Purity Oil Sales, Inc. Superfund Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • August 2012

Revised Plan for Cleanup Proposed

Introduction

This Proposed Plan presents a revised cleanup plan proposed by the U.S. Environmental Protection Agency (EPA) to address impacted groundwater at the Purity Oil Sales, Inc. Superfund site (Site) located in Malaga, California.

The overall site remedy has been divided into two operable units (OUs): OU-1, Groundwater and Tanks, and OU-2, Soils. The cleanup strategy for OU-1 originally involved groundwater extraction and treatment to restore the aquifer to federal and state drinking water standards. This was paired with a groundwater management zone strategy which relied on legally-established institutional controls (ICs) to prevent exposure to groundwater containing chemicals of concern (COCs). At the Purity site, the COCs are arsenic, iron, manganese, and volatile organic compounds, or VOCs. While groundwater impacts have been significantly reduced, the extraction and treatment strategy is no longer effective and this is why we are proposing to amend the cleanup plan.

This Proposed Plan provides a summary of an evaluation of remedial alternatives and explains the selection process for deciding on how to treat the remaining minor impact to groundwater. The remedy selected as a result of this Proposed Plan process will replace the original cleanup strategy established in the 1989 Record of Decision.

EPA proposes Monitored Natural Attenuation (MNA) with ICs to address the remaining low levels of contaminants in groundwater in the immediate vicinity of the Site. Natural attenuation relies on naturally occurring physical, chemical, or biological processes to reduce the mass, toxicity, mobility, volume, or concentration of contaminants. Long-term monitoring is also a component of the remedy and will ensure that the remedy is functioning as intended and is protective of human health and the environment. Institutional controls, in the form of land-use restrictions, will prevent human and ecological exposure to contaminated groundwater.

Versión en español disponible

Vea información de contacto en la última página

Dates to Remember

Mark Your Calendar

Public Comment Period:
August 20 – September 20, 2012

EPA will accept both oral and written comments on the Proposed Plan during the comment period

Public Meeting:
Thursday, September 6, 2012
7:00 – 9:00 PM
Malaga Elementary School Cafeteria
3910 S. Ward Ave, Fresno, CA 93725

This public meeting will explain the Proposed Plan and all of the alternatives presented in the Focused Feasibility Study, including EPA's preferred alternative. Oral and written comments from the public will be accepted at the meeting and can also be sent to EPA before the end of the public comment period (see the end of this fact sheet for details).

For more information, see the Information Repository at the following locations

Fresno County Central Library
2420 Mariposa Street
Fresno, CA 93721
(559) 600-7323
Hours:
Mon – Thurs: 10 am – 7 pm
Fri – Sat: 10 am – 5 pm
Sun: 12 pm – 5 pm

EPA Superfund Records Center
Region 9
95 Hawthorne Street
Room 403
San Francisco, CA 94105
(415) 820-4700
Hours:
Mon – Fri: 8 am – 5 pm

Web site: www.epa.gov/Region09/PurityOil

This plan describes the past cleanup history at the Site along with a summary of current groundwater conditions. In addition to presenting EPA's preferred remedial action and rationale for selection, this plan presents EPA's cleanup goals and evaluation of several other cleanup alternatives that were considered in the process.

Site Background

The former Purity Oil Sales Site is located on a 7-acre parcel at 3281 Maple Avenue (at Golden State Boulevard), approximately 0.5 miles south of the Fresno city limits in an unincorporated area of Malaga Township (Figure 1).

The groundwater beneath the Site is currently impacted by iron, manganese, arsenic and the volatile organic compounds (VOCs) 1,2-dichloroethane (1,2-DCA), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. VOCs are contaminants, such as solvents and degreasers, that readily turn to vapor. They can impact soil and groundwater when not properly handled. Other VOCs and semi-volatile organic compounds (SVOCs) were initially identified as chemicals of concern in groundwater in the 1989 Record of Decision (ROD) and can be found in Table 1.

The Site is located in an area designated for heavy industrial use and is surrounded by agricultural and industrial land. A used motor oil recycling facility operated at the Site from 1934 to 1975 under several different owners. The easternmost portion of the site included storage and processing facilities for the used oil refining and recycling operations. The western portion of the site consisted of unlined sumps and sludge pits. The oil and by-products from the refining process were collected on site and disposed of in approximately seven large on-site sludge ponds. Overflow from the unlined sumps and sludge ponds flowed onto an adjacent property, which was first observed by neighbors in the 1960s.

