

Chapter IV

PERMITTING

TABLE OF CONTENTS

Section I	Introduction
Section II	Summary of Permit Managers Interview
Section III	Summary of Findings and Conclusions
Section IV	Summary of Title V Permit Fee Review
Appendix	

Section I.

INTRODUCTION

On July 10-13, 2000, EPA Region 7 performed an evaluation of Missouri's air permitting programs. This review was conducted in part to fulfill a regional office commitment with EPA's Headquarters to perform an annual comprehensive review of at least one state or local agency permitting program and in part to satisfy EPA Region 7's new policy on periodic review of state and local programs. The overall scope of the review focused on 1) synthetic minor permitting, 2) NSPS [New Source Performance Standards] and NESHAP [National Emission Standards for Hazardous Air Pollutants] determinations, 3) establishment of enforceable permit conditions and 4) generation, accounting, and use of Title V fees, and 5) the interaction between the Title V and NSR [New Source Review] programs.

The review was initiated by a letter to the MDNR dated May 1, 2000, and a subsequent request for a list of construction permits issued since 1998. The Permitting Section of the APCP provided a timely response for each request. The review team appreciated the cooperation of the PS staff during our visit.

The review team evaluated 25 source files containing an estimated 60-70 permit projects. Most of the projects reviewed were permitted in either 1998, 1999, or early 2000, and represent only a small fraction of the 700 plus projects approved during this time frame. During the review, the team also discussed a number of the projects with permit staff and had a general permitting conversation with the permit managers.

Overall, we found that the Permitting Section is running a very competent permitting program. As with any program, there are always gaps and areas for improvement. However, advances made since the last formal program review in the late 1980's reflect that the Permitting Section has matured and is dedicated to preserving air quality. As evidenced by the large number of permit projects with screening modeling, the Permitting Section

is interested in protecting ambient air quality standards and acceptable ambient toxic concentrations even when evaluating smaller source operations; despite the controversy it brings.

The highlights of the manager interview are summarized in Section II. The major findings, including both "commendations" and "areas for improvement", are described in Section III. A summary of the Title V fee review can be found in Section IV. The list of permits reviewed and the specific details of each review are further described in Appendices A and B, respectively. Approximately two-thirds of the permit files selected for review were targeted based on problems indicated in an associated operating permit application or based on large increases or decreases in emissions indicated by the Toxics Release Inventory (TRI) data system. The other third involved sources randomly selected from a list of completed intermediate operating permits. As a consequence of this targeted approach, it is possible that the problems noted in certain files may be magnified and may not be representative of the permitting program as a whole.

Because of the EPA Region 7's national commitment to evaluate all major source preconstruction permits prior to issuance, the team chose not to evaluate the PSD [Prevention of Significant Deterioration of Air Quality] program during the on-site program review. The team also chose not to concentrate on specific Title V permits since Region 7 receives all draft and proposed permits and has an opportunity to comment on these permits in real time. Instead, the review team focused on the interaction between NSR permits and Title V to assure that preconstruction permit terms were properly being incorporated into Title V permits. For completeness sake, the PS issued approximately 14 PSD permits and over 160 Title V permits during the three year review period.

Section II

GENERAL DISCUSSION WITH PERMIT MANAGERS

Jon Knodel met with Randy Raymond and Refaat Mefrakis to talk about current highlights or other areas of interest or concern in the construction and permitting programs.

The Permitting Section expressed some concern about staffing levels. While positions have been allocated, the state is having difficulty keeping them filled. Of the 30 positions allocated for the construction and operating permit programs, nine were vacant at the time of our review; five in the operating permits group and four in the construction permit group. Staff with two or more years of air experience seem to be a very attractive grab for consultants and companies. With the boom in the number of construction permit applications, in particular for PSD, the Permitting Section may find it challenging to provide good, timely, customer service. Based on recent pre-application meetings, the state is expecting as many as nine new PSD permit applications, including five new portland cement construction projects and several more turbine projects.

The Permitting Section is currently using 10-12 contractors to assist in Title V permit development to help fill the staffing shortfall. After an initial ramp up, the program has had some success with contractors preparing Title V permits. The Permitting Section attributes this success to the standardized nature of the operating permit program; with minimal need for technical decision making. Because of the more complex nature of construction permits, the state is not currently using any contractors, but is paying substantial overtime to the Permitting Section staff to keep on top of the overload.

The state currently assigns two engineers to each construction permit project. The lead engineer usually has some experience with the particular source category and helps to train the other engineer. The state hopes this mentoring approach will help to minimize inconsistencies between permits. The mentoring also serves as a useful training opportunity for new staff and as a tool to cross train existing staff.

The state is trying harder to look at entire construction projects rather than individual emission units in an effort to cut down on possible circumvention of major source permitting. By using an in-house permit administrative tracking system (PATs), keeping a running history of permit projects in the "fact sheet", assigning the same engineer(s) to all facility projects, and relying on good institutional knowledge, the state hopes to cut down on submission of multiple-sequential projects.

The Permitting Section noted that they have been approving a significant number of "no permit required" determinations, based on the states new 0.5 lb/hr "deminimis" threshold recently approved into the SIP. The new permitting threshold has taken some pressure off of the preconstruction permit staff to conduct more formal reviews for very low emitting equipment.

In anticipation of a changing workload following initial issuance of Title V permits, the Permitting Section is exploring options to reorganize its permitting groups. One interesting option under consideration is to move several operating permit engineers into the field offices where they would be closer to the source, could assist in inspections, and could more easily fine tune re-issued Title V permits.

The state is awaiting the outcome of the "CLEAN" litigation and discussing how they might deal with any adverse decisions. The litigation, brought primarily by industry, challenges the basis for the state's "basic" and "intermediate" operating permit programs; calling them "more stringent" than minimum federal requirements. Under Missouri's "055" statute, the state program may not be more stringent than the federal program. The Permitting Section contends that these programs are voluntary in the respect that they allow a source, at their discretion, to seek restrictions that would keep them out of major source PSD and Title V review. The implications could be severe if minor source operating permit mechanisms are eliminated. In all likelihood, many additional sources would have to seek Title V permits because they would not be able to limit out of major source review.

The permit program noted that training is not currently a problem. Title V fees have helped to get staff to many good training courses. The biggest obstacle to training is finding the time for staff to attend. The Permitting Section requested that EPA host more courses in the Kansas City area to cut down on staff time away from the office.

The operating permits group anticipates that they will issue 90-95 percent of Title V permits prior to years end; despite staffing shortfalls. The Permitting Section currently dedicates one permit engineer to conduct reviews of Title V permits from the local agencies; in particular for St. Louis City where sources are allowed to draft their own Title V permits.

The state has developed a series of ambient impact nomographs to help estimate air quality impacts from quarries. The Permitting Section believes this approach provides more realistic results than those predicted by the SCREEN3 model currently used for other construction projects.

Over the last several months, the state has been putting together an in-house database of all past and present construction and operating permits. Based on the popular Adobe® format, the permits are searchable by keyword and phrase. The state has currently scanned in and converted nearly 450 megabytes of permitting information.

EPA expressed its appreciation for the Permitting Section's PSD efforts over last couple of years. The Permitting Section has kept the regional office apprized of new projects and has sought specialized assistance dealing with a number of issues related to turbine projects. We appreciate the states' leadership in this area.

Section III

SUMMARY OF FINDINGS AND CONCLUSIONS

Overall, the Permitting Section is running a very competent permitting program. The Permitting Section is fortunate to have several staff with many years of experience and knowledge in the air program. As we have found in other permitting programs, this institutional knowledge is the glue that holds the program together. As was evident from our interviews and file review, the staff are knowledgeable about the air program and generally make conservative decisions. Screening modeling for minor sources and toxics reviews are indicative of the program's desire to protect public health. As during any review, we found both strengths and weaknesses in the program. These are described in more detail below. On balance, though, the program is on the right track and is a good model for others to follow.¹

¹We encourage the reader not to over-emphasize or compare the relative number of strengths or weaknesses, or the relative length of text, summarized in this section. Overall strengths in the program heavily outweigh any weaknesses. By necessity, the

Commendations

- Despite pressure to issue quick (or no) permits for smaller sources, the Permitting Section conducts numerous air quality- and/or HAP-impact analyses, on a project-by-project basis. It was encouraging to see that the minor source program has a strong NAAQS protection component.
- In recent projects involving HAP emissions that are potentially major, it is evident that the Permitting Section is thinking about 112(g) requirements when looking at sources with major HAP levels. We encourage the Permitting Section to remain vigilant when evaluating toxics projects.
- The construction permit fact sheets are very informative of both past and present project activity. Overall, the sheets provide a very detailed explanation of the project at hand and any associated impacts analyses. The "history of projects" is an essential tool for understanding the pace of source expansion and whether new emission units have been properly permitted. We understand that fact sheets are a time consuming process, but the approach helps to provide a clear basis for the current activity at a plant and leaves a very good trail for future permit writers. We encourage the Permitting Section to continue this practice.
- Recent evidence indicates that the Permitting Section is questioning multiple, sequential projects that occur over a short amount of time. Several recent enforcement actions challenge this common practice to break apart projects into

"areas for improvement" and the basis for these recommendations requires a more comprehensive review and write-up.

smaller pieces to avoid major source review. We encourage the Permitting Section to remain vigilant in this area to assure that "related" projects undergo major stationary source review.

