

4.4 REMEDIAL DESIGN AND IMPLEMENTATION PLAN

The Project Description of the 2009 DEIR presents a summary of the site remediation process in the context of the description of site preparation activities. The Project Description includes a description of the origin of the contamination, and describes the investigation and proposed remediation covered in the five-volume 2007 Remedial Investigation/Feasibility Study/Remedial Action Plan (RI/FS/RAP). It notes those activities would be implemented subject to details to be contained in an implementation plan – the Remedial Design and Implementation Plan (RDIP). The Project Description in this Supplement to the 2009 DEIR summarizes the types of remediation activities, and the estimated quantities of soil for on-site remediation or off-site disposal.

The methods to be employed for site cleanup were first described in the RI/FS/RAP, and impacts from implementation of remediation activities were analyzed in the 2009 DEIR. The RDIP was published after the 2009 DEIR and was updated to reflect 2008 cleanup levels. In the light of the additional detail on remediation activities contained in the RDIP and summarized in this Supplement to the 2009 DEIR, some of the impacts found are reduced, and one previously identified potential source of noise is noted as operating continuously (24 hours per day), rather than with restricted hours, for 5½ days per week. All changes are described below.

A. Existing Conditions and Description of RDIP

1. Environmental Screening Levels (ESLs)

The Project Description of this Supplement to the 2009 DEIR, pages 3-10 to 3-17, describes the details and clarifications on the cleanup process that are in the RDIP. Changes in the Environmental Screening Levels (ESLs) used to determine the extent of the cleanup are shown in Table 4.4-1.

These changes affect:

- ◆ The final contaminant levels that can be left in the soil without further cleanup being necessary.

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N A P A P I P E S U P P L E M E N T T O T H E D R A F T E I R
 R E M E D I A L D E S I G N A N D I M P L E M E N T A T I O N P L A N

TABLE 4.4-1 **CHANGES IN SITE-SPECIFIC SOIL ESLs FOR RESIDENTIAL USES, 2005 AND 2008 (IN MG/KG)**

| Contaminant | Depth Below Ground Surface (Feet) | 2005 ESLs (Used in RAP and 2009 DEIR) | 2008 ESLs (Used in Draft RDIP) |
|-----------------------------|---|---|--------------------------------------|
| Diesel | 0 to 3 | 100 | no change |
| | 3 to 10 | 400 | 110 |
| | more than 10 | 5,000 | 4,200 |
| Motor Oil/ Hydraulic Oil | 0 to 3 | 500 | 370 |
| | 3 to 10 | 1,000 | 370 |
| | more than 10 | 5,000 | no change |
| Naphthalene | 0 to 3 | 0.46 | 1.3 |
| | 3 to 10 | 0.46 | 1.3 |
| | more than 10 | 0.46 | 1.3 |
| 1,1-Dichloroethane | 0 to 3 | 0.32 | 2.2 |
| | 3 to 10 | 0.32 | 2.2 |
| | more than 10 | 0.32 | 200 |
| Arsenic | 0 to 3 | 5.5 | 15.3 |
| | 3 to 10 | 5.5 | 15.3 |
| | more than 10 | 5.5 | 15.3 |
| Selenium | 0 to 3 | 10 | no change |
| | 3 to 10 | 10 | no change |
| | more than 10 | 2,500 | no change |
| Cobalt | 0 to 3 | 10 | 40 |
| | 3 to 10 | 10 | 40 |
| | more than 10 | 10 | 94 |

Note: MG/KG = milligrams per kilogram.
 Source: Napa Redevelopment Partners, 2010.

- ◆ The amount of soil that must be cleaned up.
- ◆ The amount of soil that must be trucked off-site for disposal as part of the cleanup process.

2. Areas Targeted for Treatment and Contaminants in Soil and Groundwater

As described on page 4.8-7 of the 2009 DEIR, and shown on Figure 4.8-1, using information from the soil and groundwater investigations reported in the RI/FS/RAP, Site 5, Site 7, portions of Site 2/3 (the former Pipe Storage Areas located at the Southeast Storage Area Waste Piles and the Abandoned Drainage Ditch), and the wastewater treatment pond area of Site 4 are not substantially impacted by contamination and thus are not expected to need active remedial measures. The RDIP states that conditions in these areas have not changed since their description in the RAP.

3. Volume of Shallow Soil to be Cleaned (Dry and Saturated)

Table 4.4-2 describes the volumes of dry and saturated soil that contain contamination in excess of the approved cleanup levels as reported in the 2009 DEIR and as updated in this Supplement to the 2009 DEIR based on the RDIP.