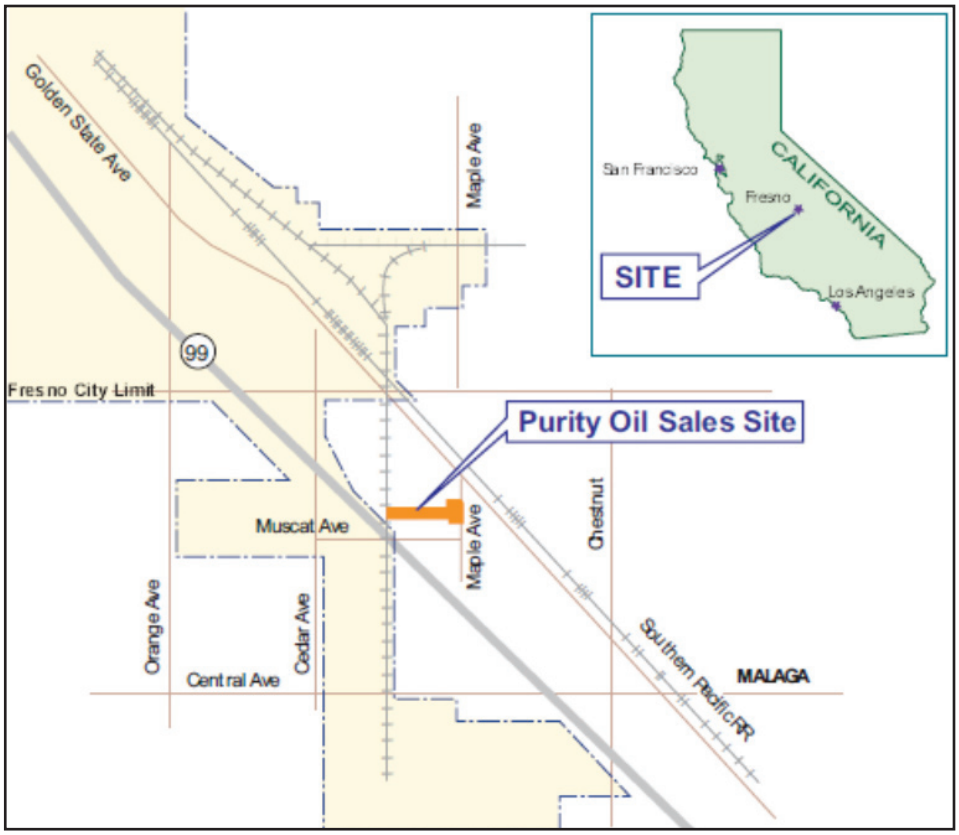

Figure 1: Purity Oil Sales Superfund Site

In 1973, Purity Oil Sales was ordered by a Superior Court to empty and backfill the sludge ponds. In 1975, a cleanup and abatement order was issued by the Regional Water Quality Control Board. The Site was included on the EPA National Priorities List (NPL) in December 1982.

The selected remedy for OU-1, documented in the 1989 OU-1 ROD, included removal of the seven aboveground tanks and groundwater extraction and treatment. The selected remedy for the Site, documented in the 1992 OU-2 ROD and 2006 OU-2 ROD Amendment, involved neutralization and capping of impacted soils, extraction and treatment of vapors from impacted soil, and ICs to restrict access to impacted soil while the remedy is ongoing. The original decisions and documents underlying them are available as part of the Administrative Record, which is a collection of Site documents that form the basis for EPA's selection of a remedy (see page 1 for the Information Repository location).

Table 1: Remaining COCs Exceeding Cleanup Levels in Groundwater

Contaminant	Selected Cleanup Level (µg/L)	Maximum 2011 Concentration (µg/L)
1,1-DCA	5	4.2
1,2-DCA	0.5	0.9
cis-1,2-DCE	6	7.4
Vinyl chloride	0.5	0.6
Iron	300	6,060
Manganese	50	3,390
Arsenic	10	22.5

In 1998, EPA entered into a consent decree under which Chevron USA, Inc. (Chevron) agreed to perform cleanup activities for the Purity site. In 1990, Chevron removed and properly disposed of the seven on-site tanks and their contents to eliminate the direct exposure threat. The groundwater extraction and treatment system selected in the 1989 ROD began operating in 1994. From 1994 to 2005, two groundwater extraction wells operated to extract and treat approximately 21 million gallons of groundwater. The groundwater extraction and treatment system was temporarily deactivated in 2005. The extraction wells were permanently decommissioned in 2006 because of groundwater extraction difficulties caused by the dropping groundwater level, and because of complications caused by well locations during implementation of the OU-2 soil remedy. In 2006, Chevron submitted a Focused Feasibility Study (FFS) for the groundwater operable unit and evaluated several new alternatives to address contaminated groundwater at the site. The result of this FFS was the recommendation to perform an Enhanced Reductive Dechlorination Pilot Study where attenuation of contaminants would be enhanced by adding electron donors to groundwater. The pilot study, performed from 2008 to 2010, was successful at reducing VOCs in groundwater but released iron, manganese, and arsenic due to the reduced groundwater conditions. Since the pilot study, Chevron has proposed several new alternatives to remediate the groundwater at the site, as presented in this Proposed Plan.

From July 2006 to June 2008, soils were excavated to a depth of approximately 15 feet below ground surface and neutralized. The neutralized soils were placed back into the excavation, and an engineered cap was installed to restrict surface water from infiltrating through treated soils and leaching into groundwater. The other part of the OU-2 remedy was the implementation of a soil vapor extraction (SVE) system, which was installed in 2010 and has operated since to address VOC impacts in unsaturated soils. The extracted vapor stream is treated prior to discharge to the atmosphere. Figure 2 provides a conceptual model of the SVE system.

