

MEMORANDUM OF UNDERSTANDING

BETWEEN
WATER POLLUTION CONTROL PROGRAM
AND
SOLID WASTE MANAGEMENT PROGRAM

Revised August 25, 2000

I. Intent of Memorandum of Understanding.

This Memorandum of Understanding (MOU) establishes a mutual understanding for coordinating interrelated permit, inspection, and enforcement activities related to solid waste and water pollution control facilities between the Solid Waste Management Program (SWMP) and the Water Pollution Control Program (WPCP). The memorandum will clarify which program has the lead in the areas regulated under the Missouri Solid Waste Management Law and the Missouri Clean Water Law. This clarification will enhance each program's ability to regulate in the most reasonable and effective manner in areas of mutual interest. The WPCP (central office) will also coordinate with the SWMP on permitting actions when actions related to water pollution are initiated in the regional offices.

II. Staff Contacts.

WPCP	Permits Section Chief Planning Section Chief Enforcement Section Chief Permits Unit Chief Land Application Unit Chief
SWMP	Engineering Section Chief Enforcement Section Chief Special Projects Unit Chief Permits Unit Chief

III. Categories of Mutual Interest.

- A. Permitted solid waste disposal areas and solid waste processing facilities.
- B. Clean fill.
- C. Industrial residuals treatment, storage, and disposal facilities.
- D. Beneficial reuse of solid waste.
- E. Other Solid Waste Exemptions

IV. Activities Requiring Coordination.

A. Permitted solid waste disposal areas and solid waste processing facilities.

For the purposes of this MOU, the term *permitted boundary* applies to the extent of the area regulated under the Missouri Solid Waste Management Law and regulations. The term *footprint* applies to the actual limits of waste disposal within that permitted boundary.

1. The SWMP will be the lead program for the review, approval, permitting, inspection, and enforcement of all aspects within the permitted boundary for solid waste disposal areas and for the design and construction aspects for processing facilities unless otherwise noted in IV.A.2, below. Where the SWMP is the lead program, the WPCP is in a concurrence role. The following are clarifications of the SWMP's role:
 - a. The SWMP will be the lead program for all *no-discharge* leachate and wastewater collection, storage, and treatment systems associated with these facilities. It is the SWMP's responsibility to determine whether or not the system design meets the no-discharge criteria set forth in 10 CSR 20-6.015(1)(B)7.
 - b. The SWMP will be the lead program for all aspects of leachate land application within the footprint of a solid waste disposal area.
 - c. The SWMP will be the lead program for all aspects of stormwater control within the footprint of a solid waste disposal area.
 - d. The SWMP will be the lead program for all aspects of groundwater studies, monitoring, and remediation associated with the permitted boundary for solid waste disposal areas. The SWMP will copy the WPCP on any letters to facility owners pertaining to statistically significant changes in groundwater parameters.
 - e. The SWMP will be the lead program for all aspects of the land application of domestic wastewater treatment sludges within the footprint of a solid waste disposal area. The SWMP will normally require use of the 40 CFR 503 standards for sludge that is land applied to surface soils or daily cover material at active or closed landfills. If higher rates are approved, the SWMP will advise the landfill to submit written notification to the WPCP at least 60 days prior to sludge application in order to address potential changes in storm water discharge characteristics as required by NPDES permit standard conditions.
2. The WPCP will be the lead program for the review, approval, permitting, inspection, and enforcement of the following aspects of permitted solid waste disposal areas and processing facilities. Where the WPCP is the lead program, the SWMP is in a concurrence role.

