GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment

Toxic Substances Division **Voluntary Cleanup Program**

Voluntary Cleanup Program

CLEANUP ACTION PLAN

The objectives of the Cleanup/Corrective Action Plan (CAP) are to summarize and document all of the activities and decisions made to date, and to describe in detail the cleanup action plan chosen for the site along with the rationale for that selection. The introductory section of the document provides a brief overview of the site history, site characterization, initial response and abatement measures, and comprehensive site assessment. Since the CAP will be made available for public comment, the document should be written in a form readily understood by the public.

The Participant shall submit a plan that provides for adequate protection of human health (maximum tolerable human health risks) and the environment, as determined by the Division, and shall modify the cleanup action plan as necessary to meet this standard.

A CAP shall propose a corrective action option for the site that will:

(a) Perform active or passive remediation at the site within a reasonable period of time to achieve the clean up criteria; and

(b) Ensure that measurable non-aqueous phase liquids will not exist or are no longer recoverable at the site.

SUBMISSION AND APPROVAL OF CAP

A. Scope

The Participant shall submit the plan according to a schedule and format established by the Division.

The Participant shall submit a plan that provides for adequate protection of both human health and the environment, as determined by the Bureau, and shall modify the cleanup action plan as necessary to meet this standard.

B. Surface Water, Groundwater, and Soil Quality Standards

1) The standards for surface water quality are the District of Columbia Water Quality Standards (21 DCMR Chapter 11, published at 41 D.C. Register 1075, March 4, 1994).

2) The standards for groundwater quality are:

a) No more than 1 ppm total petroleum hydrocarbons for groundwater contaminated by non-gasoline petroleum contamination, and

b) The standards for groundwater quality for specific inorganic and organic compounds are the District of Columbia Water Quality Standards for Ground Water (21 DCMR Chapter 11, published at 40 D.C. Register 4203, July 2, 1993).

3) The standards for soil quality are in the District of Columbia Soil Quality Standards Guidance Document.

C. Cleanup Action Proposal

The CAP must propose a cleanup action option for the site that will:

1) Remediate the site within a reasonable period of time based on the best available technology, including mass excavation for the purpose of development;

2) Ensure that non-aqueous phase liquids will not exist or are no longer recoverable at the site; and de-watering during the development stage can be an option for groundwater remediation by treating and discharge into WASA system; and

3) Accomplish one of the following:

a) Reduce the contaminant levels to achieve the standards set forth in section
(B) above, and any other applicable District of Columbia or federal regulations;

or

b) Where no standards have been established by regulation, reduce the contaminant levels to levels which the Toxic Substances Division deems to be adequately protective of human health and the environment based upon the available data;

or

c) If it is not feasible to meet the requirements of (a) or (b), monitor the site over time to provide technically-based assurance that the site contamination is controlled under natural conditions and that those conditions will not now, or at some future time, adversely impact human health, safety or the environment.

D. Contaminant Disposal

A cleanup action plan will provide for:

1) Proper disposal of contaminated soils removed from the ground, and shall not permit the placement of contaminated soils back into the ground for the purposes of *in situ* remediation or storage, unless specifically agreed to by the Division

2) Proper disposal of other contaminants found on site by following proper District and Federal guidelines.

E. Quality Assurance/Quality Control

A site-specific Quality Assurance/Quality Control (QA/QC) Plan for the activities to be carried out during implementation of the CAP must be prepared prior to the implementation of any site activities. The QA/QC Plan shall cover all actions proposed in the CAP, and comply with any Departmental guidelines.

F. CAP Approval

The approval of the Division shall be required for each CAP. Approval shall be given to a plan only after the Division determines, to its satisfaction, that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the Division should consider the following factors, as appropriate:

1) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

2) The hydrogeologic characteristics of the facility and the surrounding area;

3) The proximity, quality, and current and future uses of nearby surface water and groundwater;

4) The potential effects of residual contamination on nearby surface water and groundwater;

5) An exposure assessment;

6) The estimated timetable for completion of the remediation; and

7) Any other information assembled in compliance with release reporting, initial abatement, contaminant removal or site assessment requirements.