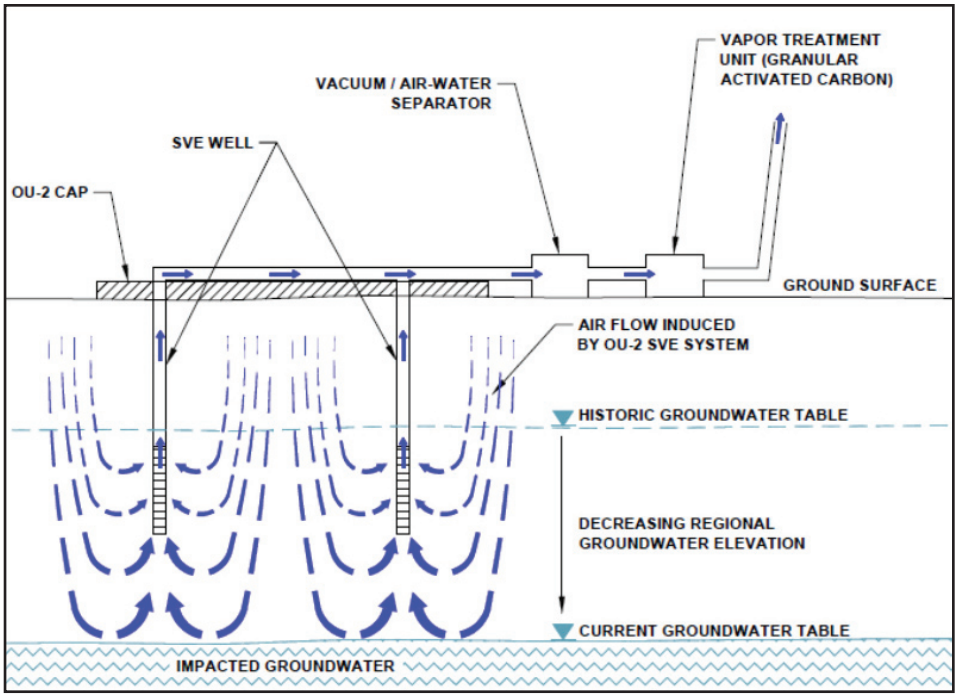

Figure 2: Conceptual model of the Site SVE System

Public participation activities for the site have been performed during the proposal of site remedy decisions, most notably at the time of the original groundwater and soils RODs (1989 and 1992, respectively) and during the 2006 soils ROD Amendment. In 2001, EPA relocated residents of a mobile home community that was formerly adjacent to the site.

Site Characteristics

Land in the Site vicinity is used for industrial or agricultural purposes and no natural watercourses are nearby. The remaining Site building is used to house and operate the existing site treatment systems.

The Site is located in the San Joaquin River drainage basin approximately 12 miles south of the San Joaquin River. The depth to groundwater at the site is approximately 62 to 82 feet below ground surface, varying with site topography, season, and regional groundwater withdrawal. Groundwater flow is generally to the northwest.

The soils at the Site are described as poorly-graded sands and silty sands. Three groundwater monitoring zones have been designated: shallow, intermediate, and deep. These monitoring zones are part of the interbedded regional aquifer.

The habitat on the Site and adjacent properties consists of ruderal grasses (i.e., plants commonly found in ecosystems disturbed by human activity) and ornamental trees and shrubs. This vegetation provides marginal habitat for species adapted to highly disturbed areas impacted by industrial activities.

Over the historic Site-related monitoring period which began in 1982, groundwater elevations at the Site (and in the Fresno Valley in general) have steadily decreased approximately 25 feet due to the high rate of groundwater use in this region of the State. Because of regional control on groundwater