- a. The WPCP will be the lead program for all leachate and wastewater systems associated with these facilities which discharge directly into waters of the state, sanitary sewers, or publicly owned treatment works (POTWs). The SWMP will perform a cursory review to ensure that the locations and construction of the proposed systems are noted in the permit documents. However, the SWMP will maintain responsibility for those portions of the systems within the footprint for landfills or for processing facilities, within the building, up to the point of connection with the sewer or POTW line. In the case of systems which discharge to POTWs, the SWMP will require applicants to provide written permission from the receiving POTW prior to issuing any permit or approving any permit modification.
 - b. The WPCP will be the lead program for the land application of leachate outside the footprint of a solid waste disposal area, except that the SWMP will evaluate the HELP model and determine the design value for the leachate generation rate. The SWMP will perform a cursory review to ensure that the locations and construction of the proposed systems are noted in the permit documents.
 - c. The WPCP will be the lead program for all aspects of stormwater control and discharge outside the footprint of a permitted solid waste disposal area.
 - d. The WPCP will be the lead program for all aspects of storm water control and discharge from permitted solid waste processing facilities. The SWMP will perform a cursory review to ensure that the locations and construction of the proposed systems and outfalls are noted in the permit documents, and to ensure that the methods of storm water control will not interfere with waste handling operations.
3. Solid waste disposal area and processing facility design shall conform to whichever are the more stringent requirements under regulations administered by the SWMP or the WPCP.

B. Clean fill.

1. The SWMP will be the lead program for the review, approval, inspection, and enforcement of all clean fill requests unless otherwise noted in IV.B.2 below. The SWMP will make the determination as to whether or not the material meets the definition of clean fill in 260.200(4), and whether or not the placement of the material meets the criteria set forth in 10 CSR 20- 6.015(3)(B)15 and 16. No further coordination will be required where the SWMP determines that the placement of the material meets these requirements. The SWMP will copy the WPCP on all clean fill approvals.

2. The WPCP will be the lead program for the review, approval, inspection, and enforcement of all clean fill requests where the SWMP determines that the placement of the material does not meet the criteria set forth in 10 CSR 20-6.015(3)(B)15 and 16.
3. Clean fill determinations at voluntary cleanup program sites will be addressed as outlined in Attachment 1 (Memorandum from the SWMP/WPCP/HWP to the Division of Environmental Quality (DEQ) dated May 7, 1998, on "Coordination of VCP, SWMP and WPCP Efforts"), or any subsequent revisions of this document.

C. Industrial residuals treatment, storage, and disposal facilities.

For the purposes of this MOU, *industrial residuals* refers to any solid or semisolid material resulting from industrial processes, or resulting from the treatment of water or wastewater in industrial processes. It includes industrial wastewater treatment sludges and drinking water treatment plant sludges; incinerator ash; coal combustion byproducts such as fly ash, bottom ash, boiler slag, and cinders; cement kiln dust, and foundry sands. It does not include domestic or municipal wastewater treatment sludges or animal feeding operations.

For the purposes of this MOU, *disposal* does not include land application for beneficial use in the production of food or fiber. Refer to Section IV.D.2. regarding land application for beneficial use.

For the purposes of this MOU, the distinction between *treatment and storage* and *disposal* is that, when industrial residuals are intended to be permanently left in place above beneficial agricultural rates, as determined by the WPCP, for longer than five (5) consecutive years, it becomes disposal. This applies to sludge-only lagoons or residuals treatment lagoons. It does not apply to the accumulation of sludge at the bottom of active biological wastewater treatment lagoons.

1. The WPCP will be the lead program for all aspects of the review, approval, permitting, inspection, and enforcement of surface impoundment's (lagoons) for the treatment and storage of industrial residuals unless otherwise noted in IV.C.2 below. Where the WPCP is the lead program, the SWMP is in a concurrence role. The following are clarifications of the WPCP's role:
 - a. The WPCP will be the lead program for closure of all new industrial residuals lagoons, existing lagoons with valid WPCP permits, and existing lagoons where the WPCP permit has lapsed, only where the residuals will be removed prior to closure, or where the owner/operator proposes to leave residuals in place at or below beneficial agricultural rates. Testing criteria will be determined by the WPCP. The SWMP will not require a survey plat or deed notation in either of these situations.

