



Maryland
Department of
the Environment

FACTS ABOUT: Voluntary Cleanup Program Response Action Plans

The Response Action Plan (RAP) identifies a specific remedial approach and schedule for addressing environmental concerns at a property not eligible for a No Further Requirements Determination (NFRD). A participant can decide to voluntarily conduct a RAP for a property early in the application process or the Maryland Department of the Environment (Department) can direct the participant to prepare and implement a RAP when the property is accepted into the VCP. If the decision to implement a RAP is made by a VCP participant but is based on limited data, the VCP may have specific requirements for additional sampling or acceptable remedial technologies may be limited.

The participant is responsible for developing and implementing the RAP and complying with the public participation requirements. The Department's role is to ensure that the plan will achieve the appropriate cleanup criteria and is protective of human health and the environment, is available for public review and comment, is adequate to address the environmental concerns at the property, and is properly implemented and completed to the satisfaction of the Department.

The VCP is frequently asked whether a participant can undertake intrusive activities on an enrolled property before a RAP is approved and the performance bond is submitted. The Department does not allow any remediation or earth moving activities prior to approval of the RAP. The sole exception to this is when a participant is directed by the VCP to abate an imminent and substantial threat to human health and the environment. Undertaking intrusive actions before RAP approval and performance bond submittal shall result in the participant's and property's withdrawal from the VCP.

After an application has been approved for participation in the VCP and the participant has been notified that a RAP must be developed, the participant must notify the Department in writing within 30 days whether the participant intends to proceed with or withdraw from the program. If the participant fails to provide the required notification within 30 days, the application will be considered withdrawn. The notification must be signed by the participant and the Department cannot accept the notification from other parties, such as the consultant or counsel. The RAP must be submitted to the Department within 18 months of receipt of the VCP acceptance letter.

The proposed RAP must focus on constructing a remedial strategy that addresses all environmental concerns at the site, is protective of human health and the environment, ensures the health and safety of the workers implementing the plan, and sets a clearly defined schedule for implementation and completion.

To assist with RAP development, participants may review previously approved RAPs for other VCP properties that may be relevant to the participant's site. The Department also recommends



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that participants communicate with VCP staff early in the development process to get feedback on the RAP approach and discuss any questions. The VCP project manager can help participants with both of these activities. Please note that while the VCP project manager encourages discussion and questions and may review proposed RAP verbiage, the final approval will be based on the proposal included in the RAP document submitted to the Department and may be subject to additional requirements or restrictions other than those discussed prior to submittal.

Before the Department issues a Certificate of Completion (COC) to the participant, it must first verify that a RAP has been successfully implemented and completed to the satisfaction of the Department. The participant must submit a Completion report to the Department for review upon completion of all RAP activities and within any deadline set forth in the RAP implementation schedule. Once the report has been reviewed by the Department and all comments have been adequately addressed, the Department shall issue a COC to the participant stating that the plan has achieved the applicable cleanup criteria at the property and protects human health and the environment.

Submission and Review

At the time the proposed RAP is submitted to the Department, the 75-day review period will begin, provided the following have also been completed:

- Publication of a notice of the proposed RAP, including the date and location of the public informational meeting, in a local newspaper of general circulation; and
- Posting at the eligible property a notice of intent to conduct a RAP at the property.

Please note that publication of the first newspaper notice and posting of the notice of intent to conduct a RAP at the property should be completed at the same time the proposed RAP is submitted to the Department. However, if the Participant delays scheduling the public informational meeting, the start of the 75-day review period is also delayed.

Within 75 days after the Department has received a proposed RAP, the Department will complete a review of the proposed RAP, consider any public comments it has received and shall notify the participant in writing whether the proposed RAP has been approved or rejected. If the proposed RAP is rejected, the Department shall state the modifications necessary to receive approval.

The proposed RAP must meet the requirements outlined in Section 7-508 of the Environment Article, Annotated Code of Maryland. It should be prepared in the format and, at a minimum, include the information described in Section C below. If the required information is not provided, the proposed RAP will be rejected. The Department may request any additional information or provisions it determines necessary to achieve the cleanup criteria or protect public health or the environment as set forth in Section 7-508 of the Environment Article, Annotated Code of Maryland.