The Division's approval shall contain a determination as to whether the proposed cleanup action is an active or passive corrective action. Passive corrective action shall include the following technologies:

1) Monitoring of natural attenuation;

2) Non-pressurized positive or negative subsurface venting;

3) A single injection of biological or chemical agents designed to enhance attenuation of subsurface contamination;

4) Any other technology involving limited activity, as determined by the Bureau.

CAP REPORT FORMAT FOR SUBMISSION

The CAP submitted in conjunction with the remediation of contaminated sites in the District of Columbia should be presented in the format described below. Please be advised, however, that this model includes references to various environmental media and treatment alternatives that may not be applicable to every site. Additionally, please include in your plans any additional information not specifically cited in this model that you feel may be pertinent to the evaluation of the proposed remedial plan.

A. Introduction - Background

Brief description of all studies performed prior to this plan submittal (record search, site assessment, pilot studies, etc.).

B. Comprehensive Site Assessment Summary

Using the information gathered during the CSA activities and any other previous investigations, briefly review and describe the current conditions.

1) Site description.
   a) Location (including map).
   b) Past and present site usage.
      -Activities that may have contributed to contamination on site.

2) Review of data collection activities.
   a) Summary of borings, wells, soil gas, other field activities (including map).
   b) Analytical results summary (no need to attach lab sheets if the results have been submitted previously).

3) Discussion of site conditions.
   a) Geology and hydrogeology of site.
   b) Extent of contamination presence and contaminant concentrations in various media.
   c) Areas targeted for remediation.

C. Cleanup Action Proposal

Discuss in detail technology(ies) proposed for remediation of impacted media (including a discussion of selected criteria for choosing proposed method over other potential remedial options). Given the current site conditions, identify, describe and evaluate potentially applicable technologies that are capable of remediating the site, based on the proposed time lines. Evaluate the positive and negative aspects of each option from the standpoint of technical merit, its ability

to be implemented, economic and temporal feasibility, and immediate/future beneficial results.

1) Implementation of selected technology(ies) at site.

a) Complete description of proposed remedial plan, including but not limited to the following:

i. Soil removal (including lateral and vertical extent and disposal and treatment options).
ii. Extraction wells (groundwater or soil vapor) with approximate extraction rates, drawdowns, radii of influence, etc. (include diagrams).
iii. On site treatment units for extracted groundwater, soil vapor, or soils.
iv. Discharge points for treated air, water (anticipated permit limitations and sampling needs).
v. Injection wells or galleries, with approximate injection rates.
vi. Off site treatment or disposal options.

b) Diagrams of proposed system (schematics are acceptable); detailed specifications of system will be reviewed during permit approval process.

D. Timetable

1) Time to begin system set-up following permit approval.
2) Time to system start-up or excavation/dewatering.
3) Anticipated time for completion of remediation.

IMPLEMENTATION OF CLEANUP ACTION PLAN

After approval of the CAP, the Participant shall begin implementation of the plan, including any modifications to the plan made by the Division. Within 30 days after CAP approval, the Participant shall submit a copy of all required permit applications. Within 90 days after CAP approval, the remediation system shall be installed on-site and operational, unless the Division grants an extension.

The Participant shall notify the Bureau and the Fire Chief at least seven calendar days prior to initiating operation of the remediation system, and provide the Bureau with an opportunity to inspect the site prior to operation.

The Participant shall monitor, evaluate, and report the results of implementing the plan in a format established by the Division, at least quarterly, or in accordance with a time schedule approved in the CAP.

If the Bureau determines that the implementation of corrective actions are not achieving adequate protection of human health and the environment, the Department may require the Participant to take additional corrective action.

COMPLIANCE MONITORING REPORTS

Outline a monitoring plan for the selected strategy to demonstrate compliance with the cleanup standards and objectives (sampling frequency, locations, parameters, levels, field and laboratory quality assurance and control.).

The Participant must evaluate the effectiveness of the corrective action program after one (1) year of implementation to determine whether additional measures must be implemented to effectively reduce the contaminant levels. After one (1) year of passive corrective action as referred to above, the Participant must either apply for closure by a certificate of completion, or obtain written consent from the Division for CAP continuation.