- The searchable database for all construction and operating permits, recently developed by the Permitting Section, is a very useful tool. The database will provide construction permit writers with an invaluable look back at past projects to determine how a current project should be evaluated. It will also assist operating permit writers to incorporate all applicable requirements from preconstruction permits. We encourage the Permitting Section to continue support for putting future permits into the database and to consider making this invaluable tool publicly available on the states' web server or by other means.
- It is evident that the Permitting Section has procedures and practices in place to incorporate past construction permits into Title V operating permits. Title V permits include clear references to past permits and appear to incorporate all applicable preconstruction requirements. All of the operating permits targeted for review -- based on NSR problems described in the company's initial compliance certification -- appear to have adequately fixed the NSR problems prior to operating permit issuance.
- The air program's internal permit tracking system (PATS) appears to be quite comprehensive and provides the Permitting Section with an invaluable tool to track individual projects and the resources dedicated to the permitting program. The construction permit numbering scheme was very helpful for targeting groupings of permits to determine if closely spaced projects should have been combined as part of a larger project or not.
- Nearly every permit with a long-term emission cap included detailed record keeping forms to assist the source with compliance tracking. While a time consuming effort for the permit staff to develop the mass-balance-based forms, these forms provide an essential starting point for determining

compliance with the applicable standard. We encourage the Permitting Section to include explicit instructions in each permit for tracking compliance with long-term emission caps.

- We found many telephone conversation records and e-mails between the permit review staff and sources and their consultants throughout the files. This is a good indication that staff are conducting comprehensive reviews and are not necessarily taking the information in permit applications at face value.
- We noted many instances where staff reviewed, challenged, and corrected emissions estimates made by sources and consultants. This is a healthy process to assure that applicants use the most recent, or best documented, information.
- Several files indicate that MDNR has made significant use of their SIP-approved "preconstruction waiver" process for true minor projects. The files generally contain significant documentation showing that the source has satisfied the conditions outlined in the rule. Further, most highlight that EPA may take an enforcement action if the conditions of the waiver are not met or if the project turns out to be PSD-related. While EPA continues to be concerned about the preconstruction waiver process in general, we encourage the Permitting Section to continue to explain the consequences of failing to construct in accordance with the approved waiver.
- Thanks again for the Permitting Sections' assistance and participation in the Title V Citizen Training, held in St. Louis on June 16th and 17th. Despite uncertainty about the usefulness of such training, participants found it to be very helpful. EPA also found it to be worthwhile and a good interaction with groups that are typically pretty quiet in the permitting arena.
- We appreciate MDNR's commitment to meet EPA's "end of year" Title V permit issuance goal. The Permitting Section has

taken the challenge seriously and will come very close (90-95%) to issuing all permits on time.

- We appreciate the Permitting Sections' efforts over the last two years in conducting rigorous and thorough BACT reviews for turbine NO_x and CO controls. Despite sometimes difficult conversations with the utility industry, the state has held the line and has made good decisions consistent with other rigorous BACT determinations made across the nation.

Recommendations for Improvement²

² The "recommendations for improvement" are generally listed in priority order from those of most concern to those of least concern. The first five should be considered high priority items, the next five medium, and the last four low.

- We noted several instances where the files contained no supporting documentation from the source for emission estimate-related information, including emission factors and control equipment efficiencies. In many cases, control equipment efficiencies were critical for limiting potential to emit below major source thresholds, yet the file contained no documentation showing how, or if, this efficiency would be met. In others, applicants relied on unrealistic control efficiencies of 99.99% for PM₁₀ control. The Permitting Section should consider requiring a stack test and periodic follow-up testing for equipment that is permitted to emit up to the major source significance thresholds. This approach would assist the Permitting Section to develop better emission factors and to make better decisions by relying on site-specific information. This site specific information also allows the source to make an informed statement when making its periodic compliance certifications under Title V. We also note that generic AP-42 emission factors are not appropriate for determining compliance with an emission limitation, unless the emission unit is identical to one used to develop the factor or the factor represents a conservative, theoretical maximum. By definition, AP-42 factors are the average of many emission test results; meaning that roughly half of the emission units emit above the standard, and the other half below. Without adequate verification, it is unreasonable to assume that all of the permitted units will be on the low side of the factor. *****³
- In at least one circumstance, a new "greenfield" company evaluated the potential to emit for both PM and PM₁₀ from all of its emission points. Both sets of calculations relied on well documented emission factors from AP-42 and other emission factor guidelines. Yet, in the final permit and review summary, the Permitting Section makes no mention of PM. This could be a critical oversight, in particular for those projects with estimated emissions at or near the

³ The "*" indicator provides the reader with an idea of how often the issue was documented during the review.

major source threshold. Any slight modification, as part of the original project, could easily put the source over the major source applicability threshold, both for PSD and Title V purposes. Neither the permit nor the review summary provide an explanation on why PM emissions were not considered. By looking only at PM₁₀, the Permitting Section may be allowing sources to delay or avoid major source review. To help clear up some of the confusion about how PM and PM₁₀ are considered for Title V purposes, EPA issued guidance titled "Definition of Regulated Pollutant for Particulate Matter for Purposes of Title V", on October 16, 1995. This guidance can be found at <http://www.epa.gov/rgytgrnj/programs/artd/air/title5/t5memos/pmregdef.pdf>. Further, both the state rule and Federally approved SIP retain both PM and PM₁₀ as regulated air pollutants for minor and major source preconstruction permitting purposes. Therefore, to minimize any potential misunderstandings between EPA, the state, and sources, we recommend that the Permitting Section fully consider both pollutants when evaluating construction projects. *

- At least two projects included screening modeling to evaluate ambient PM₁₀ impacts. Based on these analyses, emission and production limitations were set based on an allowable impact of 149.95 ug/m³; or 99.97% of the 150 ug./m³ NAAQS standard. This approach may have several flaws and should be further evaluated. Specifically...
 - The screening analyses did not appear to consider background PM₁₀ concentrations. In some areas, background already accounted for _ to ½ of the standard. In at least one case, the permitted PM₁₀ limit was likely two times higher (or more based on discussion below) than it should have been because background was not considered. We recommend that a representative background concentration be accounted for when allowing a source to emit up to the NAAQS.
 - Screening modeling appears to have focused only on the NAAQS, with little or no attention to increment. While EPA's minor source permitting guidelines, found in 40

CFR §51.165, include no specific requirements to perform an increment analysis for minor source projects, the Clean Air Act presumes that a state's policies, procedures, and rules will be protective of increment. Therefore, we recommend that if screening modeling predicts concentrations above 30 ug/m³ (the Class II increment) and the source is located in an area where the baseline has been triggered, then the state should optimize the PM₁₀ emission limitations to protect the increment, rather than focusing solely on the NAAQS. If a source wants to justify a higher PM₁₀ emission limitation, then refined modeling may be necessary.

Our comments are not intended to discourage the Permitting Section from continuing its use of "conservative" screening analyses. However, we encourage the Permitting Section to consider background concentrations and increment consumption as factors in these analyses. **

- At least two permits contained a 12-month rolling PM₁₀ emission cap in lieu of a short term emission limitation. The permits required the applicants to demonstrate compliance with a PM₁₀ cap through the use of a mass balance equation using the production output of the affected equipment along with a site specific PM₁₀ emission factor. Given the uncertainty in many factors affecting particulate matter control, including raw material quality, moisture, and ongoing control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. Without substantial "periodic" or "compliance assurance" type monitoring of the control device, or frequent verification of the site-specific PM₁₀ emission factor, this compliance technique is not recommended. None of the permits containing a PM₁₀ emission cap had adequate periodic monitoring to evaluate ongoing control equipment performance or the overall emission rate. This concern was magnified in at least one case where the estimated project potential emissions were at or near the PSD significance thresholds and the company had certified past, poor baghouse performance. EPA's June 13, 1989

"Guidance on Limiting Potential to Emit in New Source Permitting", found at <http://www.epa.gov/rgytgrnj/programs/artd/air/nsr/nsrmemos/limitpot1.pdf> may provide additional clarification. **

- Our review found a significant number of "as built" projects; projects that were constructed prior to Permitting Section approval without the benefit of any ambient modeling or technology review. This may indicate that new companies are not getting sufficient advice from various trade group representatives, commerce and growth organizations, or chambers of commerce to consult with MDNR prior to constructing. It may also indicate that the Permitting Section could do a better job getting the word out to companies about their permitting obligations. We encourage the Permitting Section to consider making its permit forms and instructions -- along with easy-to-understand applicability guidance - available on its web site. Periodic permit training workshops, presented in different parts of the state, may also help to reduce the number of "as built" projects. ****
- We found a couple of instances where the Title V permit was used to change an existing preconstruction requirement, but the preconstruction permit was not actually changed. This is inconsistent with EPA guidance (see <http://www.epa.gov/rgytgrnj/programs/artd/air/title5/t5memos/hodan7.pdf>) and may create serious enforceability problems, since the original construction permit continues to be a separable and enforceable document. We encourage the Permitting Section to follow EPA policy and simultaneously change both the Title V and construction permit. **
- We noted many instances where the permit was unclear on the question of NSPS, NESHAP, or MACT applicability. Many "...may be subject to..." statements were found throughout the permit files. Further, most NSPS applicability determinations were not very well documented. In some cases it was clear from facts in the permit application that the NSPS-NESHAP-MACT standards should apply. In others, though, details about equipment relocation and equipment

construction dates were indeterminate. Generally, though, most applicability determinations tended to err on the conservative side with more equipment subject to the standards than not. We encourage the Permitting Section to restate any assumptions used to make a NSPS-NESHAP-MACT applicability or non-applicability decision in the permit fact sheet. We also encourage the Permitting Section to work with the enforcement group to make a definitive applicability or nonapplicability determination prior to preconstruction permit issuance, as many companies rely (incorrectly) on the construction permit as their sole listing of air pollution control obligations. ****

- At least one of the more recent construction permits included parametric monitoring for control devices, presumably as a lead in to periodic or compliance assurance monitoring in the Title V permit. This is great! Many of the applications also claim reasonably high control equipment efficiencies -- most of which are necessary to keep the emission unit below major source thresholds. However, few, if any, of parametric measurements are accompanied by a control equipment performance test. Without such baseline performance measurements, it may not be possible to make a meaningful link between the control equipment performance and emissions. Without performance data, it is also nearly impossible for the source to certify, or for the state or EPA to determine compliance with the corresponding emission limitation. Therefore, we recommend that when parametric measurements are used to verify ongoing performance of control equipment, that the state rely more on the guidelines outlined in EPA's [Compliance Assurance Monitoring Technical Reference Documents](#); available on EPA's TTN-EMC web site. It may also be beneficial for the construction and operating permit teams to complete both the introductory and advance "Baseline Inspection Techniques" courses to provide a better understanding of the link between emissions data and control equipment performance data. Lastly, internal peer review by the Air Enforcement Section may also help to improve the enforceability and usefulness of parametric measurements.