- b. The WPCP will not permit or approve the design of industrial residuals treatment or residuals storage lagoons where the residuals will be stored for longer than five (5) consecutive years without complete removal, unless the facility owner/operator has a valid solid waste permit or approval. An alternative storage period and disposal plan may be approved with concurrence of both programs.
 - c. The WPCP will require applicants for industrial residuals treatment or storage lagoon permits to submit management plans specifying procedures for removal, land application, beneficial reuse, or disposal. Where applicable, the SWMP will review the management plans in conjunction with the WPCP following the concurrence procedures in section V. of this memorandum.
2. The SWMP will be the lead program for the review, approval, permitting, inspection, and enforcement of the following aspects of non-hazardous industrial residuals facilities. Where the SWMP is the lead program, the WPCP is in a concurrence role.
- a. The SWMP will be the lead program for the closure of all existing industrial residuals lagoons with a WPCP permit or approval where residuals will be left in place which exceed beneficial agricultural rates. The SWMP will close these facilities using procedures similar to those for illegal solid waste disposal areas requiring at a minimum Toxicity Characteristic Leaching Procedure (TCLP) tests and testing for total concentrations, a survey plat, and a deed notation. Other testing criteria deemed necessary will be agreed upon between the SWMP and the WPCP prior to approval.
 - b. The SWMP will be the lead program for the closure of all-existing industrial residuals lagoons which were never issued a WPCP permit or approval, regardless of whether or not the residuals will be left in place above the beneficial agricultural rates. For facilities where the residuals will be left in place, the SWMP will close the facility using procedures similar to those for illegal solid waste disposal areas requiring at a minimum TCLP tests, a survey plat, and a deed notation. Other testing criteria deemed necessary will be agreed upon between the SWMP and the WPCP prior to approval. Where the residuals will be removed, the SWMP will determine the testing criteria, but will not require a survey or deed notation.
 - c. The SWMP will require a solid waste disposal area permit or exemption for all facilities constructed after the effective date of this MOU where industrial residuals will be placed for final disposal. When any person makes such a request to the WPCP, the WPCP will inform them that a permit or approval may be required from the SWMP and the WPCP will copy the SWMP with that correspondence.

D. Beneficial reuse of solid waste.

1. The SWMP will be the lead program for the review, approval, inspection, and enforcement of all requests for beneficial reuse of solid waste unless otherwise noted under IV.D.2 below. Where the SWMP is the lead program, the WPCP is in a concurrence role.
 - a. For the general beneficial reuse of solid waste under 10 CSR 80-2.020(9)(B), the SWMP will make the determination as to whether or not the placement of the material to be beneficially reused meets the criteria set forth in 10 CSR 80-2.020(9)(B)5 and 10 CSR 20-6.015(3)(B)16. Where the SWMP determines that these criteria are met, the SWMP will be the lead program. In these situations, the SWMP will also determine an appropriate testing protocol. The testing protocol will be based on knowledge of the material to be beneficially reused, existing site conditions and site design, and the end use of the site. At a minimum, the SWMP will require TCLP tests and total concentration tests on all material. No further coordination will be required.
 - b. For the beneficial reuse of fly ash for road base construction, structural fill, soil stabilization, or soil amendment under 10 CSR 80-2.020(9)(F) through (H), the SWMP will determine whether or not the placement of the fly ash meets the criteria set forth in 10 CSR 20-6.015(3)(B)16. Where the SWMP determines that these criteria are met, the SWMP will be the lead program. The SWMP will require a testing protocol identical to that in Attachment 2 (Memorandum from the SWMP/WPCP to the DEQ dated May 28, 1998, on "Beneficial Reuse of Fly Ash"), or any subsequent revisions of this document.

Prior to approving these beneficial reuse requests in amounts greater than those specified in 10 CSR 80-2.020(9)(F) through (9)(H), the SWMP will require the applicant to obtain a permit or approval from the WPCP.

2. The WPCP will be the lead program for the following aspects of the beneficial reuse of solid waste.
 - a. In situations where the SWMP determines that the placement of the material to be beneficially reused does not meet the criteria set forth in 10 CSR 80 2.020(9)(B)5 and 10 CSR 20-6.015(3)(B)16, the WPCP will be the lead program. The SWMP will forward a copy of the request to the WPCP through the normal concurrence process. As a part of the concurrence process, the WPCP will determine an appropriate testing protocol for the project. The testing protocol will be based on knowledge of the material to be beneficially reused, existing site conditions and site design, and the end use of the site. At a minimum, the WPCP will require total concentration testing and TCLP tests on the material.