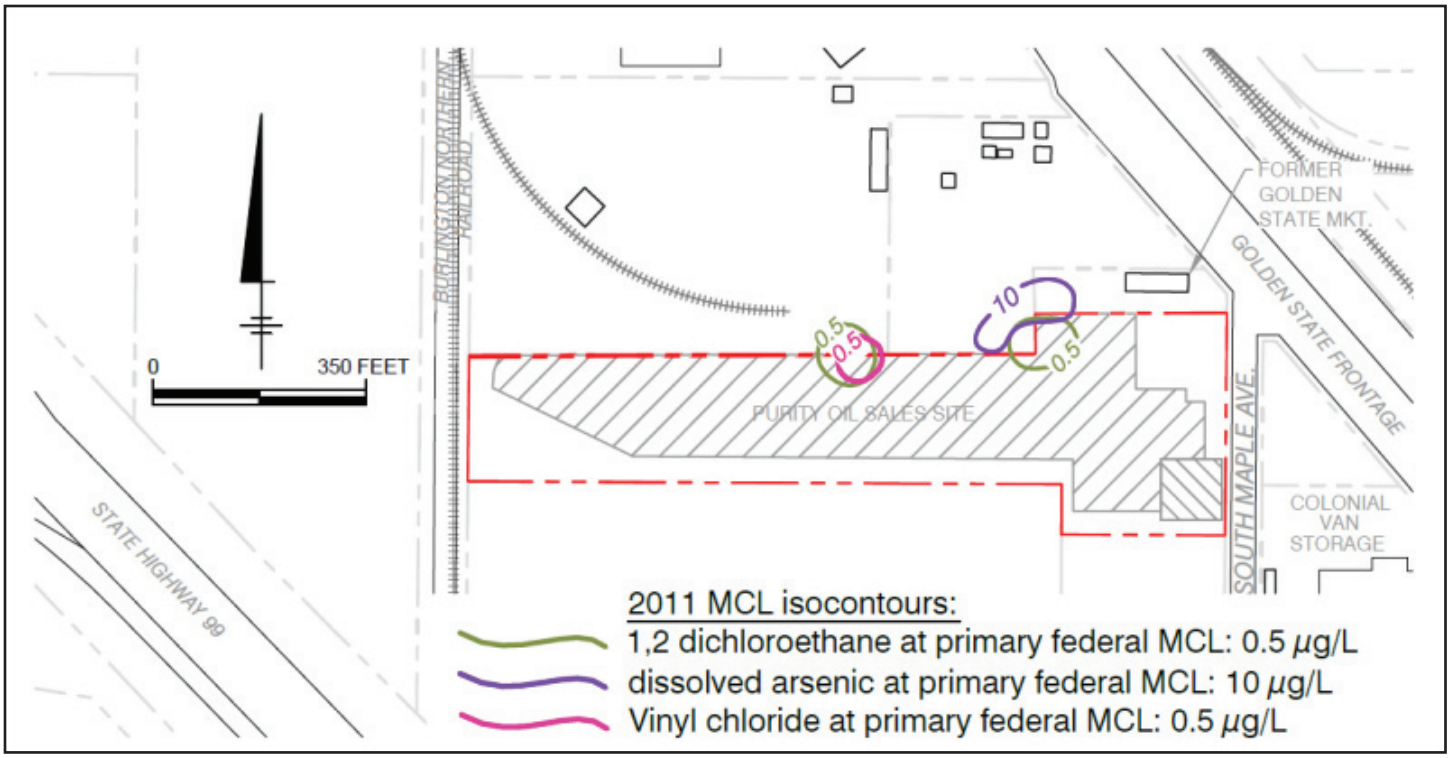

Figure 3: Extent of VOCs and Arsenic Exceeding MCLs – Shaded area shows on-site cap location. Data used for this figure depict an approximate location and concentration of the contaminants remaining in groundwater at the site. More detailed information about the extent of contamination at the site can be found in Table 1.

extraction, groundwater elevations at the Site have been relatively stable since 2009, varying seasonally by approximately one foot.

Groundwater monitoring in the past year has confirmed the presence of two remaining areas at the Site where groundwater contains VOCs and arsenic concentrations above cleanup goals. The current estimated extent of chemicals of concern above Maximum Contaminant Levels (MCLs or federal drinking water standards) is depicted in Figure 3, based on August 2011 groundwater analytical data. The historical groundwater monitoring record at the Site demonstrates that the plume has been stable or shrinking and that the areas of remaining groundwater contamination are very small compared to their size prior to the 1994 implementation of groundwater extraction.

Scope and Role of this Action

The scope of this Proposed Plan addresses OU-1 and includes remediation of groundwater impacts consistent with the remedial action objectives initially described in the 1989 ROD. The remedy currently proposed would replace the existing remedy defined in the 1989 ROD, which is a groundwater extraction and treatment system that was deactivated in 2005. The proposed remedy addresses the remaining VOC contamination that exceeds cleanup goals as defined by EPA in the 1989 ROD and reevaluated in the First, Second, and Third Five-Year Review reports conducted by EPA in 2001, 2006, and 2011, respectively.

Summary of Site Risks

The Purity Oil site is zoned for heavy industrial land use. However, it is not currently being used for commercial/industrial purposes. At this time, no non-remediation related structures are present on-site and no activities or operations other than remediation activities are underway. Personnel currently working on site are present intermittently and work in accordance with a Site Health and Safety Plan, which prevents exposure to on-site COCs. As a result, under current Site conditions, there are no on-site human receptors with uncontrolled potential exposure to COCs. The current property owner will restrict the Site from future development that would interfere with the on-site cap.

Potable water is supplied to residents and businesses near the Site by the City of Fresno and the Malaga County Water District water supply systems. Groundwater within the plume area is designated as a drinking water aquifer: however, it is not a source of public drinking water supply and no private drinking water wells operate in the area. Site groundwater usage is currently restricted by ICs

issued by Fresno County and Malaga County Water District. The ICs prevent use of impacted groundwater in the Site vicinity for domestic, industrial or agricultural uses and will remain in place, at a minimum, until contaminant concentrations no longer exceed cleanup goal concentrations.

There are no endangered species or critical habitats present at the Site. Additionally, if there were, the Site does not pose a risk to critical habitats or endangered species because there are no complete exposure pathways to these receptors.