4. Treatment Methods

The 2009 DEIR includes a generalized account of the cleanup options for the site. The RDIP has more detail on the specific processes that were selected and the plan for their implementation. These treatment technologies and disposal options for soil and groundwater are described on pages 3-13 to 3-17 of the Project Description of this Supplement to the 2009 DEIR. For soil these are:

- ◆ Biopiles/biocells
- ◆ Soil washing
- ◆ Low temperature thermal desorption
- ◆ Off-site disposal

TABLE 4.4-2 **VOLUME OF DRY AND SATURATED SOIL FOR CLEANUP
 (IN CUBIC YARDS)**

| | 2009 DEIR (Table 4.8-1, Page 4.8-14) | RDIP (Table 2) |
|---|--|----------------------------|
| Shallow, Dry Soil | | |
| Site 2/3 | 6,300 | same |
| Site 4 | 16,900 | same |
| Site 6 | 6,000 | same |
| Other Areas | 790 | 770 |
| <i>Total</i> | 29,990 | 29,970 |
| Saturated Soil/Groundwater | | |
| Site 2/3 | 21,000 | same |
| Site 4 | 44,940 | 44,570 |
| Site 6 | 17,900 | 18,550 |
| Other Areas | 8,200 | 8,210 |
| <i>Total</i> | 92,040 | 92,330 |
| Total of Dry and Wet Soil for Cleanup (Combined) | 122,030 | 122,300^a |

^a This represents an increase of 270 cubic yards, or approximately 0.22 percent, compared to the volume estimate provided in the RI/FS/RAP.

Source: Napa Redevelopment Partners, 2010.

For groundwater they are:

- ◆ Saturated soil excavation and water treatment *ex situ*.
- ◆ Chemical oxidation by injection of an oxidizer into the soil, or application to the base of an excavation.
- ◆ Enhanced bioremediation by a variety of additions to the groundwater.
- ◆ Use of existing wastewater treatment system.

5. Volume of Soils Requiring Off-Site Disposal and Number and Timing of Truck Trips

For the purposes of analyzing the maximum likely number of truck trips, the 2009 DEIR assumes that 48,800 cubic yards of contaminated soil would be taken off site for disposal. Using a truck capacity figure of 15 cubic yards, off-site disposal of contaminated soil would require a 3,254 truck loads, or 6,508 round trips. Over 130 days, there would be an average of 50 truck trips per day.

The RDIP (Table 5) and therefore this Supplement to the 2009 DEIR use a figure of 590 cubic yards of soil taken off site for disposal. Using a truck capacity of 15 cubic yards, this implies 40 truck loads, or 80 round trips. Over 130 days, there would be an average of less than one trip required per day.

6. Probable Landfills for Soil Disposal

The 2009 DEIR, Section 4.8, Hazards and Hazardous Materials, states the following on page 4.8-37: “Although the RAP stresses that landfill selection would ultimately depend on specific soil characteristics, the following three landfills may be suitable for disposition of haul-off soil: the Hay Road landfill, Vacaville, Solano County (estimated closure year of 2077), Keller Canyon in Pittsburg, Contra Costa County (2030), Altamont Pass, Alameda County (2032).”

The RDIP, page 42 states the following: “Waste characterized as Class 1 hazardous waste will likely be sent to the Class 1 disposal facility in Kettleman Hills, California. Waste characterized as Class 2 materials will likely be sent to a Class 2 disposal facility that has the lowest tipping fees and associated transportation costs, for example the Hay Road Landfill, in Solano County, California.” This Supplement to the 2009 DEIR therefore analyzes the impacts of disposal at those sites.

7. Construction Hours

The 2009 DEIR on pages 3-60 and 4.5-29 states that construction hours would be restricted to 7:00 a.m. to 7:00 p.m.

The RDIP on pages 24 and 40 describes the operation of the Low Temperature Thermal Desorption (LTTD) system for soil treatment and states that the unit will operate at a “minimum feed rate of 1,200 to 1,400 tons per day, 24 hours per day, 5.5 days per week.” The continual 24-hour processing time during the week is taken into account in this Supplement to the 2009 DEIR in the consideration of noise impacts.

8. Dust Control

The 2009 DEIR, on pages 4.8-30 and 4.8-31, describes dust control in Mitigation Measure HAZ-1. This stated that the project applicant shall fully implement the provisions of the RAP and RDIP, including, but not limited to, the soil risk management protocols in the RDIP that address discovery of new or different contamination during earth-working and subsurface construction activities. As outlined in the RAP, such implementation would include multiple dust control strategies that would be employed during remediation. In addition, Mitigation Measure AQ-2 provides a comprehensive list of control measures that the BAAQMD recommends to limit construction emissions of PM₁₀. These measures, which apply to the remedial activity on the project site, are considered effective by the BAAQMD in controlling dust emissions.