- b. The WPCP will be the lead program for all aspects of the land application of wastewater, sludges, and residuals for beneficial use in the production of food and fiber including agriculture, silviculture, horticulture, and residential uses. Refer to Section IV.C.1. for storage of industrial wastes prior to land application. If land application is proposed in conjunction with a plan for the beneficial reuse of solid waste, the SWMP will require the applicant to obtain a permit or approval from the WPCP. In these situations, the SWMP will perform a cursory review to ensure that the land application procedures are noted in sufficient detail in the beneficial reuse request.

E. Other Solid Waste Exemptions.

1. The SWMP will be the lead program for the review, approval, permitting, inspection, and enforcement of all aspects of solid waste pilot projects, composting or co-composting facilities, and construction and demolition debris processing facilities which receive a solid waste exemption under 10 CSR 80-2.020(9)(C), (D), or (E), respectively, unless otherwise noted under IV.E.2 below.
 - a. The SWMP will be the lead program for all *no-discharge* leachate and wastewater collection, storage, and treatment systems associated with these facilities. It is the SWMP's responsibility to determine whether or not the system design meets the no-discharge criteria set forth in 10 CSR 20-6.015(1)(B)7 and WPCP exemptions under 10 CSR 20-6.015(3)(B).
 - b. For compost facilities, the SWMP will perform a cursory review to ensure that the final uses of the compost are specified in the solid waste documents. Upon approval, the SWMP will notify the owner/operator that a WPCP permit or approval for land application may be required, and that other laws such as the Fertilizer Law, Section 266.291 RSMo, or the Soil Conditioner Law, Section 266.361 may apply as well.
2. The WPCP will be the lead program for the review, approval, permitting, inspection, and enforcement of the following solid waste exempted activities. Where the WPCP is the lead program, the SWMP is in a concurrence role.
 - a. The WPCP will be the lead program for all leachate and wastewater systems associated with these facilities which discharge directly into waters of the state, sanitary sewers, or POTWs. The SWMP will perform a cursory review to ensure that the locations and construction of the proposed systems are noted in the permit documents. However, where the operation takes place under roof, the SWMP will maintain responsibility for the system within the structure, up to the point of connection with the sewer or POTW line. In the case of systems which discharge

to POTWs, the SWMP will require applicants to provide written permission from the receiving POTW prior to issuing any permit or approving any permit modification.

- b. The WPCP will be the lead program for all aspects of storm water control and discharge from these facilities. The SWMP will perform a cursory review to ensure that the locations and construction of the proposed systems and outfalls are noted in the solid waste documents, and to ensure that the methods of storm water control will not interfere with handling operations.
3. Solid waste pilot projects, composting or co-composting facilities, and construction and demolition debris processing facility design shall conform to whichever are the more stringent requirements under regulations administered by the SWMP or the WPCP.
 4. The WPCP will be the lead program for the review, approval, permitting, inspection, and enforcement of *all* aspects of the following activities. A solid waste permit or approval is not required if the owner/operator obtains a valid WPCP permit or approval.
 - a. Composting and co-composting involving animal manure, poultry manure, domestic wastewater (sewage) sludge or industrial wastewater treatment sludge from the food and kindred products industry or similar organic material.
 - b. Composting and co-composting of yard waste, wood waste, paper waste, and/or similar organic materials.
 - c. The WPCP will be the lead program for land application and storm water discharge permitting from facilities for composting of dead animal carcasses. Requirements under the Dead Animal Disposal Law, 269.020 RSMo will be coordinated with the Missouri Department of Agriculture and the University of Missouri Extension Service as appropriate.
 - d. The WPCP will be the lead program for closure of all treatment and storage facilities for domestic wastewater (sewage) sludge regardless of whether they have a valid WPCP permit or approval. Sludge that is left within the lagoon must conform to the 40 CFR 503 Subpart B Land Application standards for agricultural sites or land reclamation sites and must be mixed with soil in a 1:1 ratio. The SWMP will not require a survey plat or deed notation in either of these situations. The WPCP will defer to the SWMP for projects requesting in place surface disposal or landfilling of sludge.
 - e. The WPCP will be the lead program for closure of all treatment, storage, and disposal facilities for animal feeding operations and concentrated animal feeding

operations (CAFO) regardless of whether they have a valid WPCP permit or approval.