As summarized here, the risks currently posed by contamination at the Site are low and controlled. However, the groundwater extraction and treatment remedy selected in 1989 is no longer effective, and the remedy must therefore be amended to accommodate the current conditions at the Site. It is EPA's current judgment that the Preferred Alternative identified in this Proposed Plan is necessary to protect public health and the environment.

Remedial Action Objectives

The remaining remedial action objective for the Site that has not yet been accomplished is to restore the sole-source drinking water aquifer to meet federal and state drinking water standards. This remedial action objective was established as part of the original remedy in the 1989 ROD. Although there is no exposure pathway to the constituents in groundwater that remain above the drinking water standard, the selection of the proposed remedy is necessary to meet the remedial action objective for the site.

Summary of Alternatives

EPA has evaluated how each of the five cleanup alternatives satisfies the remaining remedial action objectives and other factors required by EPA in the remedy selection process. Each alternative is described below, including EPA's preferred alternative (Alternative 2).

Alternative 1: No Further Action

The No Further Action alternative does not include any additional remedial action or groundwater monitoring beyond what has been completed to date. In accordance with EPA guidance, the no action alternative is included in remedial evaluations to serve as a baseline with which to compare other remedial alternatives.

Alternative 2: Monitored Natural Attenuation (MNA) with Institutional Controls (ICs) (EPA's Preferred Alternative)

Monitored Natural Attenuation (MNA) is the reliance on natural processes to achieve site-specific remediation objectives within a timeframe that is reasonable compared to that offered by other more active methods. These natural processes include biodegradation, dispersion, dilution, sorption, volatilization, and natural chemical destruction. A study investigating the suitability of natural attenuation for the Site was conducted in 2011. Evidence from the site indicates that the remaining VOC plume is stable and shrinking via natural processes. Natural attenuation is also occurring for the elevated concentrations of iron, manganese, and arsenic in groundwater, and evidence shows that these COCs will also attenuate within a reasonable timeframe. This alternative will meet the remedial action objective for the site by 2014 for VOCs and by 2039 for metals (iron, manganese, and arsenic).

Under this alternative, groundwater monitoring in conjunction with ICs would continue, but no active remediation of groundwater would occur. This alternative would rely on ICs to limit the use of the impacted groundwater until cleanup goals are reached. An active remedy will be evaluated if there is a rise in the groundwater table of 10 feet or more after the adoption of the proposed remedy, or a significant rise in groundwater contaminants. This evaluation will be performed as part of the Five-Year Review, which will assess the effectiveness and protectiveness of the remedy in place. If it is determined that the remedy is not making progress towards meeting cleanup goals, further remedial action will be evaluated by Chevron.

Second to the No Further Action Alternative 1, this option is the least expensive option, and the present value cost of Alternative 2 is approximately $1,331,000 for 30 years of groundwater monitoring.

Alternative 3: Enhanced Reductive Dechlorination (ERD) with MNA and ICs

ERD accelerates naturally occurring degradation of chlorinated VOCs by adding amendments that would enhance biodegradation. Four vertical extraction wells and three horizontal injection wells are expected to be necessary to extract groundwater and then redistribute amended groundwater throughout the impacted area. This alternative would require MNA following active ERD treatment and for areas of the plumes not influenced directly by ERD treatment. This alternative would rely on ICs to limit the use of the impacted groundwater until cleanup goals are reached. An ERD pilot study was conducted at the site from 2008 to 2010. Results of the pilot study indicate that although this alternative successfully reduced concentrations of VOCs, metals were mobilized due to the changed groundwater conditions, which would attenuate over time. This alternative may attenuate VOCs at a faster rate than the MNA remedy, as indicated by ERD pilot study results. However, Alternative 3 requires design and construction of a new ERD injection system, which may mean the remedy would potentially take several years to begin operating. By this comparison, the MNA remedy alone would reach MCLs by that date. Also, this alternative would cause a release of naturally-occurring metals in larger amounts than the ERD pilot study, due to full-scale implementation of ERD under Alternative 3. It would take longer for these metals to attenuate

than under the MNA remedy due to their elevated concentrations in groundwater, and would require additional years of groundwater monitoring. This alternative includes five years of operations and maintenance of an ERD system with 30 years of groundwater monitoring. The present value cost of Alternative 3 is approximately $2,722,000.

Alternative 4: Air Sparging with MNA and ICs

Air sparging would utilize an air compressor and approximately 100 wells operating in alternating groups to pump air into impacted groundwater. As air bubbles migrate through impacted groundwater, VOCs are volatilized from groundwater and into the vapor phase. A high number of wells are required for this remedy in order to provide enough oxygen to groundwater to make this remedy effective. Those portions of the plume outside the target air sparging treatment area would be addressed through MNA as described in Alternative 2. This alternative would also rely on ICs to limit the use of the impacted groundwater until cleanup goals are reached. Similarly to Alternative 3, this remedy requires design and construction, which may take up to several years. Given the very short timeframe for VOCs to reach cleanup goals under Alternative 2, MNA, the site may reach goals for VOCs by the time the remedy is in place. Metals, however, will continue to attenuate over time and may be significantly accelerated by the air sparging system. This alternative includes five years of operations and maintenance of an air sparge system with 30 years of groundwater monitoring. The present value cost of Alternative 4 is approximately $2,995,000.