*

- Several "older" project files indicated that sources likely staggered projects to avoid PSD review. While we understand that it is easy to criticize these projects in hind-sight, with PATS it should be possible for permit reviewers to look back to determine if possible circumvention is taking place. We encourage the Permitting Section to use PATS and the historical permitting information compiled in the permit fact sheets to routinely question multiple, closely spaced projects. We also encourage the Permitting Section to include any "like kind" or "no permit action" decisions in the fact sheet permitting history to provide a more complete picture of all permitting actions at the source. ***
- All permits with an emissions cap limitation specified an averaging time of 12 months, rolled monthly. The "rolling" aspect is generally acceptable, but of the permits reviewed 1) none indicated that the Permitting Section required the source to justify the need for such a long term emission cap, 2) none had a clear verification or reporting mechanism for determining compliance during the initial 12-month period, and 3) all imposed a "monthly" record keeping and verification of compliance contrary to EPA policy of "daily" record keeping. We recommend that the Permitting Section document the need for a rolling 12-month period in the permit fact sheet. If a long-term period is justified -- based on a highly variable day to day emissions fluctuation - then the permit should also include a special condition for the first 12-month period which states, for example, "that any exceedance of the cap during the initial 12 month period constitutes a violation which must be immediately reported to the Permitting Section". If emissions are not variable, though, then the permit should impose shorter averaging periods. ****
- While the mass-balance-based record keeping forms included with most "capped" permits provides a good basis for documenting source emissions in a single report, the methodology for making the calculations is often unclear. In many cases, the form accounts only for coating use but not for clean-up, wipe, thinning solvents, or off-site waste

disposal. In addition, the methodology for determining VOC content is rarely specified, leaving too much room for interpretation. Lastly, control efficiencies are rarely required to be demonstrated, and are not necessarily overly conservative. Therefore, it would be helpful for the permit, or the record keeping forms, to specify the exact methodology -- in terms of a mass balance equation or detailed instructions -- to make clear how the emissions must be calculated. ***

- The connection between the final permit and the construction application is not clear in all cases. Many newer permits contain "standard" language that requires a source to "adhere to the specifications and conditions listed in the application, the permit, and the project review". The Permitting Section notes that this catchall language is necessary to assure that a source builds the project exactly as reviewed. However, we noted several instances where "key" aspects of the application -- that would limit potential to emit or are otherwise required to ensure compliance -- were not included in the permit. For example, one applicant requested a limit on fuel usage to remain a minor source. This limitation was not included in the permit, nor discussed in the project review. Without the appropriate fuel use limitation, the source should have undergone PSD review. In another case, a bottleneck based on two production shifts was used to limit emissions, but no corresponding limitation was placed in the permit. Are the applications limiting in these two cases? Would an inspector really dig through a permit application for "hidden" limitations not otherwise described in the permit? Do inspectors even have access to permit applications? As a practical matter, probably not. Therefore, we recommend that any assumptions used to limit potential to emit or otherwise limit source operations be explicitly included in the permit. ***
- We noted some concerns about the Permitting Section's application of "like kind" replacements and the lack of any evidence of netting. Several "significant" pieces of equipment appear to have avoided permit review. We believe

that the Permitting Section should evaluate projects on an "actual-to-PTE" basis test using the traditional contemporaneous emission change process. Further, we believe that any control efficiencies used to limit the potential to emit should be made an enforceable permit condition, either as a percent reduction or emission limitation requirement. This failure to make assumed control efficiencies enforceable involving "no permit needed" or "like-kind replacements" decisions was encountered in several source files. **

- Through its preconstruction permit waiver program, the Permitting Section allows many sources to commence construction prior to permit issuance, but warns the source that if the project is later determined to be subject to PSD or NAA/Part D review that "EPA" may take enforcement action. The warning appears to place the sole responsibility for resolving any enforcement with EPA rather than the state. While we are generally willing to provide enforcement assistance in these types of situations, we recommend that the language be expanded to include the state enforcement authority as well. *

Follow Up

- We recommend that the Permitting Section undertake an effort over the next year to focus on the first five "areas for improvement". As appropriate, the Permitting Section may re-prioritize the list to concentrate on those areas most critical to the continuing success of the permitting programs.
- We recommend that the Permitting Section review and evaluate the specific findings for Northeast Corn Growers Association, Tracker Marine, and Unilever and take any corrective action that may be necessary.

Section IV

SUMMARY OF MISSOURI TITLE V FEE REVIEW

EPA Region 7 started the Title V Fee review by submitting several questions to the APCP concerning the Title V fee revenue, expenditures, and the accounting system(s). The APCP responded to the questions and provided a detailed demonstration of their system and how the APCP staff uses MOEIS [Missouri Emission Inventory System] to achieve the necessary goal of collecting, accounting, and housing the funds.

The APCP sends out Emission Inventory Questionnaires(EIQ) each January, as the sources submit their emission fee checks. APCP records them in the Missouri Emission Inventory System (MOEIS) fee tracking system. The facility is recorded in MOEIS by the county/plant number. Based on the source category code, the system credits the appropriate revenue account: Title V, Non-Title V, or Phase I utilities. The checks are deposited in the state treasury and the state's accounting system records the revenue by code in the proper account.

The current emissions fee of \$25.70 per ton is set by the MACC. Emission based fees are applied to the following pollutants: particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon dioxide, lead, and hazardous air pollutants. Missouri state statute provides for the fee collection, and the rule is referenced in each source permit. The fee structure could undergo a change, due to additional revenue of \$1.8 million in calendar year 2000 emissions. The phase I utilities will no longer be paying \$25,000 per unit. Rather, they will be subject to the rate per ton fee.

The overall finding is that APCP seems to be collecting sufficient fees and accounting for Title V and Non-Title V fees in an appropriate manner. At the current time we have no recommendations or changes to suggest for improving the system.

APPENDIX

List of Files Reviewed

Staff Notes for Individual Permit Files

Appendix A
Missouri Permit Files Reviewed

<p>Title V sources with NSR discrepancies in operating permit application</p>	<p>Aero Transportation Products, Inc., Independence Bruce Hardwood Floors, West Plains EFCO Corporation, Monett Harbison Walker Refractories Company, Fulton Huffy Corporation, Farmington Mead Products, St. Joseph OMC Aluminum Boat Group, Inc., Lebanon Plastene Supply Company, Portageville Waterloo Industries, Inc., Sedalia</p>
<p>Sources showing large increases or decreases in TRI emissions between 1990 and 1997</p>	<p>3M, Columbia A.B. Chance Company, Centralia ICI Explosives USA, Inc., Joplin O'Sullivan, Lamar Teva Pharmaceuticals USA, Mexico TG USA Corporation, Perryville Tracker Marine, Bolivar</p>
<p>Miscellaneous intermediate sources</p>	<p>Townsend Summit (formerly AT&T), Lees Summit Eveready Battery, Maryville Fasco, St. Clair Integram, Pacific Unilever, Jefferson City Vandalia Power Plant, Vandalia</p>
<p>Other sources of interest</p>	<p>Northeast Missouri Grain Processors, Macon Partridge Sand and Gravel, Reed Springs Wilson Trailer Sales, Moberly</p>

Appendix B

Comments on Individual Permit Files

3M [Electronic Products Division], Columbia

Permit Summary...

1998	Five construction permit projects
1999	Two construction permit projects
2000	One construction permit project

3M was selected for a file review based on the company's large decrease in emissions reported to the Toxics Release Inventory (over 150 tons per year since 1990). This type of decrease can sometimes be indicative of "netting" or banking of emissions. The Missouri permits list also indicated that the company seemed to have an unusually large number of projects over a relatively short period of time.

The files indicated that 3M has an active, ongoing permitting process. Over a three year period, 3M undertook eight different projects. In several instances, initial projects appeared to be of pilot scale with follow-up projects resulting in full scale production. Several permits involved refinements of earlier-approved projects. Each subsequent permit included a summary of previously issued permits, assisting both the source and MDNR in project tracking.

Nearly all of the projects, except for a new, small boiler approved in September, 1997, and several new selective cover and plasma coaters approved in August, 1998, appear to have resulted in very small amounts of new emissions. Since the company's potential emissions appear to be far below the PSD major stationary source threshold, and all of the projects were below the significance thresholds, no netting was found. Also, the company made no request to bank its TRI-related emission reductions. It's possible that this repetitive, piecemeal approach, resulting in lots of work for both 3M and MDNR, may be minimized with the Permitting Sections new "no permit required" for projects emitting less than 876 pounds of any criteria pollutant per year.

At least three of the eight projects involved pre-construction waivers. In all cases, the projects were "true minors" and MDNR approved the waivers, consistent with their rules. However, this potential overuse of the waiver approach may be indicative of poor corporate planning and should be a signal to closely watch future growth to make sure that projects are not staggered out of major source review.

A. B. Chance Company, Centralia

A. B. Chance was selected for review because of its large change in emissions reported to the Toxics Release Inventory.

A. B. Chance received construction permit number 032000-010 on February 22, 2000 for a lead solder pot, project number 1999-12-054. This is a modification to an existing minor source.

Emission increases for this project were calculated using AP-42 emission factors using the maximum hourly rate and assumed that the lead solder pot would operate 8760 hours per year.

This was a simple permit with no special conditions.

Aero Transportation Products, Inc., Independence

The Title V permit application states noncompliance with the emission limit set forth in construction permit 0889-0007; the source's statement says an application for a permit amendment is under preparation. Was the construction permit ever so revised?