5. Activities listed under 10 CSR 80-2.020(9)(A) do not require a solid waste permit or approval. The SWMP will inform any person requesting a solid waste exemption for any of these activities not specifically addressed by this MOU that a permit or approval may be required from the WPCP. The SWMP will also contact the WPCP to inform them the request was made.

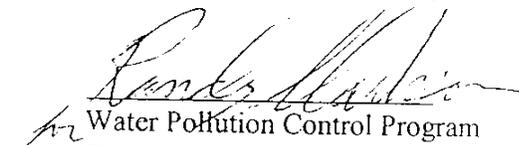
V. Program Coordination Responsibilities.

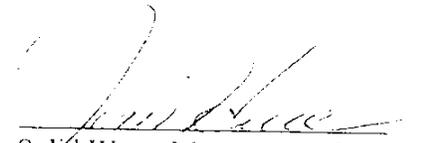
The WPCP and the SWMP agree to the following responsibilities in the coordination process:

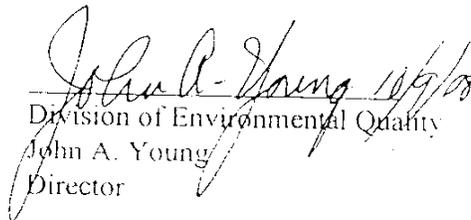
- A. During the review of a permit application or permit modification, the lead program will require evidence that the applicant/permittee is in compliance with, or is in the process of complying with, the other programs permit requirements. Otherwise, the permit application or modification will not be approved by either program.
- B. The lead program will forward DEQ concurrence of action forms with pertinent information prior to:
 1. Recommending issuance of permits, permit modifications, or exemption approvals that could cause impacts on the other programs area of interest.
 2. Draft rule or policy additions/revisions that affect areas of mutual interest. A copy of the final proposal will also be provided to the other program upon publication of the proposed rule in the Missouri Register.
- C. In lieu of concurrence of action forms, either program may use electronic mail (E-mail) under the following guidelines:
 1. E-mail will be used only in cases where extensive background information is not necessary for the concurring program to issue comments or concurrence. The concurring program will notify the requesting program as soon as it becomes evident that further information is required.
 2. To avoid delays due to employee absences, all requests for concurrence via E-mail will be sent to the appropriate Section Chief, and copied to the appropriate Unit Chief and where possible, the staff member primarily responsible for the review.
- D. In lieu of the concurrence of action forms or E-mail, the WPCP's standard public notice package will suffice as notice to the SWMP that a solid waste facility's WPCP permit is being issued or renewed.

- E. The receiving program will review and return the concurrence of action forms, or for E-mail requests, reply via E-mail within fourteen (14) days of receipt.
- F. Information sent to potential applicants will recommend that the applicant contact the other program regarding other potential permit or approval requirements.
- G. Permits, permit modifications, exemption approvals, and comment letters to applicants that directly reference the other program's requirements or potentially impact the other program will be copied and sent to that program.
- H. Language will be included in the permits, permit modifications, and exemption approvals stating that the permit/permit modification or approval does not waive the responsibility for compliance with other federal, state, and local regulatory requirements.
- I. Changes in one program's laws or regulations will be distributed to the other program upon promulgation. See V.B.2 for concurrence procedure for draft rules.

The under signed directors agree to the above and encourage both formal and informal communications between staffs. This MOU will be reviewed annually and any required revisions will be initiated by the program requiring the revision.


Water Pollution Control Program
Edwin D. Knight
Director


Solid Waste Management Program
Jim Hull
Director


Division of Environmental Quality
John A. Young
Director

BENEFICIAL USE GUIDELINES

August 27, 2001

The regulations, 10 CSR 80-2.020(9)(B), allow the department to grant an exemption from the solid waste disposal area permitting requirements for the beneficial use of solid waste, provided that beneficial use and/or reclamation can be demonstrated and provided that pollution, a public nuisance or a health hazard will not be created. Though some broad general exemptions have been granted for beneficial use, these requests are usually evaluated on a case by case basis for a specific site and type of activity. This process is not precise simply because we cannot anticipate the beneficial use of every possible waste stream and the conditions at every possible site. The level of detail we require varies somewhat from one request to another, depending on the circumstances. The regulatory requirements are in italics, while the explanation of the requirements is in standard font.