Alternative 5: Groundwater Extraction and Treatment with MNA and ICs

This alternative would modify the existing groundwater extraction and treatment system to employ a horizontal extraction well to withdraw impacted groundwater and deliver it to an on-site treatment plant before the water is discharged into the North Central and Central Canals. Those portions of the plume outside of the area directly addressed by groundwater extraction would be addressed through MNA as described in Alternative 2. This alternative would also rely on ICs to limit the use of the impacted groundwater until cleanup goals are reached. Similarly to Alternative 3 and 4, this remedy requires design and construction, which may take up to several years. Given the very short timeframe for VOCs to reach cleanup goals under Alternative 2, MNA, the site may reach goals for VOCs by the time the remedy is in place. Metals, however, will continue to attenuate over time and may be slightly accelerated by the groundwater extraction and treatment system. This alternative includes five years of operations and maintenance of a groundwater extraction and treatment system with 30 years of groundwater monitoring. The present value cost of Alternative 5 is approximately $2,693,000.

Evaluation of Alternatives

EPA evaluates each of the alternatives based on nine standard criteria (Figure 4). The two threshold criteria are the most important and must be met for an alternative to be further considered: 1) overall protection of human health and the environment, and 2) compliance with federal and state "applicable or relevant and appropriate requirements" (ARARs). The five balancing criteria include 1) long-term effectiveness and permanence; 2) reductions in toxicity, mobility, and volume through treatment; 3) short-term effectiveness; 4) implementability; and 5) cost. The two modifying criteria are 1) potential for state acceptance and 2) community acceptance, which will be evaluated after the close of the public comment period.

Alternative Comparison

Figure 5 illustrates how each alternative compares to each evaluation criteria.

Alternatives that fail threshold criteria

The two threshold criteria are: 1) overall protection of human health and the environment, and 2) compliance with federal and state "applicable or relevant and appropriate requirements" (ARARs).

Alternative 1 failed to fully meet the threshold criteria and was not retained for further evaluation. Alternative 1, the No Further Action alternative, does not provide a mechanism to monitor Site conditions, confirm compliance with ARARs, or ensure protection of human health and the environment. For this reason, it was not retained for further evaluation.

Alternatives 2, 3, 4, and 5 were carried on for further evaluation. The primary ARARs pertinent to each of the alternatives are the same: state and federally-established drinking water standards for the site contaminants.

Evaluation of alternatives that meet criteria

Balancing criteria considered for the alternatives that meet threshold criteria are: 1) long-term effectiveness and permanence; 2) reductions in toxicity, mobility, and volume through treatment; 3) short-term effectiveness; 4) implementability; and 5) cost. Since Alternative 1 did not meet all threshold criteria, the only alternatives compared against the balancing criteria are Alternative 2, 3, 4 and 5.

Long-Term Effectiveness and Permanence

Long-term effectiveness and permanence refers to expected residual risks and the adequacy and reliability of the alternative to manage any residual risk (e.g., untreated contaminants) remaining after

