservative 5 µg/L level of concern. The probability that the child's blood lead concentration exceeds 10 µg/dL is 0.021%, which is less than USEPA's target probability of 5% or less.

2.1.4.1.3 Human Health Preliminary Remediation Goal

The results of the HH SRE indicate that leaving the waste material associated with the Site in its present condition would not result in an unacceptable risk to reasonably anticipated current and/or future human health receptors. Based on Site cancer risks well below the target cancer risk goal of 1E-06 and noncancer and HIs well below the noncancer threshold of 1, contaminants of concern (COCs) were not identified and therefore preliminary remediation goals (PRGs) were not calculated for the HH SRE.

2.1.4.2 Ecological SRE

The ecological SRE documents the potential exposure and risks to ecological receptors exposed to soil contamination within the Site.

Multiple trophic levels were evaluated in this SRE. Communities evaluated in the SRE included plants, soil invertebrates, birds, and mammals. Soil concentrations were compared to soil-based Ecological Screening Values (ESVs) in order to identify contaminants of potential ecological concern (COPECs). ESVs for the COPEC screening were obtained from the NPS Protocol for the Selection and Use of Ecological Screening Values for Non-Radiological Analytes (NPS, 2016) and from the Los Alamos National Laboratory (LANL) Ecorisk database for the 2,3,7,8 TCDD TEQ (LANL, 2015). For the COPEC screening, the minimum ESV of plants, soil invertebrates, plants and mammals was used. Based on these comparisons, several metals (including beryllium, cadmium, chromium, copper, lead, mercury, vanadium and zinc) and 2,3,7,8 TCDD TEQ were determined to be a Site COPEC. Note that barium, cobalt, and nickel were removed from consideration in the ecological SRE based on detected concentrations being below background.

The hazard quotient (HQ) calculated in the ecological SRE reflects the magnitude by which a sample concentration or dose exceeded or was less than the ESV. In general, if an HQ exceeds 1, the potential for the exposure to elicit an adverse effect is possible. As part of the HQ determination for mammal and avian species, an area use factor (AUF) was developed based on the surrogate bird and mammal species selected for the Site. The AUF is defined as the ratio of the site area to the receptor's home range and is the probability that a receptor will be exposed to contamination throughout its home range. Home ranges for the surrogate bird (American robin,

Turdus migratorius) and the surrogate mammal (deer mouse, Peromyscus maniculatus) were obtained from the Wildlife Exposure Factors Handbook (USEPA, 1993b and Cal/ECOTOX, 1999).

The results of the ecological SRE were the following:

- Copper and zinc indicated potential adverse effects for all four ecological receptors (plants, soil invertebrates, birds, and mammals),
- Lead indicated potential adverse effects for three receptors (plants, birds, and mammals),
- Cadmium indicated potential adverse effects for two receptors (birds and mammals),
- Chromium and mercury indicated potential adverse effects for soil invertebrates only,
- Vanadium indicated potential adverse effects for plants only, and
- 2,3,7,8-TCDD TEQ indicated potential adverse effects for mammals only.

Table 4 presents the ecological SRE results for plants and invertebrates and Table 5 presents the ecological SRE results for birds and mammals.

2.1.4.2.1 Ecological Preliminary Remediation Goals

PRGs were developed using the following general approaches:

- Food chain modeling-based PRGs were developed using avian and mammalian receptor dietary exposure modeling with a specified target risk, solving for the medium concentration. These PRGs were developed using both no observed adverse effect level (NOAEL)- and lowest observed adverse effect level (LOAEL)-based toxicity reference values (TRVs).
- Terrestrial plant and soil invertebrate PRGs were derived from the LANL ECORISK Database based on the geometric mean of the NOAEL and LOAEL ESLs.

Table 6 summarizes all of the ecological soil PRGs, the background threshold values (BTV), the final soil PRG based on the higher of the BTV or receptor-specific soil PRG, and the final overall COPEC-specific PRG.

2.1.4.3 Site Drainages

Comparison of the SI and EE/CA contamination observed in the Site drainages with that detected in the Former Burn Dump Area indicates that contaminants are migrating down-gradient from the Former Burn Dump Area within all three drainages. Based on the findings of the HH and ecological SREs, the drainages do not pose unacceptable risks to human health and ecological receptors, and the Former Burn Dump Area is primarily responsible for unacceptable receptor risks.

2.1.5 National Priorities List (NPL) Status. The Grant Grove Burn Dumpsite SMWU No. 38 is not listed or proposed for listing on the NPL.

2.2 PREVIOUS AND CURRENT ACTIONS TO DATE. Other than the Site investigations discussed previously in Section 2.1.1, there has been no government or private actions undertaken on Site. This NTCRA will be the only removal action to be undertaken at this Site.