Cover Sheet, Item 4: Title V Operating Permit

The permit incorporates the requirements of construction permits 0198-010 and 0198-010A.

The permit package for 0198-010 says that production of the '89 permitted products has stopped and that the '89 permit no longer applies since HAPs will be above de minimus and the overall potential for the facility will be greater than major levels.

Bruce Hardwood Floors, West Plains

Permit Summary...

January, 1987	Initial pre-construction permit issued
June, 1988	Construction permit revised to include production limitations, superceding 1987 permit
01/22/99	Final Title V operating permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. MDNR originally issued a permit to Bruce Hardwood Floors (a subsidiary of Triangle Pacific Corporation) in January, 1987. In June, 1988, the permit was revised to establish enforceable production conditions to assure that the source remained minor for PSD purposes. The production-based conditions generally limited how many board feet of wood that Bruce Hardwoods could process in any given year, thus serving as a surrogate for actual emissions.

In recent years, Bruce was no longer able to meet the board feet production limitation, but believed that it was emitting well below the originally estimated VOC and PM emissions calculated in the original permit

application. Consequently, the company asked MDNR to reconsider stating its limits in terms of an emission cap, rather than as a production limitation.

On January 22, 1999, MDNR issued a final Title V operating permit to Bruce. The proposed operating permit contained emission caps for VOC and PM₁₀, rather than production limits, as requested by Bruce. EPA commented on the proposed permit and recommend that the emission caps, alone, were not sufficiently enforceable to assure compliance with the original permit assumptions. EPA recommended that the Title V permit retain the production limitations. In the Permitting Section's "response to comments" document, MDNR decided not to retain the production limitations and finalized the permit to contain only emission caps. Mass balance forms were included with the final permit.

EPA believes it is highly questionable whether a mass balance approach for PM₁₀ can be used to verify compliance with an emissions cap. The approach described in the permit makes use of a site specific emission factor -- developed through testing -- that when multiplied against the actual board-feed production rate gives "estimated actual" emissions. However, given the uncertainty in wood quality, moisture, and control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. Since plant wide potential emissions are well below the PSD thresholds, this is probably not a big issue in this case. However, for a company that is close to the PSD major source or significance thresholds, this compliance technique is not recommended.

MDNR further described, in the Title V "statement of basis", that the modified limits in the Title V permit would be re-incorporated into Bruce's construction permit. However, EPA was unable to determine if the preconstruction permit was ultimately revised or not. Based on a conversation during the exit interview, Randy Raymond indicated that the Permitting Section is not changing construction permits in parallel with the operating permit. While the Title V "statement of basis" appears to have taken the correct policy position, it appears that the changes to the construction permit were never carried out.

EFCO Corporation, Monett

Permit Summary...

1991	Originally permitted as deminimis source
10/30/97	Construction permit issued, limiting plant wide VOC and HAP emissions
03/24/00	Final Title V permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. In 1991, EFCO received an "after the fact" deminimis construction permit from the Permitting Section, limiting VOC emissions to less than 40 tons per year. In 1992, the company reported emissions of over 225 tons; with a potential to

emit over 250 tons per year. In 1993, MDNR required the company to perform a HAP ambient analysis to determine if the ambient concentrations were less than those established by the Department of Health. Based on initial modeling, the state determined that the ambient HAP concentrations were unacceptable. The file indicates that MDNR and EFCO had no further discussions until March, 1996, when the state initiated a PSD-related enforcement action.

The company paid a \$4,000 penalty to settle alleged PSD violations and agreed to follow through with the HAP ambient monitoring. In October, 1997, the state issued a revised construction permit, limiting VOC emissions to less than 249 tons per year (12 month rolling average), and individual HAPs based on the modeling results. The permit, like others reviewed, contained good record keeping forms. In this case, the forms acknowledged credit for off-site transfers of hazardous waste, but on balance were deficient with the details for making the mass balance calculations.

In March, 2000, MDNR finalized the Title V permit for EFCO. The permit incorporated all of the requirements from the construction permit, including the VOC and HAP caps and associated record keeping.

Eveready Battery, Maryville

Cover Sheet, Item 6: "No permit required" decision

Project involves the replacement of bin vent filters for the ore and graphite filter/receiver system.

DNR's letter to the source cites 10-6.060 and states that no permit is required and that the modification does not involve any appreciable change in either the quality or nature or any increase either in the PTE or the effect on air quality of the emissions of any air contaminant.

Cover Sheet, Item 7: "Like-kind replacement" exemption

Project involves the replacement of the fine mix collection system.

DNR's letter to the source cites 10-6.060 and states that the modification qualifies as a like-kind replacement and that verification will be performed during a routine inspection of the source.

Cover Sheet, Item 8: "No permit required" decision

Project involves the installation of an asphalt [sealant] machine and relocation of an existing machine. Emission estimates: 4A machine, 1.08 TPY of TCE; C machine, 0.38 TPY, naphtha. Calculation sheets are in the file with appropriate submittals from the source.

DNR's letter to the source cites 10-6.060(1)(D)(3) and states that no permit is needed since the max hourly design rate of each machine of HAP will be less than the exempt limit of 0.5 lb/hr.

Cover Sheet, Item 9: "No permit required" decision

Project involves the installation of 2 mix receivers and a baghouse. The projected PM₁₀ emission rate based on a baghouse control efficiency of 99.99% is 0.19334 lb/hr.

DNR's letter to the source cites 10-6.060 and states that no permit is required since the projected emission rate is less than the exempt limit of 0.5 lb/hr. The assumed control efficiency of 99.99% has not been made enforceable. The project in and of itself appears to be subject to PSD permitting unless/until an appropriate control efficiency [or equivalent] is made enforceable.

Cover Sheet, Item 10: "No permit required" decision

Project involves the installation of an exhaust fan in the HCl storage area.

DNR's letter to the source cites 10-6.060 and states that no permit is required since the emissions are already accounted for, the emissions [< 200 lbs/yr] are considered insignificant, the fan allows air to escape from the tank while filling, no new emission created, and emissions are < exempt limit.

Cover Sheet, Item 11: "Like-kind replacement" exemption

Project similar to that listed under Project ID 2000-05-038.

Cover Sheet, Item 12: "No permit required" decision

Project involves the installation of two emergency generators; one on natural gas at 0.3 mmBtu/hr and the other on diesel fuel at 0.5 mmBtus/hr. The source states both units will be run 2 hours per month for testing and whenever needed. Emissions will be < 150 lbs per day of any criteria pollutant. The file does not contain calculation sheets for continuous [8760 hrs/yr] operation.

DNR's letter to the source cites 10-6.060(1)(D)(1)(B) and states that no permit is required since the provision exempts any combustion equipment with capacity < 1 mmBtu/hr heat input.

Cover Sheet, Item 13: "No permit required" decision

Project involves the installation of a vacuum system in the molding room. Based on an assumed control efficiency of 99%, the projected controlled emission rate is 3.02 lbs/yr. In this case, the failure to make the assumed control efficiency enforceable is not of concern.

DNR's letter to the source states that no permit is required in that the projected emission rate is less than the exemption limit of 200 lbs/yr.

Cover Sheet, Item 14: Revision of prior issued construction permit; 0197-020

Action involves the revision of the emission limit in the permit for the cathode molding process.

Emissions for four (4) processes each based on different emission factors but the same pollutant weight % [86.54%] and baghouse efficiency [99%]; 10.77 ton per year, MnO₂. The revised permit limits MnO₂ to 10 ton per year, 12-month rolling average and contains a monthly emission tracking form which sets forth the assumed emission factors, pollutant content and control efficiency; the source need only input monthly production. It doesn't appear the source was required to document or justify the assumed values or to post-permit compliance verify those values, initially or from time-to-time thereafter. Regarding the baghouse, the source must operate the unit whenever processes are in use, operate and maintain the unit per manufacturer specifications and track malfunctions, maintenance activities and repairs. Determinations of the ongoing effectiveness of the unit regarding actual control efficiency or resultant emission rate is not addressed by the revised permit. The possibility exists that none of the assumed values will ever be required to be verified by DNR. The "Review of Application" document attached to the permit incorporates by reference various documents into the permit including AP-42, a site survey, the authority to construct application and the emission factors and control efficiency provided by the applicant. This raises a concern regarding the use of [generalized/average/etc.] AP-42 emission factors for source-specific purposes if and when factors in question have not been verified as applicable to the specific source in question. The monthly determinations of MnO₂ emissions are based more on assumptions than verified values. These comments generally apply wherever permits have attached monthly emission calculation forms. [NOTE: The assumptions are of concern in that the Emissions Summary table in the permit package indicates that the potential to emit of the pre-modified source has not been determined and the PM₁₀ PTE of the application is 12.22 ton per year which is somewhat close to the PM₁₀ major modification threshold].

Cover Sheet, Item 15: "Like-kind replacement" exemption

Project involves the replacement of four gas/oil-fired boilers [two @ 16.8 mmBtu/hr, one @ 8.4 mmBtu/hr, one @ 3.4 mmBtu/hr] with three gas/oil-fired boilers [two @ 16.7 mmBtu/hr, one @ 10.4 mmBtu/hr].

DNR's letter to the source, dated 11/19/98, cites 10-6.060 and states the criteria for like-kind replacement [i.e., emission units which do not involve either any appreciable change either in the quality or nature, or any increase either in the potential to emit or the effect on air quality, of the emissions

of any air contaminant]. The letter states that verification of the like-kind replacement will be performed during a routine inspection and that NSPS "may apply" to the "new piece of equipment" [emphasis added]. The source's letter to DNR, dated 10/98, notifies the Permitting Section that the boilers were replaced due to age.

The file does not contain any indication that PSD-based net emission change estimates were calculated by the source or DNR. It appears DNR's review was focused on a PTE vs PTE assessment rather than a pre-change actual vs post-change PTE assessment. The file does not set forth the pre-changed source's PTE. The file does not provide an explanation as to why the question of NSPS/Dc applicability was not resolved before issuance of DNR's reply letter.