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If the proposed RAP is not sufficient for approval, the VCP will issue comments on the proposed RAP and the participant will have 120 days to revise the proposed RAP and resubmit it to the Department. If the participant fails to resubmit the plan within 120 days, the Department shall consider the application withdrawn in accordance with Section 7-512 of the Environment Article. The participant may request in writing a 30-day extension to the RAP submittal deadline. Additional extensions may be requested; however, the Department reserves the right to deny an extension and reject the RAP.

Within 30 days following receipt of a resubmitted plan, the Department will notify the participant whether the plan is approved. Upon approval, the Department will notify the participant in writing a RAP approval letter which states that no further action will be required to accomplish the objectives set forth in the approved plan other than those actions described in the plan.

Public Participation Requirements

The participant will hold a public informational meeting at his or her expense on the proposed RAP within 40 days after publication of the first newspaper notice. The Department will attend the meeting and accept written comments on the proposed plan for five days after the meeting, or 30 days after publication and posting of the public notice, whichever date is later.

1. Public Notice of Meeting:

a. Newspaper:

The notice for the proposed RAP must be published once a week for two consecutive weeks in a daily or weekly printed newspaper of general circulation where the eligible property is located.

All newspaper notices must be reviewed by the Department prior to publication. Upon request, the participant must submit documentation confirming that the selected newspaper's circulation coverage area includes the property and vicinity.

The participant must also provide documentation of newspaper publication, either in the form of the proof of publication provided by the newspaper or scanned pages of the newspaper.

If there is an error in the published meeting date, time, or location, the notice is not published as required, or the meeting location is inaccessible when the attendees arrive, the public informational meeting will need to be rescheduled and all public notification requirements repeated for the public meeting.

b. Property Sign:

The participant must post a notice of the proposed RAP at the property. The participant must submit photographs, either digital or print, documenting that the sign is located in



an area with high visibility and traffic volume. In addition, the participant must provide a close-up photograph showing the text of the sign. The text of the posted notice must be reviewed by the Department prior to placing the sign on the property. The posted notice must:

- Be located in an area of the property with the greatest visibility and highest volume of traffic;
- Contain the same information as the newspaper notice;
- Be no smaller than six (6) feet wide by four (4) feet high; and
- Remain standing, and its printed message maintained in a legible condition, for the full 30-day public comment period.

2. Meeting:

The participant shall hold a public informational meeting on the proposed RAP at the expense of the participant within 40 days after publication of the notice in a newspaper of general area circulation. If the meeting is not held during the required time frame, the RAP will be rejected without further comments.

The participant is responsible for all costs associated with the public informational meeting, which shall take place in a public building at a location and time that are readily accessible and convenient to the majority of citizens living near the property. The meeting room selected should accommodate the number of potential attendees. The meeting must be held in the evening hours with the start time no earlier than 5:30 pm. The participant or their representative should begin planning the public informational meeting prior to submittal of the RAP. Many potential public meeting places such as libraries or schools require reserving meeting rooms well in advance and may be difficult to book during certain times of the year. The VCP project manager should be consulted for confirmation of potential meeting dates as early in the planning process as possible to ensure that VCP staff is available to attend the public informational meeting. During the public informational meeting, the participant should present the history of the property, the contaminants of concern at the property that will be addressed in the RAP, a description of the proposed RAP, and future development plans for the property. All graphic presentations should be clear and legible. Handouts may be provided. The VCP project manager will provide a sign-in sheet that all participants are encouraged to sign. The VCP project manager will initiate the public informational meeting and provide a brief introduction of the participants. After the introductions, the participant or their representatives will continue with a presentation on the RAP. The participant and their representatives should be prepared to answer questions from the attendees during the public informational meeting.

RAP Requirements

The VCP has revised the required sections of the RAP to streamline the drafting and review process, allow more clarity for implementation for both environmental and construction



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personnel, and to more accurately reflect the implementation process. Any RAP submitted after publishing this guidance should meet the requirements set forth below.