2.3 STATE AND LOCAL AUTHORITIES ROLE AND ACTIONS TO DATE. The NPS is the lead agency for this Site. No State or local actions have been performed at the Site to date.

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

As a direct result of the past use, the Site contains elevated concentrations of metals and dioxin in ash and soil within the dump, and in soil within the debris apron surrounding the dump to the north, west and southwest. The materials found on the Site include fill, ash and debris.

Concentrations of lead have been identified exceeding lead solubility thresholds of 10 and 20 times the solubility limit for California hazardous waste and USEPA's Resource Conservation and Recovery Act (RCRA) hazardous waste, as well as its ecological PRG (see Table 6).

Concentrations of several remaining metal COCs (cadmium, chromium, copper, and zinc) and 2,3,7,8-TCDD TEQ (mammal) also exceed ecological PRGs (see Table 6), demonstrating the Site contains unacceptable risks to ecological receptors.

The NCP is the implementing regulation for CERCLA, and 40 C.F.R. Section 300.415(b)(2) sets forth the factors the NPS shall consider to determine whether a removal action is appropriate. Those factors applicable to this NTCRA include the following:

Actual or potential exposure to nearby human population, animals, or the food chain from hazardous substances or pollutants or contaminants.

Plants, soil invertebrates, birds and mammals who utilize this area could be exposed to hazardous concentrations of heavy metals and dioxins in soil.

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

Site contamination is largely concentrated in surface soil and has the potential to migrate. The Site is located in a porous geologic area which allows for possible infiltration of rain water into the below permeable rock units.

Migration of contaminants to surface water would likely only occur over a long time span due to the area's permeable geology. No surface water was observed at the Site during the Site visit or field investigations; however, periods of heavy rain and snowmelt may lead to the presence of surface water in the drainages at the Site. The nearest surface water body is an ephemeral drainage that discharges to Sequoia Lake which is approximately 1.5 miles southwest of the Site.

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

Elevations at the Site receive an average of 40-45 inches of precipitation annually resulting in snow cover from December to May. Snow melt can cause increased migration possibilities.

Excavation should be conducted during summer or early fall when precipitation is low and snowmelt has ended, reducing unwanted migration of contaminants.

4. **ENDANGERMENT DETERMINATION.** An actual release or substantial threat of release of hazardous substances at the Site, if not addressed by implementing the response action selected in this action memorandum, poses a threat to public health and the environment. This NTCRA is necessary in order to abate, prevent, mitigate or eliminate the threat posed by the release or substantial threat of release of these substances. Migration of contamination to surrounding areas is of concern. The removal of contaminated soil from the Site is expected to mitigate, if not eliminate, threats to the environment associated with the COCs at this Site.

5. **PROPOSED ACTIONS AND ESTIMATED COSTS**

The area of proposed actions can be divided into refuse accumulation areas and adjoining debris fields, as shown in Figure 4. The refuse accumulation areas are where waste and ash are buried and covered by a veneer of soil pushed on top of the refuse. The debris fields consist of the approximate areas where dump-related debris has been found strewn across the ground surface but is not believed to have a depth greater than 6 to 12 inches. Together, these impact areas are estimated to have an area of 2.24 acres and a volume of 7,400 cy.

As part of the NTCRA, NPS will excavate soil and debris contaminated with cadmium, chromium, copper, lead, mercury, zinc and dioxins. The contractor will be required to remove the contaminated soil from the Site and transport the material to an approved disposal facility(s). While the material has not yet been fully characterized for disposal, the identified concentrations of lead at the Site meet the criteria for non-RCRA (California) and RCRA hazardous waste. Based on the time the lead-containing material has been exposed at the Site, it was assumed that Site material will be disposed of at a Class II landfill. The nearest cost effective RCRA Class II Landfill is Waste Management's McKittrick facility near McKittrick, west of Bakersfield, California.

After completion of the NTCRA, soil confirmation sampling will be conducted to ensure that the Site soil concentrations are at or below the remediation goals. NPS will complete the NTCRA by restoring the natural contours of the Site and monitoring Site re-vegetation to ensure that, over time, appropriate native vegetation associations and densities on-Site reflect pre-NTCRA conditions.

Work is planned to be initiated in Summer 2019 but after snow melt to reduce the potential risk of contamination migrating off-Site. Overall construction, materials transport, and disposal is estimated to take approximately 1-2 weeks of on-Site work, and is planned to occur between June and July 2019. If at any point in time the NPS believes that the net environmental impacts of achieving the remediation goals outweigh the net environmental benefits, the remediation goals may be revised to reflect background or other defensible criteria.