Installation of the new units had already occurred and the NSPS clock may have been ticking regarding the installed units. Question exists regarding the meaning of "new" applied to the installed units; e.g., the units could be "old" units "new" to the source.

Cover Sheet, Item 16: Construction Permit

Project involves the installation of C diaphragm asphalter #3. The VOC PTE for F-41 emission point, which has 2 other asphalters, is given as 3.66 tons per yr. It's not clear if the emission estimate applies to all of F-41 however it appears the estimate is due to asphalter #3 rather than the total of F-41.

The permit, dated 11/04/98, states that none of the NSPS and none of the NESHAPs apply to the source. The basis for that statement/determination is not set forth in the file. This is a common characteristic wherever construction permits cite applicability or non-applicability of NSPS or NESHAP standards -- the construction or operating permit files do not contain any documentation regarding the decision's basis or who made the determination. If the determination was made by another group at DNR, the other group's communication of that decision to the construction or operating permit group was not found in the permit files. According to the enforcement members of the audit team, they also found no applicability decisions in DNR's enforcement files; where such determinations are expected to be found.

General Comment:

There's no indication in the file which indicates that the above noted changes at the source were addressed for possible agglomeration; it appears that the changes were each reviewed as separate projects which may be DNR's tendency whenever changes are presented by sources for DNR review. The permits, as mentioned above, contain a list of permits issued to the source; we should suggest that equipment addressed by "no permit needed" and/or "like-kind replacement" letters also be included in the listing to allow a quick look at all changes at the source rather than only the permitted changes; of course, the title of the section will need to be changed as well.

Fasco, St. Clair

File documents indicate 1) tracking of in-house activities regarding the Permitting Section's review, 2) record of telephone conversations [RTCs], 3) tracking of staff time regarding the Permitting Sections review, and 4) corrections by staff of data/estimates provided by the source.

A letter from DNR to the source contains seven (7) pages of items in the permit application which need correction or clarification [indicating attention to detail and/or a tendency to not rubber-stamp permit applications].

This file left a good impression of staff accountability, of the considerable amount of time spent by staff on review of received applications and of the Permitting Section's apparent willingness to challenge source-submitted information.

Harbison Walker Refractories Company, Fulton (formerly Dresser Industries)

Permit Summary...	
March, 1999	Construction permit issued
11/17/99	Final Title V permit issued

This file was triggered for review based on questions raised in the Title V application. The company indicated that it would have to replace or repair the baghouse on the rotary cooler to be able to certify compliance with the rules. While not directly related to permitting, the company had other recent permitting actions that looked to be of some interest.

In March, 1999, MDNR approved a construction permit for the company covering three new emission points. The permit limited PM₁₀ emissions from two of these points [E0051 and E0052] to less than 14.7 tons per year; slightly below the PSD significance threshold. The permit also required Harbison to test each emission point to determine a site specific emission factor to be used to verify the PM₁₀ cap. In November, MDNR issued a final Title V permit. Of note, the Title V permit corrected a couple of deficiencies in the 1999 construction permit, including a clarification of NSPS Subpart 000 applicability and the confusion created over the omission of emission point E0053.

As found in other Title V permits, it appears that the Permitting Section completely and correctly incorporated all of the pre-construction requirements into the operating permit. The "statement of basis" described the enhancements made in the operating permit and that the changes would also be reflected in the construction permit. A review of the permit files, though, revealed that the construction permit had yet to be changed at the time of our review. The Title V review also found that a previously issued construction permit from 1992 was no longer valid since the equipment had been

removed. The removal of the obsolete permit was clearly explained in the "statement of basis".

EPA believes it is questionable, though, whether a mass balance approach for PM₁₀ can successfully be used to verify compliance with an emissions cap.

The approach described in the permit makes use of a site specific emission factor -- developed through testing -- that when multiplied against the actual production rate gives "estimated actual" emissions. However, given the uncertainty in raw material quality, moisture, and ongoing control equipment performance, it is unlikely that the emission factor approach is suitable to verify compliance with the cap. This concern is magnified in this case since the estimated project potential emissions are at or near the PSD significance thresholds. Further, as indicated in the company's Title V application, they indicate past problems with baghouse performance. Without substantial "periodic" or "compliance assurance" type monitoring of the control device, this compliance technique is not recommended.

Huffy Bicycle, Farmington

Huffy Bicycle was selected for review because their Title V permit application indicated that Huffy requested tighter VOC PTE limits in their operating permit than they received in their construction permit. Our concern was that Huffy was requesting these tighter limits because they discovered that they should have received a PSD permit with the VOC limits that the construction permit had.

Permit 0994-002 issued on August 14, 1994 was reviewed. The file indicated that Huffy Bicycle requested a VOC limit of 240 tons per year instead of the 249 tons per year limit in the construction permit to create a buffer for small miscellaneous VOC emissions not accounted for in their construction permit.

ICI Explosives USA, Inc., Joplin

Cover Sheet, Item 19: "Like-kind replacement" exemption

The project involves the replacement of an ethylene diamine dinitrate batch reactor. A letter from the source dated 2/29/00 projects a max potential emission rate of 30.8 ton per year @ 8760 hrs/yr. There's no indication in the file that DNR checked the estimate.

DNR's letter to the source, dated 3/20/00, states the new unit will have the same design capacity of the replaced reactor, operation of the new reactor will not increase production capacity, it will not cause an emission increase, and the PTE for the new unit is less than the significant level for VOC. Verification of like-kind replacement will be verified during a routine inspection. The letter also states that NSPS "may" apply to the new unit.

Cover Sheet, Item 20: "No permit required" decision

Project involves the installation of two 5000 gallon fixed roof tanks to contain wastewater having ammonia or nitrates. The tanks stored nitric acid and will be used to store wastewater.

DNR's letter to the source, dated 7/19/99, states no permit is needed in that usage is not expected to increase emissions.

Cover Sheet, Item 21: Construction Permit

The project involves the replacement of a manual packaging system with a new automated ANFO packaging system. The permit package sets forth PM₁₀ emission estimates for the new and replaced systems of 6.31 tons per year [based on source-supplied emission factor and control efficiency information] and 3.5 tons per year, respectively. There's no indication in the file that DNR checked the information or estimates.

The permit, dated 1/27/98, states that HAPs are not expected, none of the NSPS/NESHAP regulations apply to the proposed modification, the potential to emit for the new unit is 2.81 ton per year, PM₁₀, and the existing facility is major based on actual emissions.

General Comment

One major impression I developed after review of the first two files is that DNR's permits, review of application documents, formatting, etc., are standardized and as such, an observation that applies to one file generally applied to all files. For example, all permits have a section which address NSPS/NESHAP applicability. An observation that a particular file does not contain adequate documentation regarding NSPS applicability decision making, justification of the need for a 12-month limit, etc., can generally be safely extended to all other files. During my review of files I ignored [and did not make note of] similarities and searched for exceptions to the standard practice usually to no avail.

Integram - St. Louis Seating, Pacific

Integram permits reviewed included an Intermediate Operating Permit OP1999055 and construction permit 1096-010 issued on October 15, 1996.

The construction permit was for a 4th production carousel which Integram built before applying for the construction permit. Integram was a major source for VOC located in an ozone nonattainment area at the time the 4th production carousel was built. The PTE for VOC's before this project was 127 tons per year. The project had a PTE 42 tons per year of VOC. MDNR limited

the source's PTE to 99.9 tons per year of VOC. A Clean Air Act Part D permit was not required and there was no control technology review. The PTE limit was a blanket emissions cap of 99.9 tons in any consecutive 12-month period. The permit included forms the source could use to calculate and track VOC emissions for the spot repair glue. The permit also had example tracking forms for VOC emissions from the mold release, touch-up spray paint, and spot cleaning. The mold release emissions are the largest for this source with potential emissions of 165.6 tons per year of VOC. The example forms all required emissions to be tracked monthly instead of daily. These forms were not included in the Intermediate permit.

The Intermediate permit limits HAP emissions to 10/25 tons per year. The HAP limit could be interpreted as a calendar year limit. The permit says that HAPS will be tracked monthly based on purchase records. The Intermediate permit does not specify how the HAP emissions are to be calculated.

Mead Products, St. Joseph

Permit Summary...

1992 - 1997 Eight construction permits issued
02/04/2000 Construction permit issued, limiting plant wide VOC and HAP emissions to less than 40 and 10/25 tons per year, respectively
03/28/2000 "No operating permit required" approval

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. MDNR issued eight construction permits to Mead Products from May, 1992 through June, 1997. Of particular interest was a series of three projects approved in January, March, and May, 1995. At the time, Mead was classified as a major stationary source, with potential VOC emissions over 500 tons per year. The three projects in 1995 were each individually permitted, with no apparent review to determine if they were connected.

The combined emissions from the three projects was approximately 57.1 tons per year; well above the PSD significance threshold. Based on a cursory review of the file, EPA would have likely concluded that the three projects -- including one installation of 4 presses and another of 6 presses -- avoided PSD review because of the way the company "packaged" the applications.

This concern was rendered moot when the company received a plant wide emissions cap in February, 2000, limiting VOC and HAP emissions to less than 40 and 10/25 tons per year, respectively. Shortly thereafter, MDNR notified the company that their de minimis emissions potential was sufficient for limiting the company out of the need for an operating permit.

As with other permits involving a mass balance cap approach, the permit could benefit from more specific instructions on how total emissions are required to be calculated. The forms attached to the permit generally provide a good accounting for all HAP and VOCs emitted, but are not specific on how

VOC content is to be determined and how the mass balance calculations are to be made.

This file may provide some indication that Title V has side benefits beyond those originally anticipated. As a result of the compliance review conducted for Title V purposes, the source, over a short period of time, re-tooled and re-engineered most of its processes and raw materials to get emissions below the Missouri deminimis thresholds.