1. Site Overview:

This section of the RAP must provide a brief description of the property and a summary of the site history. It should identify the specific areas of the site requiring remediation and provide a map clearly delineating each area. This section should summarize the proposed response actions, including the applicable future land use category, each proposed remedial technology, and each proposed land use control. The land use category in this section must match the land use category selected on the VCP application form. In addition, the RAP must include summary tables and figures summarizing the sampling data for the property. A RAP will not be approved without the data summary.

2. Additional Investigatory Information:

If the VCP acceptance letter required additional sampling or the participant elected to collect any samples following issuance of the acceptance letter, the investigation and data must be summarized in this section of the RAP. If no additional data was collected, this section does not need to be included in the RAP. Types of additional information include further sampling for source or plume delineation or additional investigation completed as part of a remediation pilot study. This data most frequently includes collection of additional soil data to evaluate whether a soil exceedance is a hot spot limited in area or depth or whether contamination is more widespread. In other instances, sampling may be limited to demonstrating whether the vapor intrusion pathway is impacted.

3. Exposure Assessment:

Information presented in the exposure assessment should include:

- Current and future use as defined by the VCP land use definitions;
- All media of concern, including fate and transport assumptions and the rationale for excluding any medium;
- Potentially exposed populations, based on current and future use, including specific subpopulations, such as children or the elderly;
- A discussion of all potential exposure pathways and complete exposure pathways (i.e., pathways for which a contaminant, receptor, and contact are present), and the rationale used to determine whether an exposure pathway is complete; and
- Ecological receptors.

4. Cleanup Criteria:

A proposed RAP must demonstrate achievement of the appropriate cleanup criteria selected by the participant and the protection of public health and the environment.



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Section 7-508 of the Environment Article, Annotated Code of Maryland, lists six cleanup criteria that may be used for determining if further requirements are necessary at a property:

- Uniform numeric risk-based standards;
- Standards from a site-specific risk assessment;
- Background levels;
- Federal or State soil or water quality standards;
- Standards based on federal or State Maximum Contaminant Levels (MCLs); and
- Any other federal or State standards.

One or more of these criteria can be used to evaluate conditions at a VCP property. The use of the available cleanup criteria does not exempt applicants from meeting all other applicable Maryland environmental regulations at the property. A separate fact sheet on the cleanup criteria is available.

5. Remedial Approaches and Institutional Controls:

This section of the RAP should propose and discuss the details of the remedial approach or technology that would address each exposure pathway and media, area, or contaminant of concern at the property. This discussion should include any proposed institutional controls intended to prevent a complete exposure pathway or to maintain the protectiveness of the technology.

Prior to choosing a remedy and submitting a proposed RAP, the participant should consider cost, difficulty of implementation, schedule, and other factors when selecting the proposed remedy. For example, clean fill that meets the VCP clean fill requirements costs significantly more than generic fill and costs should be considered before proposing a cap to ensure that the implementation of the proposed RAP will be possible within the available budget for the cleanup/development.

The VCP will evaluate the proposed remedial approaches based on the requested land use, development plan, and property ownership. Not all remedial approaches are acceptable under all property uses or development plans.

The RAP must include construction details for each proposed remedy, including criteria to evaluate the effectiveness of the remedy, the area to be addressed under each remedy type, description of the general land use controls proposed to ensure long term protection of human health and the environment from the proposed remedy, and a description of any proposed action levels that will trigger contingency measures when exceeded. Examples of required details are described below:

- a. Soil Contamination: Approaches to soil contamination include, but are not



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limited, to the combination of, or each of, the following:

- 1) Soil removal and confirmation sampling: For a RAP proposing soil removal, it is necessary to provide details on the area and depth of soil proposed for removal, the confirmation sampling protocol including frequency and proposed analysis, location for proper disposal of impacted soil and, if applicable, details regarding importation of clean fill onto the property following the removal.
- 2) Installation and continued maintenance of a cap: For a RAP proposing a cap to mitigate exposure to impacted soil, the RAP must include a figure showing the proposed location, areal extent, and construction details, including cross sections, for each type of cap (asphalt paving, concrete sidewalks, landscaping, building slabs, etc.). The details provided should either include documentation provided by an engineer that the proposed construction detail for the remedy is sufficient for the proposed use or an engineer stamped cross section for each capping type. In addition, a detailed long term inspection, maintenance, and excavation protocol should be proposed including: 1) specific inspection forms for each cap type; 2) an inspection retention policy; 3) a protocol for notifying the Department of any change in contact person for the cap inspections; and 4) a protocol for notifying the Department in the event of any planned or emergency intrusive activities. The proposed RAP should also include details regarding the source of any clean fill or other cap material brought onto the property. If a cap is proposed in combination with consolidation of impacted soil, the RAP must also include details of soil management.
- 3) Continued maintenance of an already existing cap: For a RAP proposing to use an existing capped surface (i.e. parking lot, building slab) as the remedy, the RAP must include a figure showing the proposed location and areal extent of the existing cap. In addition, a detailed long term inspection and maintenance protocol should be proposed including: 1) specific inspection forms for each cap type; 2) an inspection retention policy; and 3) a protocol for notifying the VCP of any change in contact person for the cap inspections.

b. Groundwater Contamination: Approaches to groundwater contamination include, but are not limited, to the combination of, or each of, the following:

- 1) Source reduction: For a RAP proposing source reduction as the remedy, the RAP must include details of the proposed technology, a monitoring network and sampling protocol, a specific proposal for the sampling criteria by which the cleanup criteria will be met, and in certain cases, a specific proposal for long term post-treatment



monitoring. The completion of fate and transport modeling after confirmatory sampling or a groundwater monitoring program may be required at a property.

- 2) Monitored natural attenuation: For a RAP proposing monitored natural attenuation as the remedy for groundwater at the property, the RAP must include details of the proposed monitoring network and sampling protocol, a specific proposal for the sampling criteria by which the cleanup criteria will be met, and/or the proposed time period for monitoring.
- 3) A groundwater use prohibition on the property.

c. Vapor Intrusion: Examples of proposed approaches to the vapor intrusion pathway may include, but not be limited to, the following:

- 1) Source reduction via soil removal or groundwater treatment: A RAP proposing a source reduction of soil or groundwater to address the vapor intrusion pathway, must include proposal of a soil gas and/or indoor air confirmation sampling protocol in addition to the requirements set forth above for soil removal or groundwater treatment.
- 2) Source reduction via installation of a vapor extraction system: A RAP proposing source reduction via a vapor extraction system must include a detailed plan regarding location and installation of the extraction points, monitoring protocol for soil gas and indoor air, a specific proposal for the sampling criteria by which the cleanup criteria will be met (two consecutive quarters or three consecutive months) and system shut down, and a detailed inspection and maintenance protocol for the period of system operation including: 1) specific inspection forms for the system; 2) an inspection retention policy; and 3) a protocol for notifying the VCP of any change in contact person for the inspections and a specific proposal for long term post-treatment monitoring (30, 60, 180, 365 and 720 days after system shutdown).
- 3) Installation of a sub-slab depressurization system: A RAP proposing a sub-slab depressurization system to address the vapor intrusion pathway must include a detailed plan regarding location and installation of the system, monitoring protocol for soil gas and indoor air, a specific proposal for the sampling criteria by which the cleanup criteria will be met and system shut down (two consecutive quarters or three consecutive months), a specific proposal for long term post-treatment monitoring (30, 60, 180, 365 and 720 days after system shutdown), and a detailed inspection and maintenance protocol for the period of system operation including: 1) specific inspection forms for



the system; 2) an inspection retention policy; and 3) a protocol for notifying the VCP of any change in contact person for the inspections.

d. Other Details: There may be other details relevant to the design and implementation of the RAP that must be included in the Remedial Approaches and Institutional Controls section of the RAP. The most common additions are described below.

- 1) Action Levels: The action levels must be established to ensure that changing site conditions (e.g. increasing contaminant concentrations) do not pose a threat to potential on-site and off-site receptors.

As an example, for on-site receptors, a groundwater action level could be set based on vapor intrusion modeling to calculate the concentration of contaminants of concern that would pose an unacceptable health risk considering the site's future use scenario. The vapor intrusion modeling would provide a basis for establishing an on-site action level to trigger contingency measures if exceeded. For off-site receptors (e.g. domestic wells), appropriate action levels would be MCLs at the downgradient monitoring wells and other values derived from fate and transport groundwater modeling. The appropriate action levels will be established in consultation with the CHS Enforcement/Fund Lead Site Assessment Division or the Oil Control Program (OCP).