The RDIP, on page 32 under Section 6.1.7, Dust and Odor Management Plan, states that depending upon the soil conditions encountered during excavation, there is a potential to generate a nuisance dust condition and odors. A Dust and Odor Management Plan has been prepared for the project that describes “Basic Control Measures” for management of dust. The plan, attached to the RDIP as Appendix H, also provides detailed procedures for monitoring dust and odors during facility grading activities that may occur during remediation.

The RDIP, on page 41 under Section 6.3.3, Decontamination Procedures, states that during soil excavation and loading, the work areas outside of the excavation limits will be kept reasonably clean and free of excessive soil or debris. A street sweeper will be made available, as needed, to keep the loading area and haul roads clean. The soils will be wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities. Soil

residue on equipment and excavator tracks/tires and truck tires will be removed using a combination of wet and dry methods. A decontamination station for off-haul trucks and demobilizing earthwork equipment, located as shown on Plate 19 of the RDIP, will be constructed in the center of the project site.

9. Worker Safety/Health Risks

The 2009 DEIR, on pages 4.8-9 to 4.8-10, describes measures to protect workers from unknown contamination. The 2009 DEIR states that given the size of the project site – and thus the potential for contamination to be discovered during the construction process and in places where contamination is not currently documented to exist – the RDIP will include a set of contingency measures that address the steps that are to be followed in the event that contractors working on the site (whether during remediation or later during project construction) encounter unexpected hazardous substances. Unexpected hazardous substances could include the existence of known substances in areas where they were not expected to be located, or substances different from those expected to exist on the site based on the sampling conducted to date.

The 2009 DEIR states that these contingency measures will describe, among other things, health and safety procedures to be followed by personnel in the field in case of such discoveries, testing methods to be employed to assess the lateral and vertical extent of such discoveries, and reporting and notification requirements through which such discoveries would be reported to, reviewed by, and evaluated for appropriate cleanup action by the Regional Water Quality Control Board (RWQCB) or other regulatory agency with appropriate jurisdiction over the discovery (e.g., the Napa County Department of Environmental Management in the event that an underground storage tank is discovered).

The RDIP, on page 31 under Section 6.1.5.2, states that a Hazardous Waste Operations and Emergency Response (HAZWOPER) Health and Safety Plan (HASP) has been prepared in accordance with applicable Occupational Safety and Health Administration (OSHA) regulations for general and engineering-specific remedial site activities and is attached as Appendix G of the RDIP.

The HASP provides information that addresses: (1) the health risks and hazards for each task to be conducted during implementation of the RDIP; (2) employee training assignments to assure compliance with Title 8 of the California Code of Regulations; (3) personal protective equipment; (4) personnel monitoring; (5) control measures; and (6) decontamination procedures. An Emergency Response Plan is also included in the HASP. The Emergency Response Plan addresses reasonably foreseeable accident or upset conditions and outlines the procedures to be followed in the event of an emergency at the project site. Emergencies that may occur at the project site can include, but are not limited to, chemical spills, fires, explosions, and personal injuries.

The information contained in the HASP is used in this Supplement to the 2009 DEIR.

10. Status of RWQCB Review and Consultation

The RWQCB issued a Conditional Approval of the RDIP on October 18, 2010. The letter states that final approval of the RDIP is conditioned upon the final certification of the Napa Pipe EIR, at which time the RWQCB will determine whether the CEQA requirements have been met. In the event the RWQCB determines that the requirements have not been met, they would conduct a separate environmental analysis of the RDIP.¹

B. Impact Discussion

Implementation of the RI/FS/RAP with the RDIP would change some of the impacts found in the 2009 DEIR. Changes are described below:

¹ Terry Seward, Division Chief, Groundwater Protection Division, California Regional Water Quality Control Board, San Francisco Bay Region, Letter to Keith Rogal, Rogal+Walsh+Mol, October 18, 2010.

1. Traffic/Transportation

a. Trucking of Soils

As described in Section A.5 above, over 130 days there would be an average of 50 truck trips per day, which is the equivalent of 100 vehicle trips per day.¹ The peak truck traffic generation would be equivalent to 200 passenger cars per day. This would be far less than the project would be expected to generate under full buildout conditions. With the incorporation of a Mitigation Measure TRA-14, which requires implementation of a Construction Management Plan, the impact on traffic from the trucks hauling soil offsite was found to be less than significant.