(9)(B)1. A detailed explanation of the beneficial use or reclamation that supports the request.

To request a beneficial use of solid waste, you must submit a letter and at least a site map to the Solid Waste Management Program (SWMP) explaining the proposal. While they do not have to be prepared by a Professional Engineer, the documents must contain enough detail to provide a clear understanding of your proposed project. Please submit three copies so we may distribute copies to our regional offices and other affected programs.

The proposal should demonstrate a legitimate beneficial use of a solid waste. For example, by far the most frequent type of request we receive is for the use of solid waste such as flyash, slightly contaminated soil, or other granular solid waste, as a substitute for clean soil or gravel as fill material. The possibilities are limitless, however.

Please note that some types of beneficial use, such as the use of solid waste in the manufacture of a product, do not require prior approval from the department. These exemptions may be found at 10 CSR 809-2.020 (9)(A). Also, there are specific regulations governing the beneficial use of flyash and waste tires. The regulatory requirements for flyash exemptions may be found at 10 CSR 80-2.020 (9)(F) through (I).

For information regarding the beneficial use of flyash or other coal combustion byproducts, contact the SWMP's Special Projects Unit at (573) 751-5401. The regulatory requirements for waste tire exemptions may be found at 10 CSR 80-8.060. For information regarding the beneficial use of waste tires, contact the SWMP's Waste Tire Unit at the same number.

(9)(B)2. A detailed explanation with supporting documentation identifying the site location, surrounding land use, and site characteristics.

The request must include a description of the site. The best way to address this requirement is with a site map showing nearby buildings, roads, and landmarks. The map should show the property boundary as well, and indicate the approximate size of the site. A recent survey plat would be helpful if you have one. The term "site characteristics" refers to the general topography of the site, and the general area hydrology and geology

(proximity to water bodies, caves, sinkholes, wells, etc.).

(9)(B)3. An estimate of the quantity of waste needed to complete the project, the length of time required for completing the project and documentation specifying the source of the waste.

Most of this should be self explanatory. However, you should be as specific as possible regarding the source(s) of the waste. If it is from multiple sources, you may need to provide analyses for each source.

(9)(B)4 "A detailed description of the physical and chemical characteristics of the waste, background soils and water quality immediately within and/or adjacent to the project area. The description shall include supporting laboratory test data. The appropriate laboratory tests shall be determined in conjunction with the department, and shall include, at a minimum, Toxicity Characteristic Leaching Procedure (TCLP) testing analyses or modified TCLP testing analyses. Details regarding locations of samples and sampling and testing methods shall be provided. Testing analyses shall be performed on all applicable parameters (organic and/or inorganic substances) which comprise the waste. The detection limits for applicable constituents in the testing analyses shall be consistent with standard laboratory procedures. Sampling and analysis shall be conducted in accordance with U.S. EPA approved standard laboratory methods and procedures."

Attached is a document entitled, Beneficial Reuse Testing Protocol, which is intended to provide guidance in determining the appropriate chemical analyses. The concepts in this document were developed by the SWMP, the Hazardous Waste Program, and the Water Pollution Control Program in an attempt to refine this process. Though it doesn't establish limits for specific constituents (other than the TCLP limits in 40 CFR 262), we feel it does provide a framework for deciding what you need to worry about and how to test for it. The protocol focuses on both constituent levels and the circumstances specific to the project. Please note the constituents of concern should not be limited to TCLP constituents, but should include any contaminants that can impact waters of the state.

(9)(B)5. Verification that the placement of the waste will be kept above the seasonal high groundwater table, unless a variance is obtained from the Water Pollution Control Program (WPCP).

This requires an interpretation by a geologist registered in the State of Missouri. It usually consists of a short report, stamped by the registered geologist, verifying that the placement of waste will be above the seasonal high groundwater table. In order to make this determination, the geologist typically evaluates both regional and site specific geologic information and performs a site investigation. A site investigation by the department's Geological Survey and Resource Assessment Division (formerly the Division of Geology and Land Survey) will also be required. Though our history in this process is brief, we have generally been able to arrange the site investigations in less than 30 days.