The Department's remedial action standards have been set at a carcinogenic value of 1.0×10^{-5} and noncarcinogenic hazard quotient (HQ) value of 1. An exceedance of either of these remedial action standards represents an unacceptable risk to human health.

Contingency plan trigger levels generally should be set for carcinogens between 1.0×10^{-6} and 1.0×10^{-5} and for noncarcinogens between a HQ of 0.1 and 1. The resulting action levels will then be below the Department's remedial action standards to account for the presence of multiple contaminants and to trigger appropriate contingency measures before site conditions reach unacceptable levels.

- 2) Continued Maintenance of Long-Term Remedies: For any proposed remedy that must be maintained to provide continued protections, a detailed maintenance plan is required as part of the RAP to ensure that future conditions at the site do not compromise the integrity of any physical maintenance controls. The maintenance plan should include: specific inspection forms for each remedy type, an inspection retention policy for inspection results to be provided to the Department upon request, and a protocol for notifying the Department of any change in contact person for the inspections.
- 3) Excavations and Clean Fill: All excavated material must be disposed in accordance with applicable local, State and federal laws and



regulations. The source of backfill material must be documented, and the Department may require laboratory analysis to certify its cleanliness. The participant cannot transport fill material to the site unless it has been approved in writing by the Department. The participant should provide sufficient time in the implementation schedule for the fill sites to be identified, sampled and the sample results reviewed by the Department prior to transport. The Department is not responsible for project delays caused by insufficient scheduling.

- 4) Asbestos, Lead, Oil: Any demolition activities at the site must be performed in accordance with all applicable federal, State, and local regulations regarding asbestos containing material and lead based paint. To ensure compliance with asbestos regulations, State law requires notification of the Department's Division of Asbestos Licensing & Enforcement at 410-537-3200 at least ten days prior to beginning demolition. Please contact the Department's Lead Poisoning Prevention Program at 410-537-3825 regarding regulations concerning demolition activities and lead based paint. Please contact the Department's OCP at 410-537-3442 for guidance on the proper abandonment and removal of storage tanks.
- 5) Reuse of Demolition Materials: Code of Maryland Regulation (COMAR) 26.04.07.04C(5) allows clean earthen fill material containing rock, concrete, non-refractory brick, and asphalt created as a result of construction excavation activities, mining, or regrading projects to be used as fill material without a Refuse Disposal Permit from the Department's Solid Waste Program (SWP) provided that: if warranted, a county grading permit is obtained, and the filling, grading, and site stabilization is carried out in accordance with the provisions of Environment Article, Title 4, Subtitle 1, and COMAR 26.17.01 (Sediment and Erosion Control regulations).

The Department has historically interpreted the phrase "construction excavation activities, mining, or regrading projects" to limit the concrete, asphalt and bricks referred to by this regulation to materials encountered in outdoor grading projects, e.g., from roads, sidewalks, footers, retaining walls, concrete slabs, parking lots, etc. Concrete, asphalt and bricks from buildings is covered under the regulatory definition of "demolition debris," and is a regulated solid waste that under most circumstances cannot be disposed except in a permitted rubble or municipal landfill. However, where a building is subject to deconstruction rather than demolition (ie., the structure is dismantled and the component parts separated for appropriate disposal and recycling, rather than just demolished), and all the material which is



not concrete or masonry is first removed, the concrete or masonry is demonstrated to be clean and not contaminated with oil or other industrial materials, and the structure is inspected by a Department representative prior to demolition, then the Department can issue a variance for this material to be managed as clean fill on-site.

If the participant is intends to request a variance for use of building deconstruction debris, the participant is urged to contact the Department to discuss the requirements for a variance request prior to submittal of a proposed RAP. An inspection of the building must occur prior to deconstruction of the building. A separate fact sheet on the requirements and process for a variance for reuse of demolition materials is available upon request.

- 6) Cap Specifications: The Department requires a two foot clean fill cap in all landscaped areas regardless of the property use. For other hardscape cap types (i.e. concrete building slabs, concrete sidewalks, asphalt, etc.), the Department requires either a copy of a plan stamped approved by the County or documentation from an engineer indicating that the cap thicknesses proposed are suitable for the final use. The RAP must include cross sections and a map indicating the areas for each cap type.