Northeast Missouri Grain Processors, Macon

Permit Summary...

03/09/99	Construction permit issued
11/09/99	Construction permit issued

This permit record was reviewed because it is the first ethanol plant to construct in Missouri. Overall, the files revealed some serious concerns; some of which have been resolved, other which have not.

MDNR issued a construction permit for a "greenfield" ethanol plant on March 9, 1999. The permit was based on a plant design of 15-16 million gallons of denatured ethanol per year, with a by-product of 100 million pounds per year of dry distillers grain. The permit limits only PM₁₀ emissions from the DDGS dryer and also establishes a restriction that ambient concentrations of PM₁₀ not to exceed the 150 ug/m³ NAAQS at the property boundary. The permit included special forms to track the daily ambient impact based on daily production throughput to the DDGS dryer. More details on the ambient impact analysis are described below. The permit also established once-a-day pressure drop reading for the DDGS baghouse and the fermentation scrubber to help verify that the control performance remains high. Otherwise, no restrictions or work practices were placed on VOC emissions or VOC fugitives from leaking pumps, valves, flanges, or compressors.

NSPS Observations

The permit fact sheet correctly noted that the boiler and tanks would be subject to NSPS Subparts Dc and Kb, respectively, but was silent on applicability of NSPS Subpart DD, which may apply to the corn storage and handling equipment.

The fact sheet also stated that the plant was not subject to NSPS Subpart VV -- because biofermentation operations are exempt -- and that it would not be considered a chemical processing facility (SIC group 28). No rationale was found in the file for the latter two claims, which are both contrary to EPA policy for ethanol plants. Interestingly, on January 28, 1999, the source questioned MDNR's statements in its hand-written markup of the draft permit, making clear that it should be classified under SIC group 28, and thus should be considered a chemical processing facility subject to PSD at the 100 ton per year threshold. Nevertheless, this change was not made

to the original construction permit. Both deficiencies were fixed in the November, 1999, construction permit, following consultation with EPA. The later permit made clear that the facility would be considered a chemical processing facility for PSD purposes - subject to the 100 ton per year major stationary source threshold - and that NSPS Subpart VV would apply to biofermentation operations. The company acknowledged that it agreed with both determinations and would comply accordingly.

Enforceability Observations

VOC emissions from the fermentation process account for just under 50% of the projected VOCs from the facility. The company estimated the PTE based on full source operation, but also considered a scrubber efficiency rated at 95.3% effectiveness. Neither the scrubber efficiency nor a controlled VOC emission limitation were included in the permit. Unfortunately, a minimal drop off in scrubber efficiency, on the order of 2%, could easily put VOC emissions over the PSD major source threshold, and subject the entire facility to PSD. In these types of situations -- where emissions are close to the PSD thresholds -- we believe it is important for the permit to echo the assumptions used to limit potential to emit. We also think it is important to verify that the control equipment operates as prescribed, both initially and ongoing. The permit probably should have required baseline testing for VOC so that the required pressure drop monitor data could be used to verify that the scrubber continues to operate at or above its baseline performance.

A PM₁₀ limit was set only for the DDGS dryer, but not for other emission units critical to the modeling, like the grain dryer and hammermill. The permit requires pressure drop monitoring for all baghouses, but specifies no procedures for using these data to determine if the particulate matter assumptions in the application are being met or not. Without baseline test data, for other than the DDGS dryer, it will be nearly impossible to equate the baghouse pressure drop data to any meaningful compliance threshold.

Does the later permit supersede the original permit? It appears so, since the later permit mimics the first in nearly all instances (except for addition of the new equipment and certain corrections), but no supersession language is found either in the permit or review summary.

Applicability Observations

In the original permit application prepared by Northeast Missouri Grain, the company evaluated the potential to emit for both PM and PM₁₀ from all listed emission points. Emissions were estimated at 98.5 and 77.4 tons per year, respectively. Both sets of calculations relied on well documented emission factors from AP-42 and other emission factor guidelines. Yet, in the final permit and review summary, the Permitting Section makes no mention of PM. This appears to be a critical oversight, since PM emissions are estimated to be at or near the major source threshold. Any slight modification, as part of the original project, could easily put the source over the major source applicability threshold, both for PSD and Title V purposes. No explanation is

provided on why PM emissions were not considered by the Permitting Section as part of its permit record. We reaffirm that both the state permit rule and the federally approved SIP require consideration of PM for pre-construction applicability purposes.

There appears to be some confusion over whether the source must apply for a Part 70 operating permit or whether an intermediate operating permit is adequate. There was correspondence in the file indicating that the source would apply for an Intermediate permit. However, based on calculations performed by MDNR, Northeast Missouri Grain has a NO_x PTE for fuel-burning equipment in excess of 130 tons per year. This would classify the source as major for Title V purposes. In addition, because the source is classified as a chemical processing facility under SIC Group 28, it would also trigger PSD review. In some handwritten notes provided by the company, Northeast Missouri Grain noted that it was their intention that MDNR limit the fuel use of the facility so that NO_x emissions would remain below the 100 ton per year threshold. Since this limitation was never imposed in the permit, though, it is doubtful that the facility has been properly limited out of Title V or PSD.

The company's permit application and the corresponding permit and review summary continue to conflict, potentially leading to some enforcement risk in the future. If Northeast Corn Growers has not yet submitted a Part 70 application (even though not yet required), we recommend that the Permitting Section contact the company to resolve this conflict before it becomes an enforcement problem. We also recommend that the permit be revised to appropriately reflect the fuel restrictions needed to keep NO_x emissions below the major source threshold, or that Northeast Missouri Grain obtain a PSD permit.

Overall, we have concerns about the true objective of this project. In the original permit application, the company estimated the capacity of the plant at 15-16 million gallons denatured ethanol per year. Following conversion of one beer well to a fermentation unit and installation of a new beer well, the company recently restated the capacity of the plant as 18-19 million gallons per year. This latest revision was apparently accompanied by no corresponding increase in emissions; either from the new equipment or from downstream and upstream equipment. Given the 20% increase in capacity from original application to the latest revision, this seems unlikely. Potential to emit estimates already suggest that the plant may be major for NO_x without appropriate restrictions. Other pollutants, like PM₁₀ and VOC, are also very close to the PSD threshold. Any additional projects to enhance the production capacity of the plant could easily put them over the top. We may investigate further to determine if any capacity-building or debottlenecking projects should have been considered as part of the original plant design. We will also monitor compliance with the company's assumptions used in the permit application and the corresponding permits to assure that the company continues to operate as originally projected. If compliance problems arise, such that the major source thresholds are exceeded, then some type of PSD enforcement action is inevitable.

Ambient Modeling Observations

The applicant performed a detailed ambient impact analysis for PM₁₀. The review apparently showed the potential for significant impact from the grain dryer (EU0030) and as a consequence the state imposed special limits in the permit to assure that this emission point, along with other points at the source, would not exceed the NAAQS for PM₁₀. Condition 1.A. requires the source to keep daily records of "estimated" impact through the use of a mass balance calculation, by multiplying grain throughput by a special modeling factor and adding to the predicted PM₁₀ concentration for all other equipment. Combined, this calculation must show that the 150 ug/m³ standard is protected each day. In essence, this approach limits the daily grain drying throughput to 608 tons of grain per day, rather than the 874 ton per day potential of the equipment. Overall, though, this approach appears to have many flaws...

- The hourly emission factor used for the dryer in the SCREEN 3 modeling appears to have been "proportionally flattened" to an annual average; based on a projected number of operating hours of 2,308-3,000 hours per year. As a consequence, modeled emissions from this "critical" unit are likely underestimated by a factor of three.
- The screening modeling performed, and the subsequent ambient-based, surrogate production limit in the permit, do not appear to have considered the PM₁₀ background concentration in and around the source. Data for Monroe County, not far from Macon County, shows daily maximum background concentrations of 33 to 54 ug/m³. Some representative background concentration should have been accounted for when allowing a source to emit up to the NAAQS.
- The modeling appears to have focused only on the NAAQS, with little or no attention to increment. The Class II PM₁₀ increment for this area is 30 ug/m³, assuming that the baseline has been triggered. The new plant, though, projects an overall impact of over 113 ug/m³; or nearly four times the increment. While not a PSD source (although this is also of question as described above), it seems reasonable that if screening modeling predicts concentrations well above the increment level then refined modeling should have been performed. Refined modeling may have shown lessor impacts, but it is doubtful that it would show such a significant reduction that the impacts would fall below the allotted increment. This suggests that tighter PM₁₀ emission limitations would have likely been required; in particular for the grain dryer, DDGS dryer, and the hammermill and belt scale.
- Unlike other PM₁₀ emission points which were modeled based on AP-42 factors, the DDGS dryer [EU026] was modeled using a "conservative" process weight rate emission factor. The permit establishes the process weight rate as the enforceable PM₁₀ limit for the DDGS dryer, so this is the proper input to the model. Based on the results of the screening modeling, though, this unit has the highest impact of all emission units and -- alone -- is

predicted to exceed PM₁₀ increment levels. Based on the increment concerns expressed above, it is likely that the permit should have specified a much lower emission limitation for this unit.

- Other "critical" units, including the grain dryer and the hammermill, are of concern as well since they were modeled based on controlled AP-42 factors. These factors, while not useful for compliance purposes, are likely to be somewhat representative of average actual emissions from this type of equipment. The modeling shows that these units, too, are very close to the increment level. Combined, they are well over. Therefore, it appears that controls would have to perform substantially better than those used on a similar AP-42 unit.
- The screening modeling does not appear to have considered fugitive emissions from haul roads. Given the short stacks of much of the equipment, it is possible that overlapping impacts from road dust and process equipment may even further aggravate conformance with the increment.