(9)(B)6. A detailed description of the proposed operational procedures for waste removal from the generator, transport, placement, compaction, dust control, erosion control and procedures for protecting the general aesthetics of the site;

The proposal should describe the type of equipment to be used for excavation, processing, transportation, storage, placement, etc. The requirements for dust control and erosion control procedures should be self explanatory.

(9)(B)7. Provisions for closing the area—

A. A description of the source, quality and quantity of cover required;

This should include the type of cap, thickness, manner of construction, compactive effort, etc. As stated in the testing protocol, if the material is covered with an impermeable cap, higher constituent levels may be allowable. See (9)(B)4. This requirement is only applicable to the beneficial use of solid waste as fill material.

B. A description of the type of vegetation to be established to prevent erosion;

This should be self explanatory.

(9)(B)8. The exemption request must also include the following:

A. Name of the owner(s) of the property on which the proposed beneficial reuse operation will be located. If the owner differs from the person requesting the exemption, the permit exemption request shall include a statement signed by the owner stating his/her awareness of the beneficial use request and his/her approval of the operation;

B. Name of the operator(s) of the proposed operation;

C. A map showing land use within one thousand feet (1,000') of the proposed operation;

D. A management plan that describes and includes:

(I) Basic site design;

(II) Size of buffer zone;

(III) Site drainage control;

(IV) A list of the waste material to be beneficially reused;

(V) Quality and quantity of incoming waste material;

(VI) Type of technology to be used;

- (VII) Odor and vector control and mitigation procedures; and*
(VIII) Contingency plan (what steps will be taken to correct any problems that may occur as a result of the operation);

Section (9)(B)8.A and B are self explanatory. Many of the other items can be addressed using a site map to show the site layout, surrounding land use, distance to other properties (buffer zone), site drainage control (surface water routing). The rest of the items should be addressed in the text of the request.

The list and quantity of the waste material are self explanatory. The quality refers to the test results, level of contamination with undesirables, and things of this nature.

The description of the technology is one of the items where the level of detail we receive is variable. The response could be anything from simply using a backhoe to a fairly complicated description of a screening, mixing, and compaction process. The terminology in the regulations had to be left somewhat vague because of the wide variance in the type of beneficial use requests that are possible.

Odor and vector problems are not typically associated with beneficial use, but again, because we can't anticipate every type of situation, it was necessary to include this.

The requirement for a contingency plan was intended to cause the person making the request anticipate what could possibly go wrong (spills, direct release into waters of the state, out of specification materials, etc.) and develop a plan to deal with those situations.

E. A copy of the application for any applicable Water Pollution Control Program permits or approvals;

F. A copy of the application for any applicable Air Pollution Control Program permits or approvals;

Though the SWMP will be the lead review program, some beneficial use projects will also require a permit or approval from the WPCP as well and sometimes from the Air Pollution Control Program (APCP). Since we work together frequently, the SWMP and the WPCP have an agreement outlining the general procedures we use to review projects of this nature. From the SWMP's perspective, we can approve beneficial use requests with pending WPCP approval, though our standard procedure is to obtain concurrence from the WPCP on all draft approvals. A letter of approval from the SWMP typically includes a standard condition requiring you to contact the WPCP Permits Section Chief for a determination of any necessary permits or approvals. We recommend that you discuss your proposal with the WPCP in advance. The WPCP may be reached at (573) 751-1300.

Beneficial use proposals rarely require an APCP permit or approval, unless grinding or chipping waste is involved. If the SWMP has any doubt, we also ask the APCP for

concurrence and/or include a similar condition for you to contact the APCP Permits Section Chief for a determination. You may also wish to contact the APCP directly prior to submitting your proposal to the SWMP. The APCP may be reached at (573) 751-4817.