6. Criteria for Issuance of the COC:

The RAP must establish evaluation criteria to define specific conditions and project completion goals or objectives that must be achieved prior to issuance of the COC. These project completion goals must be based on the cleanup criteria and remedial technologies. The completion goals also may include other objectives or conditions, such as decreasing source concentrations, achievement of steady-state conditions, or a change in receptors (e.g. municipal water extended to downgradient residences to replace domestic wells).

This section of the RAP should include a numbered or bulleted list of the activities that will be completed and criteria that will be met in order for the participant to request issuance of a COC. While this section will include items from the “Remedial Approaches and Institutional Controls” section of the RAP, it should not merely be a repeat of that section. Submittal of a completion report is a requirement prior to issuance of the COC.

7. Reporting:

The RAP must outline notification and reporting time frames for status reports during RAP implementation, submittal of any required sampling and data (confirmation samples or monitoring samples), and a RAP Completion Report.

- a. Status Reports: RAP implementation status reports should be submitted to the VCP project manager on a periodic basis, usually monthly by the 15th of the following month, and should include a summary of activities completed during the prior month



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and a summary of any activities planned for the current month. In the event that no RAP activities have been completed or are planned, the progress report should state as much. The progress reports should also summarize application or granting of permit approval for any work related to implementation of the RAP. Examples include, but are not limited to, demolition permits, sediment and erosion control plans, and grading permits. The status report should include documentation, including manifests, for any impacted soil removed from the property, manifests and clean fill certification letters, or reference to sampling results approved by the VCP for any clean fill brought onto the property. The status reports may include sample results from monitoring or confirmation samples as well but in other cases the VCP may require a quicker turnaround time for submittal of monitoring results (i.e. indoor air). The status report should provide updated contact information for the participant, environmental consultant, or construction contact if there has been a change during the reporting period.

- b. **Completion Report:** A RAP Completion Report must be submitted to the VCP that fully and adequately documents all of the above and any additional contingency measures that have been completed per the requirements set forth in the RAP. The RAP completion report must include figures showing the final lateral and vertical extent of any removal, location and results (including laboratory data sheets) from all confirmation samples, disposal manifests, and clean fill tickets for any material brought onto the property, total volumes of material imported, total volumes of material disposed, and/or a summary of monitoring data as appropriate based on the remedies in the approved RAP. The completion report does not need to provide duplicate documentation that has already been submitted under RAP status reports.

8. Contingency and Notifications:

In certain cases, the RAP must propose contingency measures that must be implemented if site conditions change or the proposed response actions are not effective. The RAP must specify criteria, such as specific action levels, that will trigger the contingency measures if contaminant concentrations increase or other conditions change. Initial contingency measures may include notifying the Department and collecting confirmatory samples. Based on site specific circumstances, further contingency measures may include preparing a RAP addendum to outline more frequent groundwater sampling, installation of additional monitoring wells or other site investigation, modeling, residential well sampling, or other active remediation options.

All RAPs should include contingency measures for unexpected or undiscovered conditions including the following:

- The Department must be notified immediately of any previously undiscovered contamination, changes to the RAP schedule, previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices.



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- The RAP must outline procedures for amending the RAP in the event of unexpected conditions such as encountering free product, buried tanks, unidentified chemical containers, undiscovered contamination, or other issues not contemplated in the RAP.
- The VCP must be provided with all documentation and analytical reports generated as a result of any previously unidentified contamination. The participant understands that previously undiscovered contamination and/or previously undiscovered storage tanks or other oil-related issues may require an amendment to this RAP.

9. Permits:

The participant must comply with all local, State, and federal laws and regulations by obtaining all necessary approvals and permits to conduct the activities pursuant to an approved RAP. An approved RAP does not negate or otherwise affect any other provision of law requiring a person to report a release or a threat of a release of a controlled hazardous substance or oil (petroleum) on a site.