5.1 **DESCRIPTION OF PROPOSED ACTION**

5.1.1 **Removal of Impacted Soil and Debris**

The estimated total volume of material assessed in this removal action is 7,400 cy, based on two areas of COC impact: refuse accumulation areas and adjoining debris fields, as shown in Figure 4. The refuse accumulation areas include buried waste and ash which is covered by a thin, variable thickness of soil on top of the refuse. The debris field consists of the approximate area where dump-related debris is found strewn across the ground surface but is not believed to have a depth greater than 6 to 12 inches. Together, these impact areas are estimated to have an area of 2.24 acres and a volume of 7,400 cy. The approximate thickness of waste ranges from 4 to 10 feet.

Excavated soil and debris will be placed in 20 cy bins for transport off-Site to a landfill licensed to accept the waste. The contaminated soil and debris bins will be placed in trucks for ground transport to an approved disposal site. Site restoration will be limited to grading at the time of soil removal. Appropriate erosion control measures will be implemented to minimize erosion from exposed soils.

NPS will collect confirmatory samples to verify that soils remaining after the removal action are at or below the PRGs. Materials will be disposed of in an approved, USEPA-compliant landfill licensed to accept the material based on designation and classification of the contaminated materials. Removed material will be managed in accordance with all applicable federal, state, and local requirements.

5.1.2 Factors Affecting Removal

The site is located on a hillside with granite outcrops, vegetation and trees, both standing and downed. Beyond the existing materials storage platform area, access to impacted areas may be difficult and require Site-specific equipment, techniques and an increased amount of hand-work to remove affected material and to restore the Site. Additionally, the Site is located close to a horseback riding concession and the General Grant Tree and Grant Grove and pose a noise and dust nuisance or hazard to these recreational use areas.

5.1.3 Risks to Human Health and the Environment Associated with the Work

A small increase in short-term risk to human health and the environment may be encountered during the excavation and transport phase of this work. Work will be conducted in accordance with OSHA health and safety protocols for working with hazardous substances. Impacts associated with construction activities are considered short term, and should not significantly impact human health or the environment.

Short-term air quality impacts to the immediate vicinity may occur during removal of debris and contaminated soils. Control of fugitive dusts may be required on-Site and will be conducted by wetting soils as required. Additional NTCRA activities that could cause the spread of contamination within or from the contaminated zone will need to be mitigated, including excavation activities, transport of materials on the dirt access road, and other removal work activities.

All materials removed from the Site will be transported in covered trucks and/or containers from the site to the selected disposal facility. The Site will remain closed to public access throughout implementation of the NTCRA.

5.2 CONTRIBUTION TO REMEDIAL PERFORMANCE. In evaluating the appropriateness of a NTCRA, the NPS must consider whether the removal action would contribute to the efficient performance of any anticipated long-term remedial action with respect to the release concerned [NCP § 300.41 5(d)], as well as the availability of other appropriate federal or state response mechanisms to respond to the release of hazardous substances [NCP § 300.415(b)(2)(vii)]. This NTCRA will entail the excavation and disposal of contaminated soil located at the Site, thereby minimizing risks to the environment and mitigating, if not eliminating, the source of the contamination (determined based on post-removal confirmation sampling). Future response actions at the Site are not expected based upon available information.

5.3 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

In the context of a NTCRA, Site activities are subject to all applicable federal, state, and local laws and regulations, and all on-site project activities must comply with applicable or relevant and appropriate requirement (ARARs) under federal and state environmental laws and facility siting laws that the NPS determines to be practicable considering the exigencies of the situation (CERCLA Section 121(d); NCP Section 300.4150)).

In order to determine whether a particular ARAR is applicable under the exigencies of the situation, the NPS has considered the scope of the response action to be conducted, the urgency of the situation, and other appropriate factors (40 C.F.R. § 300.4150)). The NPS has identified the federal and state ARARs set forth below for this NTCRA and that additional federal and state ARARs may be identified and added to project requirements.

1. The NTCRA must be conducted in compliance with the NPS Organic Act of 1916 (codified at 16 U.S.C. §§ 1-3), which requires management of units of the National Park System so as to leave them "unimpaired" for future generations. See the implementing regulations (36 CFR Parts 1-79), and in particular, see 36 CFR Part 2 regarding preservation of natural, cultural, and archeological resources.