Overall, it appears that the "conservative" screening modeling performed by Northeast Grain Processors may not be protective of either the PM₁₀ NAAQS or the increment. Whether ultimately found to be a PSD source or not, we believe that increment consumption should be evaluated where screening modeling (and likely refined modeling) indicate a substantial likelihood of problems. We continue to support the Permitting Section's use of screening modeling for these kinds of projects and understand the resource concerns associated with refined modeling. However, in this case we recommend that the Permitting Section re-evaluate the modeling and modify the permit, if necessary, to assure that critical PM₁₀ emitting units are properly limited to avoid any modeled exceedance of the NAAQS and increment.

112(g) Observations

It wasn't clear from our review whether the Permitting Section considered the 112(g) [or 10 CSR 10-6.060(9)] implications for this new ethanol production facility. The permit fact sheet indicates that "HAP emissions are not expected from the proposed equipment", but other information in the permit record indicates that such facilities may emit methanol and hexane, both listed HAPs. Test data, included in the permit record, for a similar facility in Minnesota indicated that methanol emissions may be present. The source application also notes that hexane may also be emitted from the bio-digester. Since the facility was constructed after the 112(g) applicability dates, it would have been worthwhile to see an applicability or nonapplicability analysis specific to the equipment being installed. Absent this showing, it is uncertain whether 112(g) applies or not.

Specific Recommendations

- We recommend that the Permitting Section follow-up on the question of NSPS Subpart DD applicability for the corn storage and handling equipment.
- We recommend that the Permitting Section follow up with Northeast Missouri Grain to determine whether HAP levels should be controlled under 112(g).
- We recommend that the Permitting Section re-evaluate the modeling and modify the permit, if necessary, to assure that critical PM₁₀ emitting units are properly limited to avoid any modeled exceedance of the NAAQS and increment.
- We recommend that the Permitting Section resolve the PSD and Title V applicability concerns by reopening the permit to:
 - clarify restrictions on fuel use (NO_x) and particulate matter (specifically PM) emissions
 - establish testing requirements for all equipment with a potential to emit that accounts for 25% or more of the potential to emit of the facility (e.g. PM, PM₁₀, NO_x, and VOC for the DDGS Dryer, NO_x for the Boiler, and VOC for the Fermentation Scrubber) to provide baseline comparison to control equipment operating parameters. Without such testing, the measurements taken from the control equipment are likely not meaningful for compliance certification purposes.

OMC Aluminum Boat Group, Inc., Lebanon

Permit Summary...

05/09/97	Title V permit application filed
09/22/97	Construction permit issued
12/03/98	Title V permit issued

This file was reviewed to determine if NSR-related questions raised in the Title V application had been addressed by the Permitting Section. The original Title V application described the installation of a spray booth in 1989, but made no mention of the construction permit for this project. The Title V application also noted that the company was seeking a plant wide cap to limit its VOC emissions to below 250 tons per year.

The file revealed that the Permitting Section issued an "after the fact" preconstruction permit to the facility limiting its plant wide emissions to less than 249 tons per year. This cap applied to all equipment at the installation. Since overall criteria emissions were limited to less than major source status, no further review was done on the original paint booth installed in 1989. The cap seemed to resolve the question raised during the Title V permit application review.

The Title V permit properly incorporated the cap limits for both VOC and HAPs. Both the pre-construction and operating permits included detailed mass balance record keeping forms to assist in the accounting of VOCs and HAPs. While the forms were comprehensive, neither the construction or operating permits specified the details for making the mass balance calculations. Nor did either permit specify how the various emissions factors for coatings and solvents were to be determined. For example, it was not clear from the permit whether the company was allowed to receive any credit for off-site waste disposal of its VOC or HAP materials. It would have been very helpful to see an explicit equation, along with a description of each term, or a detailed explanation of the methodology to be used to make the VOC and HAP calculations.

The file contained the results of ambient screening modeling for six HAPs performed by the Permitting Section. Modeling results indicated that the concentration of HAPs would be below the Permitting Section's action level of 10 times the ambient air level (AAL).

O'Sullivan, Lamar

Cover Sheet, Item 17: "No permit required" decision

Project involves the installation of a routing unit. The applicant set forth the following: 294 bd ft/hr, an emission factor of 0.1324 lb/1000 bd ft and a control efficiency of 99.35%. DNR applied an emission factor 0.315 lb/1000 bd ft and estimated potential emissions not considering control equipment as 0.09 lb PM₁₀/hr.

DNR's letter to the source, dated 5/03/00, cites 10-6.060(1)(D)(3)(A) states no permit is needed in that at the max hourly design rate of 294 bd ft/hr, the potential emission rate is less than the exempt rate of 0.50 lb/hr.

Cover Sheet, Item 18: Construction Permit

Project involves the installation of a laminating machine at an existing wood furniture plant. To its credit, DNR informed the source in a letter dated 7/20/99 that MHDR [i.e., max hourly design rate] may not be determined using annual through put data; DNR suggested that the equipment's manufacturer be contacted for the machine's MHDR. DNR needed the MHDR for PTE purposes. The machine replaced an existing machine; it doesn't appear DNR treated this change as a like-kind replacement. HAPs were addressed by DNR with the conclusion that MACT JJ would not apply to the source in that the source is not a major HAP source. The source stated in a letter dated 4/23/99 that the new machine will have a higher production rate [205,705 gal resin/___] than the unit to be replaced [80,404 gal resin/___] but that the resin to be used in the new machine will have a lower VOC and formaldehyde content than that used in the to be replaced unit. The file does not indicate that the source was asked if the new unit would be able to process the resin previously used or a higher VOC content resin; also, the permit does not restrict the characteristics of

the resin to be used. Thus, the source's PTE [4.96 TPY] estimate for the new unit is questionable but this may be a moot point in that the source appears to be a nonmajor source. DNR's "Review of Application" document says the application's emissions will be 11.38 TPY which differs from the source's estimate of 4.96 TPY. The file is not clear as to how the 11.38 TPY estimate was derived. Application of a revised MHDR [53.91 vs 34.3] doesn't account for the difference in the projected annual emission increase estimates.

The permit issued on Sept 20, 1999, contains a standard condition not previously notice by the auditor. The 1st sentence of the condition states that the specifications/conditions listed in the application, the permit and the project review document are incorporated as part of the permit. However, the 2nd sentence of the condition may restrict the applicability of the entire condition to the specifications/conditions directly related to control equipment. If so, then the other specifications in the application [e.g., relating to paint VOC content, production rate, etc.] may not be incorporated into the permit if that's DNR's intent. The permit package cites NSPS nonapplicability; the file is not clear as to who at DNR made that determination.

A letter dated 7/21/99 to the source allows constructions activity prior to permit issuance. It basically states that if PSD or NSR Part D review is later determined to apply the company may be subject to "EPA" enforcement action. The reason the enforcement burden is placed only on EPA is not clear; the statement if a standard statement used by DNR should be revised to place enforcement action priority on DNR rather than on EPA.

Partridge Sand and Gravel, Reed Springs

Cover Sheet, Item 22: Construction Permit

NOTE: Only the construction permit was reviewed for purposes of assessing the adequacy of permit conditions/discussions. The permit was randomly picked from the most current notebook of construction permits across from Raymond's office.

Findings/suggestions/questions follow:

The permit [072000-004], issued 3/29/00, approves a new plant with a washing rate of 75 TPH.

The cover page approves construction of the source "under the authority of RSMo 643 and the Federal Clean Air Act". What authority has been granted Missouri, or any state, by the federal CAA? Rather than specifying CAA authority, why not cite "under authority granted by the EPA and of RSMo 643"?

Regarding Standard Condition 1, a deadline has not been specified for the notification of failure to begin construction within two yrs of the effective date of the permit; the same comment applies regarding suspensions greater than one year. As written, the second sentence's intent will be difficult to enforce in that the deadline for each notification is not specified.

Regarding Standard Condition 4, why isn't the application [and other associated documents] also mentioned if those documents may contain provisions/proposals/etc., intended to be enforceable by DNR?

Regarding Standard Condition 6, what if the mentioned documents contain conflicting information [e.g., control efficiency, EF] ... which applies and/or must be met if/when the permit does not specifically address the matter? Maybe include a statement that the most stringent of the conflicting items applies until DNR formally resolves the matter.

Regarding Site Specific Conditions 1.B.1 and 2, they are not equivalent. What's the basis for this non-equivalence? Based on a 24 hr/day operating schedule [which the permit allows], the per 4 hour water application rate should be 26 gallons rather than 21 gallons to equate a quarter inch daily rain fall over a 1000 sq feet area.

Regarding Site Specific Condition 1.C.1, the frequency of the haul road surface area estimating is not specified; as such, the provision is not enforceable from a practical standpoint. Maybe require a new estimate each time the unpaved haul road configuration changes.

Will there be no emissions off the paved haul roads at the site? If no such roads, the permit is silent as to what will be required [e.g., permit re-opening] if/when unpaved roads are paved.

Regarding Site Specific Condition 1.C, why not also require reporting or highlighting sections of roads which were not wetted per the conditions of the permit?

Regarding the "Emissions/Controls Evaluation" section of the "Review of Application" document attached to the permit, DNR's use of AP-42 emission factors has not been justified for this particular source. If justified, each emission factor "rating" should be specified for informational purposes.

Regarding paragraphs 2 and 3 of the "Emissions/Controls Evaluation" section of the "Review of Application" document attached to the permit, many assumptions are mentioned which have not been justified as applicable for this particular source. As such, the PTE estimates given for the source are questionable.

The permit package mentions Partridge Sand & Gravel many times. The permit is silent regarding transfer of ownership of the source. Will the new owner need to get a new permit for the source? Will the requirements of the permit automatically transfer to the new owner? Will proposals made in the application by Partridge still be binding on the new owner if the permit does not specifically impose the proposals?

The "Ambient Air Quality Impact Analysis" of the "Review of Application" document states a nomographed modeled impact estimate of 149.95 ug/m³ for PM₁₀ against the 24-hr NAAQS of 150 ug/m³. The estimate does not appear to include a background concentration; if so, it appears the source will cause or contribute to a violation of the PM₁₀ NAAQS. DNR approved the project. Why wasn't more complex modeling studies required? The impact estimate appears to rely in part on 99% and 90% effectiveness control regarding, respectively, the wash system and haul roads.