The following paragraph must be included verbatim in this section:

The participant will comply with all federal, State and local laws and regulations by obtaining all necessary approvals and permits to conduct all activities and implement this RAP. The VCP will be verbally notified within 48 hours (72 hours in writing) of any changes (planned or emergency) to the RAP implementation schedule, any previously undiscovered contamination, any previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices. All notifications shall be made to the VCP project manager at 410-537-3493. If the VCP project manager is unavailable, the notifications must be made to another VCP staff member.

The VCP must be provided with all documentation and analytical reports generated as a result of any previously unidentified contamination. The participant understands that previously undiscovered contamination and/or previously undiscovered storage tanks or other oil-related issues may require an amendment to this RAP.

10. Implementation Schedule:

The RAP must provide a detailed schedule for all work necessary to perform the proposed action, including post-remediation requirements (e.g. long-term monitoring). The proposed plan must specify the dates and time frames for implementing and completing each phase of the work. Please note that the implementation of the RAP must begin within eighteen (18) months from the date of final RAP approval. The implementation schedule must reflect the start date of the RAP within the allotted time frame.

For the project tasks in the proposed plan, the implementation schedule shall list the start and complete time frames in days from RAP approval (e.g. “30 days from RAP



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approval”). Upon RAP approval, the schedule should be finalized with actual anticipated dates for each phase of work. During implementation of the RAP, the Department must be notified in writing of all requested changes to the schedule. The RAP implementation schedule must include submittal of the performance bond, letter of credit, or other surety within 10 days after approval of the RAP.

The Department encourages the use of Gantt charts and flow charts to present the implementation schedule and track the on-going project.

11. Administrative Requirements:

The proposed RAP must meet certain administrative requirements as outlined below:

- a. Written Agreement: Section 7-508 of the Environment Article, Annotated Code of Maryland, requires that the RAP shall “include a written agreement that if the RAP is approved, the participant agrees, subject to the withdrawal provisions set forth in Section 7-512 of this subtitle, to comply with the provisions of the plan.” The following language is approved as meeting this requirement and must be included verbatim in the final RAP accompanied by the participant’s dated signature:

If the response action plan is approved by the Maryland Department of the Environment, the participant agrees, subject to the withdrawal provisions of Section 7-512 of the Environment Article, to comply with the provisions of the response action plan. Participant understands that if he fails to implement and complete the requirements of the approved plan and schedule, the Maryland Department of the Environment may reach an agreement with the participant to revise the schedule of completion in the approved response action plan or, if an agreement cannot be reached, the Department may withdraw approval of the plan.

- b. Zoning Certification: Section 7-508 of the Environment Article, Annotated Code of Maryland, requires that the participant develop a RAP that includes a “certified written statement that the property meets all applicable county and municipal zoning requirements.” A new signed Zoning Certification must be included in each RAP revision. The following language is approved as meeting this requirement and must be included verbatim in the final RAP accompanied by the participant’s dated signature:

The participant hereby certifies that the property meets all applicable county and municipal zoning requirements. The participant acknowledges that there are significant penalties for falsifying any information required by MDE under Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland, and that this certification is required to be included in a response action plan for the Voluntary Cleanup Program pursuant to Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland.



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12. Performance Bond or Other Security:

The proposed RAP must include a proposal for a performance bond or other security to secure and stabilize the property if necessary. The RAP must clearly state the bond amount and the line item costs for all activities covered by the bond. The obligation of the performance bond or other security must be available for use by the Department upon notification to the participant by the Department. The performance bond or other security must be filed with the Department within ten days following approval of the RAP regardless of the proposed start date of the RAP.

The performance bond or other security, such as a surety bond, letter of credit, escrow account, environmental insurance, or other mechanism approved by the Department, must provide, to the benefit of the Department, an obligation to satisfy the Department's requirements to secure and stabilize the property if necessary. That obligation exists until a COC is issued or, if the participant withdraws, until 16 months after the date of withdrawal. Please contact the Department for the approved template for the performance bond. Securing and stabilizing the property includes activities necessary to:

- Post appropriate warnings and notices about conditions on the property;
- Restrict access to contaminated portions of the property;
- Prevent exposure to contaminated soil, water, or contaminants prior to continuing implementation of a RAP;
- Prevent dust or other movement of contaminated soil or contaminants off the property prior to continuing implementation of a RAP;
- Where applicable, abandon monitoring wells, dismantle and dispose of treatment systems, and backfill open excavations;
- Prevent and abate any other dangerous conditions prior to continuing implementation of a RAP; and
- Maintain the above-referenced measures in effective working order.