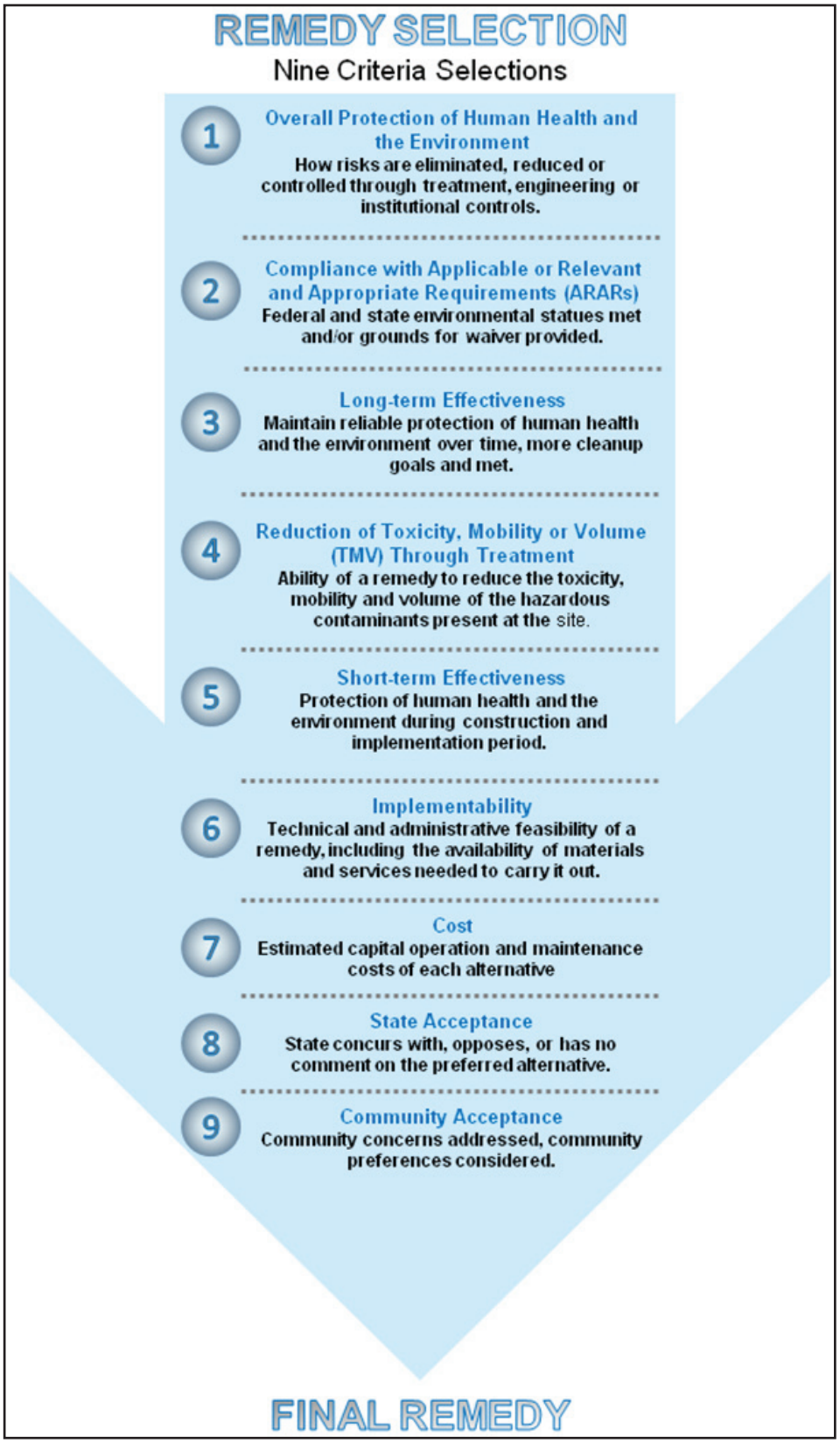

Figure 4: Nine Criteria for Remedy Selection

cleanup levels have been met. The remediation achieved by Alternatives 2, 3, 4, and 5 would be permanent. Successful implementation of all of these alternatives would clean up the groundwater to drinking water standards, and continued monitoring would ensure that the reduction in concentrations is not temporary. Institutional Controls required by all alternatives would also ensure permanent long-term protectiveness.

Reduction in Toxicity, Mobility, and Volume through Treatment

This criterion considers the anticipated performance of an alternative to permanently and significantly reduce the toxicity, mobility, or volume of COCs in groundwater through treatment.

Since Alternative 2, MNA with ICs, does not include an active component to the remedy, it does not satisfy this balancing criterion, even though natural attenuation processes will successfully reduce the toxicity, mobility, and volume of contaminants in groundwater.

Alternative 3 partially meets this criterion. Although in the long term this alternative would restore groundwater to drinking water standards, the short-term effect of an ERD remedy would be a rise in metals concentrations in groundwater (specifically iron, manganese, and arsenic). In the short-term, groundwater contamination would increase in toxicity, mobility, and volume, but the remedy would be effective in the long term in meeting this criterion.

Alternatives 4 and 5 all effectively meet this criterion. Through active treatment these alternatives are expected to decrease the mass of contaminants in groundwater until they restore the aquifer to drinking water standards.

Figure 5: Groundwater Alternatives Comparison

Criteria	No Further Action	MNA with ICs [Preferred]	ERD with MNA & ICs	Air Sparging with MNA & ICs	Extraction & Treatment with MNA & ICs
Overall Protectiveness	○	●	●	●	●
Compliance with State/Federal Requirements	○	●	●	●	●
Long-Term Effectiveness and Permanence	○	●	●	●	●
Reduction of Mobility, Toxicity, Volume	○	○	◒	●	●
Short-term Effectiveness	○	●	●	●	●
Implementability	○	●	●	●	●
Cost (NPV*)	0	1.3	2.7	3.0	2.7
Potential for State Acceptance	○	●	◒	●	●
Community Acceptance	Community acceptance of the preferred alternative will be evaluated after the public comment period.				

● = Fully meets criteria ◒ = Partially meets criteria ○ = Does not meet criteria

* Net Present Value calculated over 30 years, in millions of dollars.

Short-Term Effectiveness

Short-term effectiveness addresses the period of time needed to implement the alternative and any adverse impacts that may affect workers, the community, or the environment during the construction and operation of the alternative until cleanup levels are achieved. Alternative 2 is the most effective in the short-term because there is no construction associated with this remedy.

Alternatives 3, 4, and 5 require construction of their respective proposed remedies, but all fully meet this criterion since there is no exposure pathway to the community, and on-site hazards related to construction of the remedy will be minimized. Although any construction activity creates potential for site workers to be exposed to contaminants in soil, soil vapor, and groundwater, on-site workers would minimize exposure to COCs by limiting contact with the groundwater, contaminated soils, and following approved Health & Safety plans.