As a consequence of the information in the RDIP, the amount of soil that must be hauled offsite for remediation purposes is calculated to be only 590 cubic yards. Using a truck capacity of 15 cubic yards, this implies 40 trucks, or 80 round trips. Over 130 days, there would be an average of less than one trip required per day. Although Mitigation Measure TRA-14 would still be employed, impacts would be reduced, and would still be *less than significant*.

2. Noise

a. Noise from Operation of Remediation Equipment

As described above in Section A.7, the 2009 DEIR used the assumption that construction hours would be restricted to the hours of 7:00 a.m. to 7:00 p.m. Instead, as described in the RDIP, some soil treatment will occur 24 hours per day, 5.5 days per week. The 2009 DEIR notes on page 4.5-27 that noise sensitive receptors do not exist near the project, due to the adjoining industrial land uses. Therefore, the impact from extending the remediation process as described would be *less than significant*.

¹ As described on page 4.3-61 of the 2009 Draft EIR, according to the Highway Capacity Manual, heavy vehicles should be evaluated as equivalent to 2.0 passenger car equivalents.

3. Air Quality

a. Emissions from Soil Treatment

Publication of the RDIP adds additional information on exactly how the remediation would take place and the equipment and processes that would be used. As described above under Section A.8, the RDIP contains a Dust and Odor Management Plan that describes “Basic Control Measures” for management of dust. The plan, attached to the RDIP as Appendix H, also provides detailed procedures for monitoring dust and odors during facility grading activities that may occur during remediation. With implementation of this plan in addition to adherence to the BAAQMD rules and regulations, adherence to which is specified under Mitigation Measure AQ-2, the impact on release of dust and odors to the air would still be *less than significant*.

Section 4.6 of this Supplement to the 2009 DEIR includes a discussion regarding NO_x emissions generated during remediation and grading activities. The County has concluded that the NO_x reductions achieved by Mitigation Measure AQ-2 may not be desirable or feasible from a public policy perspective, and that the NO_x emissions during remediation and grading would remain *significant and unavoidable*. See Section 4.6 for a discussion of impacts related to NO_x emissions.

4. Hazards and Hazardous Materials

a. Release of Contamination to the Environment

As described under Threshold #2 in Section 4.8 the 2009 Draft EIR, during remediation, the possibility exists for disturbance of groundwater or soil that could lead to an accidental release of contaminants. Theoretically this could occur by soil and groundwater disturbance during excavation, spillage of soil from trucks, or dust being entrained in air currents. Publication of the RDIP has not changed the knowledge of the location, form and degree of the contamination, although it has changed the understanding of the actions that would be taken to remediate it. Mitigation Measure HAZ-1, which binds the project to the provisions of the RAP and RDIP, remains in effect and the impact of accidental releases of contamination would therefore still be less than significant following mitigation.

With the reduced amount of soil now anticipated for offsite disposal, impacts from possible accidents during its transportation – already found to *be less than significant* – would be further reduced.

b. Discovery of Currently Unknown Contamination

The 2009 DEIR acknowledges that during the site clearance, remediation and/or construction processes, it is possible that some soil might be found with unexpected contaminants. This is not an uncommon situation at large, formerly industrial sites such as the Napa Pipe site because the soil dislocation associated with site clearance, remediation, and infrastructure construction exposes more of the subsurface than does the sampling conducted during the remedial investigation process. The potential for discovery of unexpected contamination during excavation is addressed through Mitigation Measures HAZ-2 and HAZ-3. Publication of the RDIP has not changed the degree of knowledge on the extent of contamination and this possibility remains. With implementation of Mitigation Measures HAZ-2 and HAZ-3, the impacts from discoveries of unexpected contamination would (still) be *less than significant* following mitigation.

c. Health Risks Associated with Remedial Actions

Mitigation Measure HAZ-3 refers to the soil risk management plan contained in the RDIP and states that after development and implementation of the RDIP, there would be a less-than-significant impact from unknown contaminants encountered during the construction process because the RWQCB would need to conclude that ESLs are met based on empirical testing data. The RWQCB would not issue a “no further action” letter until this condition is met. Publication of the RDIP has not changed the information contained in the 2009 DEIR.

5. Hydrology and Water Quality

The evaluation of possible substantial degradation in water quality discussed Chapter 4.8, Hazards and Hazardous Materials, of the 2009 DEIR remains unchanged.

6. Utilities

The updated information given in the RDIP and used in this Supplement to the 2009 DEIR on the choice of landfill for disposal of contaminated soil does not affect the impact of solid waste disposal as these landfills also have adequate capacity for the project. There would still be a *less-than-significant* impact from landfill capacity.