G. Evidence of compliance with local zoning and planning requirements; (9)(B)8.E - G

Ideally, a letter from the zoning board, county commission, or city government should be provided, either stating that the activity will be in compliance, or that there are no local requirements. However, it may not be possible to obtain a letter of this nature in all instances. In some situations a record of telephone conversation stating the date and time, and indicating the official who was contacted, is acceptable. However, we usually telephone the local agency ourselves as verification. Again, the intent is to cause the person making the request to think about local issues as well

The point is that the SWMP does not determine whether your proposal is in compliance with any other laws or regulations other than the Missouri Solid Waste Management Law and regulations. The SWMP does not have the knowledge of local requirements, nor do we have the authority to grant you permission to conduct an activity that is against a local ordinance, or local zoning requirements, for example. It is ultimately the responsibility of the person making the request to investigate these matters.

H. Emergency contact phone number(s);

You should provide telephone numbers where a responsible person can be contacted in case the department is notified of a problem at the site.

I. Final use or disposition of the material to be beneficially reused; and

In most cases, this item is already addressed in the other text without answering this question directly. If your proposal is descriptive enough, the final use or disposition of the material will be obvious.

J. A statement indicating what steps will be taken to ensure unacceptable waste is not received and verification that the unloading of waste will be supervised.

All offloading should be supervised, and contaminated or unacceptable loads should be removed from the site immediately. Though you do not have to describe them in excruciating detail, the text should indicate the general waste screening procedures.

BENEFICIAL USE TESTING PROTOCOL

August 30, 2001

1. Identify the *constituents of concern* that you reasonably expect to find in the material based on the composition of the base material and any additives, treatments, or other processes used in manufacturing. Don't just focus on hazardous constituents, but any constituent whose presence and concentration could potentially impact the environment.

For soil contaminated with virgin petroleum products, you must identify the specific type of product (gasoline, diesel, etc.). Unless other contaminants are also present, the constituents of concern are benzene, toluene, ethylbenzene, xylenes, (commonly called the BTEX constituents), methyl tertiary butyl ether (MTBE), and total petroleum hydrocarbons (TPH).

2. Perform a totals analysis on representative samples of the material for any *constituents of concern* identified in Step 1.

For soil contaminated with virgin petroleum products, if the results of the totals analysis indicates that the BTEX constituents, MTBE, and TPH are below the following levels, proceed to step 4.

Benzene	13	parts per million (ppm)
Toluene	650	ppm
Ethylbenzene	400	ppm
Xylenes	418	ppm
MTBE	8760	ppm
TPH	2,500	ppm

For other solid waste, proceed to step 3.

3. In accordance with 40 CFR 262.11, determine whether the material is a hazardous waste. Only non-hazardous waste will be considered for beneficial reuse. In most cases, this requires that you run TCLP tests. However, TCLP analyses only need to be performed for those constituents detected above the following level in the totals analyses in step 2:

0.8 (20 X TCLP limit)

For example, the TCLP limit for lead is 5 ppm. $20 \times 5 = 100$

$0.8 \times 100 = 80$

If the totals analysis shows 80 mg/kg lead or more, you must run a TCLP for lead. If the totals analysis shows less than 80 mg/kg lead, there is no need to run a TCLP for lead.

4. No further testing must be done if the material will be placed such that no potential exists for the material to come into contact with surface or subsurface waters of the state. In order to meet this criteria, both of the following conditions must apply:
 - a. The material must be placed above the seasonal high groundwater table, as determined by a geologist registered in the State of Missouri, (10 CSR 80-2.020(9)(B)5); and

- b. The material must be covered by a building, asphaltic concrete, Portland Cement concrete, an engineered clay cap, or other impermeable surface.
5. When the criteria in step 4 cannot be met, you must also perform ASTM D-3987 tests for all *constituents of concern* detected in Step 2. The levels in the extract of the material must be below the applicable Water Quality Standards in Table A of 10 CSR 20-7. These tests need not be performed for constituents for which TCLP analyses, EPA method 1311, were performed as part of Step 3, provided the constituent levels in the TCLP extract are below the applicable Water Quality Standards for that particular *constituent of concern*. The department may allow exceptions to these requirements on a case by case basis.
6. Based on the results of Steps 1 through 5, as well as your knowledge of the environmental conditions at the proposed site, demonstrate that there are no potential negative impacts to public health or the environment.

Note: The detection limits for all tests must be appropriate for the demonstration you are making.