Implementability

Implementability addresses the technical and administrative feasibility of an alternative from design through construction and operation. Factors such as availability of services and materials, administrative feasibility and coordination with other governmental entities are also considered.

Alternative 2 has the highest implementability because it would not require any additional treatment components or mechanical systems and a routine groundwater monitoring program is being implemented at the Site.

Alternatives 3, 4, and 5 would also meet this criterion. There are no anticipated obstacles with respect to doing more action if needed, the ability to construct and operate the proposed remedy, the ability to monitor the effectiveness of the remedy, or the ability to acquire the required equipment for the proposed remedy.

Cost

EPA compares each alternative based on present worth cost (a measure of the total project cost over the time frame required to achieve the cleanup goals). Alternative 2 costs the least of all the alternatives. The net present value of this alternative is approximately $1,331,000 for 30 years of groundwater monitoring.

Alternatives 3, 4, and 5 are proposed to cost between $2.6-$3 million dollars (net present value). All three of these alternatives include the construction, as well as the operations and maintenance of their respective treatment systems. For these alternatives, it is estimated that groundwater monitoring will also continue for at least 30 years. Although Alternatives 3, 4 and 5 include active treatment and could decrease the time needed to reach cleanup goals for VOCs, the savings in time might never be realized because Alternative 2 would likely reach cleanup goals for VOCs before the active treatment systems could be constructed and operated (other alternatives require design and construction). These alternatives might also reduce the time needed to reach cleanup goals for metals, except for Alternative 3, which would increase metals concentrations. However, since standards for iron and manganese are not based on risk to human health, continued monitoring of metals is acceptable.

Preferred Alternative

Based on information currently available, EPA believes the Preferred Alternative (Alternative 2) meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. EPA expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment, 2) comply with ARARs, 3) be cost-effective, 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, and 5) satisfy the preference for treatment as a principal element or explain why the preference for treatment will not be met.

EPA's Preferred Alternative (Alternative 2, MNA with ICs) will protect human health and the environment and achieve ARARs. There is clear evidence of decreasing contaminant concentration trends since the groundwater extraction and treatment system was deactivated and the Enhanced Reduction Chlorination pilot study was performed.

VOC concentrations above cleanup goals remain in two isolated areas of the site and detectable concentrations continue to approach MCLs. Metals (iron and manganese) exist over a larger footprint at the site and will continue to naturally attenuate over time. Cleanup standards for iron and manganese are based on aesthetic drinking water quality standards and do not pose a risk to human health.

The main groundwater constituents of concern with concentrations that have exceeded cleanup goals in the last year are summarized in Table 1. Through monitored natural attenuation, cleanup goals are expected to be reached for VOCs by 2015, and by 2039 for metals (iron, manganese, and arsenic). The Preferred Alternative is effective in the short term because there are no complete exposure pathways at the Site, the plume is stable and shrinking, and the ICs currently in place prevent the groundwater from being accessed or used for any purpose. The proposed remedy will ensure that the site meets the remedial action objective of restoring groundwater to drinking water standards.

Community Participation

EPA provides information regarding the cleanup of the Site to the public through fact sheets, public meetings and the Administrative Record file. The public may also visit the EPA website at **www.epa.gov/region09/purityoil**

EPA invites the public to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted there by attending a Public Meeting to be held on Thursday, September 6, 2012. The public may also provide comments on this Proposed Plan anytime during the public comment period. Please send your comments to: Lily Tavassoli, EPA Site Manager, 75 Hawthorne St., San Francisco, CA 94105, (415) 972-3146, *Tavassoli.Lily@epa.gov*

Glossary

Institutional controls: Legal controls that help minimize the potential for human exposure to contamination. For instance, zoning restrictions that prevent site land uses, like residential uses, that are not consistent with the level of cleanup.

Monitored Natural Attenuation (MNA): MNA uses monitoring of natural physical, chemical, and biological processes to measure the attenuation (reduction) of constituents of concern.

Remedy: The remedial alternative that is selected, documented in a ROD, and implemented at a site.

Soil vapor extraction (SVE): SVE uses a fan to pull the air from between soil particles, also removing VOCs.

Volatile Organic Compounds (VOCs): Organic chemicals that evaporate readily and have low to medium solubility in water

Purity Oil Sales, Inc. Superfund Site

For further information on the Purity Oil Sales, Inc. Superfund Site, please contact

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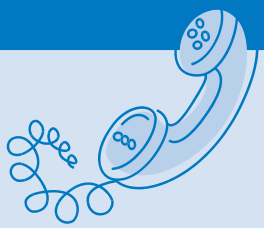
Web site:
www.epa.gov/Region09/PurityOil



Para versión en español, pongase en contacto con: Alejandro Díaz, (415) 972-3242 o diaz.alejandro@epa.gov

Public Meeting Thursday, September 6, 7:00 pm
Malaga Elementary School Cafeteria
3910 S. Ward Ave, Fresno

United States Environmental Protection Agency, Region 9
75 Hawthorne Street (SFD-6-3)
San Francisco, CA 94105
Attn: Vicki Rosen (Purity Oil 8/12)

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