2. Treatment, storage, and disposal of waste and excavated soils must comply with all applicable state and federal laws, including applicable provisions in the Resource Conservation and Recovery Act (42 U.S.C. §§ 7401-7642; 40 CFR §§ 264 and 265), Hazardous Waste Regulations (California Code of Regulations (CCR) Title 22), and provisions governing solid waste disposal in National Parks (codified at 16 U.S.C. §§ 4601-22(c) et seq.) and related implementing regulations (codified at 36 CFR Part 6). This project must comply with CERCLA Section 121(d)(3) ("off-site rule"), which requires that hazardous substances, pollutants, and contaminants that must be transferred off-site as a result of CERCLA response activities must be managed at a facility operating in compliance with federal and state laws. The NCP's "off-site rule" implementing regulations (40 CFR § 300.440) define facility acceptability and create procedures for obtaining and reviewing acceptability determinations.

3. Regulations describing monitoring and assessment of all areas where waste has been discharged to the land, including a determination of the spatial distribution and concentration of each constituent (CCR Title 23, Sections 2550.7 and 2550.9; and CCR Title 27, Sections 20415 and 20425).
4. Laws and regulations protecting threatened and endangered species present at the Site, including the Endangered Species Act (e.g., 16 U.S.C. §§ 1531-1544, 50 CFR Part 402).
5. The NTCRA is required to avoid, minimize, or mitigate impacts to historic sites or structures and must be conducted in compliance with the National Historic Preservation Act (16 U.S.C. § 470f; 36 CFR Parts 60, 63, and 800), the Archeological Resources Protection Act (43 CFR Part 7), the American Indian Religious Freedom Act (42 U.S.C. § 1996), the Native American Graves Protection and Repatriation Act (43 CFR Part 10), and Executive Order 13007.

Additionally, the following are other factors "to be considered" (TBCs) that provide useful standards or policy direction for this NTCRA.

1. Section 4.1.5 of the 2006 NPS Management Policies provides: "The Service will reestablish natural functions and processes in parks unless otherwise directed by Congress-..... Impacts on natural systems resulting from human disturbances include the introduction of exotic species; the contamination of air, water, and soil; changes to hydrologic patterns and sediment transport; the acceleration of erosion and sedimentation; and the disruption of natural processes. The Service will seek to return such disturbed areas to the natural conditions and processes characteristic of the ecological zone in which the damaged resources are situated. The Service will use the best available technology, within available resources, to restore the biological and physical components of these systems, accelerating both their recovery and the recovery of the landscape and biological community structure and function."
 2. NPS Reference Manual (RM) #77 offers comprehensive guidance to NPS employees responsible for managing, conserving, and protecting the natural resources found in park units. It addresses management of natural resources (including air; disturbed land; endangered, threatened and rare species; geologic resources; vegetation; etc.), resource uses, and planning (e.g., emergency management, and environmental compliance).
 3. PS-28: Cultural Resource Management Guidelines addresses park cultural resource management programs, compliance with Section 106 of the National Historic Preservation Act, and issues related to archaeological resources, cultural landscapes, structures, museum objects, and ethnographic resources.
- 5.4 PROJECT SCHEDULE. NPS plans to begin removal actions in Summer 2019, depending on weather. The transportation of the material off-Site is anticipated to occur upon completion of the excavation. Site restoration via limited grading at the time of waste and soil removal will be the last phase of the NTCRA.
- 5.5 ESTIMATED COSTS. Projected total costs for the NTCRA, including design, contracting, oversight, and contingency, are estimated to be \$1.97 million.

There are no long-term operations, maintenance, or monitoring costs associated with this removal action as all contaminants above the Site-specific PRGs will be removed.

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

If the proposed NTCRA is delayed or not taken, hazardous concentrations of metals including cadmium, chromium, copper, lead, mercury, zinc, as well as dioxins will continue to be released, or there is a substantial threat of such release, at the Site that continues to pose a risk to ecological receptors in particular, and, to a lesser extent NPS employees or the public.

7. OUTSTANDING POLICY ISSUES. No outstanding policy issues exist for this NTCRA.

8. RECOMMENDATION

This EE/CA presents the selected NTCRA for the Grant Grove Burn Dumpsite SWMU No. 38, located within SEKI, Fresno County, CA which was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a NTCRA and through this document, I am approving the proposed NTCRA.

On the basis of the evaluation conducted and the factors outlined in the NCP, the NPS has determined that the release or substantial threat of release of hazardous substances at the Site pose a risk to the environment, and that a NTCRA is necessary and appropriate in order to abate, prevent, mitigate or eliminate the threat posed by the release or substantial threat of release of these substances. Because conditions at the Site meet all applicable CERCLA and NCP criteria for undertaking a NTCRA, I recommend/concur/approve that the NPS implement the NTCRA as proposed herein.

9. REFERENCES

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Date: 9/20/18

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