Before taking action to secure and stabilize the property, the Department will notify the participant at the participant's last known address on file with the VCP that:

- Upon the participant's withdrawal, the site was not secured and stabilized to a level determined by the Department to be protective of public health and the environment, and state requirements for securing and stabilizing the property; or
- The Department has deemed the participant withdrawn, the reasons for that decision, and setting forth the requirements for securing and stabilizing the property; and if activities to secure and stabilize the property are not completed within ten days, the bond or other security will be forfeited to the Department to perform the necessary activities.



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Templates for the administrative requirements, including the written agreement, zoning certification, or performance bond, are available by contacting the project manager at 410-537-3493.

13. Health & Safety Plan:

A detailed Health and Safety Plan must be available prior to the implementation of an approved RAP. At a minimum, the plan should reference key regulations that may apply to project activities (i.e. applicable sections of the Occupational Safety and Health Administration (OSHA) regulations, 29 Code of Federal Regulation (CFR) 1910 (General Industry – Hazardous Waste Site Operations, Excavations, Personal Protective Equipment, Respiratory Protection) and 29 CFR 1926 (Construction). The Health and Safety Plan should include, but not limited to, the following:

- Appropriate personal protective equipment (PPE) and monitoring devices that must be utilized by workers to ensure that all worker protection requirements are met, and the rationale for the PPE selected;
- Site control measures that will be maintained during RAP implementation to restrict access (e.g. security guards, warning fences);
- Dust abatement or suppression methods; and
- Compliance by all on-site workers with OSHA guidelines for managing contaminated material regardless of its characterization as hazardous or non-hazardous waste. The remedial contractor must possess the necessary certification for the transportation of any controlled hazardous substance.

The following statement must be included verbatim in the final RAP:

All applicable Occupational Safety and Health Administration (OSHA) regulations will be followed during the implementation of this RAP. A site specific Health and Safety Plan (HASP) for all personnel will be developed, implemented and maintained on-site. All on-site personnel must be made aware of and sign the HASP. The development of the HASP is the responsibility of the participant. On-site records of HASP signatures must be available to the Department upon request.

RAP Implementation

The VCP project manager should be notified at least 5 days prior to the start of RAP activities. The participant should also provide contact information for all on-site construction supervisors and environmental oversight personnel to the VCP project manager. Any contractors performing activities related to those outlined in the RAP should be given a copy of the approved RAP, including the HASP. A copy of the approved RAP should be kept on site during implementation of the RAP.

As required in the RAP under Contingencies and Notifications, the VCP must be notified immediately of any previously undiscovered contamination, changes to the RAP schedule,



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previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices.

Activities outlined in the approved RAP must be conducted and completed exactly as approved including, but not limited to, pre-approval of clean fill and dust control monitoring. It is the responsibility of the participant to ensure that there is adequate documentation that the RAP has been implemented to the approved specifications.

The VCP may conduct periodic site visits at any time during the RAP implementation process to ensure adequate implementation.

RAP Addendums

If during the RAP implementation process, it is necessary to modify the RAP, an addendum must be submitted to the Department for review and approval prior to implementation. The RAP addendum will be reviewed by the VCP project manager using the same criteria as the original RAP to ensure that the plan is protective of human health and the environment. The Department may provide comments on the RAP addendum or reject it entirely. Implementation of a RAP addendum may not occur without written approval from the Department.

The Department may request that the participant amend a RAP based on action levels or contingencies presented in the approved RAP or identification of new contamination or previously undiscovered contamination at the property.

The participant may request a revision to the RAP based on newly available technologies, changes in the development plan, or evaluation of the system performance after installation and operation for a period of time. If the participant proposes a change in the remedial technology proposed to address contamination at the property in a RAP addendum, the Department will require that the participant hold a new public informational meeting.

A RAP addendum may not be used to change the proposed use of the property under the VCP. If a participant wishes to change the use of the property, a new VCP application and application fee must be submitted.