Plastene Supply Company, Portageville

Plastene Supply Company was selected to review because their Title V permit application indicated that they had built several paint spray booths without construction permits. Plastene also requested to use TVEE Method 2 for periodic monitoring for opacity. We wanted to make sure that this method was not used in the operating permit.

A review of the operating permit file showed that TVEE Method 2 was not used for opacity periodic monitoring. A requirement for equipment to be labeled in construction permit 1298-009 was not included in the operating permit.

Plastene received construction permit number 1298-009 dated November 12, 1998 for four "as built" paint booths. These booths were installed in 1986. MDNR fined Plastene \$50,000 in a 1999 settlement agreement with Plastene for this violation. Plastene is an existing major source with actual VOC emissions greater than 250 tons per year. The construction permit included the following special condition:

Plastene Supply Company shall not discharge into the atmosphere from the four (4) spray booths using HVLP spray guns VOC's in excess of 40 tons in any consecutive 12-month period.

To avoid PSD, the limit should have kept the emissions below 40 tons instead of equal to 40 tons. The permit required monthly records and did not specify how to get the VOC content of coatings. HAP emissions were modeled for this construction permit. The permit also created a HAP limit. The HAP limit also required monthly records and did not specify how the HAP content of the coating should be determined.

Construction permit 1198-008 issued on September 18, 1998 for a new 10.5 mmBtu per hour boiler correctly stated that the boiler is subject to 40 CFR Part 60 Subpart Dc.

TG (USA) Corporation, Perryville

TG was selected for review because of its large change in emissions reported to the Toxics Release Inventory. TG has been issued six construction permits in a relative short period of time. TG is a major source for PSD with potential VOC emissions greater than 250 tons per year.

Project Summary			
	Date Applied for Permit	Date Permit Issued	VOC PTE
1	11/14/94	4/25/95	0.4
2	9/5/95	12/20/95	29.5
3	11/22/95	2/28/96	1.2
4	4/22/96	7/19/96	8
5	11/6/97	1/29/98	12.6
6	6/24/98 "As Built"	9/3/98	9.3

Each of these projects had a potential to emit less than the significance threshold. However, these projects were permitted within a short period of time from each other. We are concerned about sources splitting projects into multiple permits so that they appear to not be significant. We recommend that sources that submit multiple permit applications over a short period of time, as in the case here, be looked at to make sure they are not trying to avoid PSD or NSR with sham permits. We did not have time to review these projects to determine if PSD should have applied in this case. Also, it was hard to tell from the application where the emission factors came from. Furthermore, some of the annual emission rates reported in the review summary did not equal the product of the hourly rate and the number of hours the source planned to operate. We were not able to determine from the files why a lower annual rate was used in the review summary.

The construction permits issued in 1998 state that 40 CFR Part 63 Subpart T does not apply to the degreasers. These degreasers use Aktrel Solvent but it was unclear from the file what this solvent is composed of. Therefore, we could not confirm that this applicability determination is correct.

Teva Pharmaceuticals USA, Mexico

Teva Pharmaceuticals was selected for review because of its large change in emissions reported to the Toxics Release Inventory. Construction permit files for two permits/projects were reviewed.

Project number 007-0040-013 was for the installation of two reactors and one bulk storage tank to manufacture bis-trimethylsilylurea (BSU). Construction permit 0198-024 was issued for this project. This was a modification to an existing source. Material from the two new reactors are used in the "Cephalosporin-G" process. The file referred to the "Cephalosporin-G" process as being new. There was no indication in the file that this project was considered as part of the "Cephalosporin-G" process project. The permit did require Teva to test to quantify the VOC from the BSU reactors. Since there was not VOC limit in the permit it appeared that the test was to verify information supplied by Teva in the application on the emissions from the reactor. The estimated VOC emissions from this project is 0.0134 tons per year.

Project number 007-0040-014 was for an amoxicillin trihydrate manufacturing facility. All the equipment for this project was transferred from Teva's New Jersey manufacturing site. Construction permit 0198-034 was issued for this project on January 20, 1998. The review summary says that Teva is subject to 40 CFR Part 63 Subparts H and I but the file did not say if the source is major for HAPS. The permit requires the use of a carbon absorption system with a breakthrough monitor. The permit requires the carbon adsorption system to be maintained to minimize excess emissions and defines excess emissions and detecting a breakthrough. The permit also requires annual verification of control efficiency but the permit does not specify what efficiency is required. The permit may have intended Teva to verify the control efficiency specified in the permit application but the permit application is not specific on the averaging time of the control efficiency. The review summary stated that tanks T-008, T-010, and T-014 are subject to 40 CFR Part 60 Subpart Kb. However, there was no information in the file on when these tanks were built. It was not clear that these tanks are subject to Kb since the tanks were being moved from New Jersey.

Tracker Marine Bolivar Plant, Bolivar

Tracker Marine was selected for review because of its large change in emissions reported to the Toxics Release Inventory. Permit 0599-006 issued on April 23, 1999 was reviewed. This permit was for an "as built" paint booth. This source is not in a nonattainment area.

This permit referenced permit 1196-010 which was issued in November of 1996. This permit was also an "as built" and limits Tracker's facility wide VOC emissions to 40 tons in any consecutive 12-month period. The 1999 construction permit file says that permit 1190-010's 40 ton VOC cap was changed in an operating permit to a 100 ton per year limit. There is no record in the file for permit 1196-010 that it has been changed. Also, no operating permit has been issued to Tracker. It is not clear if permit 0599-006 revises the VOC limit.

Tracker also has limits on HAPS to keep Tracker a minor source for HAPS. It appeared that MDNR considered 112(g) when this project was reviewed and calculated a HAP PTE of just over 25 tons of HAPS per year. MDNR correctly

determined that the source is not subject to 112(g) since the source has facility wide HAP limits to keep the source minor. However, MDNR has discovered that Tracker has violated its HAP limits. Therefore, Tracker has now applied for a Part 70 permit. The Part 70 application incorrectly says that currently there are no plant wide permit conditions and the permit does not propose any plant wide permit conditions. It appears that Tracker must either get a 112(g) permit or limit the new paint booths to less than the major source threshold since they will be a major source for HAPS.

It was not clear where the emission factors for NO_x and PM₁₀ came from.

Townsend Summit (formerly AT&T), Lees Summit

Cover Sheet, Item 5: Intermediate Operating Permit

Standard permit; as such, standard comments.

Unilever Home Personal Care, Jefferson City

Unilever's Intermediate operating permit issued on June 1, 1999 was reviewed. This permit limited SO₂ emissions to 95 tons in any 12 month period. SO₂ emissions at this source is from the combustion of oil. The permit requires Unilever to analyze the fuel oil on an annual basis for the percent sulfur. The permit does not specify what method to use to analyze the oil. There is no requirement for the source to install a fuel meter so the amount of fuel used can be determined.

Also construction permit 1100-0009-007 issued on August 16, 1996 was reviewed. This permit was for a line to manufacture Dentifrice toothpaste. This was an "as built" permit. MDNR issued Unilever a NOV on November 4, 1994. Unilever's SIC code is 2844 and is not located in a nonattainment area.

The existing source had a PTE 113 tons per year of SO₂ making the source major for PSD. This construction project had a potential to emit 67 tons of VOC per year. It appears that Unilever's SO₂ PTE should have been limited in this construction permit to keep the source out of PSD.

Vandalia Power Plant, Vandalia

Vandalia Power Plant's Intermediate operating permit was reviewed. This was a simple permit with nothing noteworthy discovered.

Waterloo Industries, Inc., Sedalia

Were EP26 and EP28, apparently mentioned in the source's Title V permit [and/or application], installed w/o proper construction permits.

Cover Sheet, Item 2:

A construction permit for emission points 15-18, 33 as well as **emission points 26 and 28** [consisting of 42 natural gas fired infrared heaters] was issued on 7/17/99. The projected PTEs for the various criteria pollutants are each less than 1.6 TON PER YEAR. The permit package contains an ambient impact analysis

Ambient Impact Analyses: According to Refaat, ambient impact analyses are required by state rule. The emissions increase threshold are the significant increase thresholds for criteria pollutants; the Permitting Section is developing thresholds for HAPs. Each portable is apparently subjected to an ambient impact analysis [apparently because of their changing surrounding situation].

A construction permit for an EDP coating tank and a bake oven was issued by DNR on Aug 1, 1997. The permit and an attached document entitled "Review of Application for Authority to Construct and Operate" which constitute the permit package contain a review summary section, an applicable regulations section, a listing of past permits issued to the source section and a project description section which are typically concise and informative. The permit notation system is somewhat clever if not simple [e.g., 0897-012 for a permit issued around 8/97]. The permit package also contains a HAPs emissions impact analysis. This construction permitting action also set forth a plant-wide VOC emission limit of 248.5 tons, 12-month rolling allowable. The limit basically subsumes 112.18 tons for emission points 3-11 and 136.32 tons for emission points 24-42 [NOTE: I could not determine why the 112.18 tons was tied to emission points 3-11 as opposed to emission points 3-9; see the following paragraph]. The permit sets forth a blanket emission limit as opposed to restrictions relating to production, solvent content, etc. EPA policy allows blanket limits for painting operations if daily, rather than longer period, record keeping is required. The file document do not indicate that the source was required to justify its need for a 12-month limiting period. DNR's actions regarding these matters are not consistent with EPA policy. The permit also does not set forth clear provisions regarding applicability of the 12-month limit during the initial 12-month period.

NOTE: Except where otherwise noted, each deficiency noted above is common to other permits which have a 12-month emission limit.

A construction permit [1294-003] issued on 11/27/94 [and/or 12/02/94?] for new paint-related systems emission points 3-9 establishes a VOC emission limit of 112.18 tons. The permit requires a log of monthly VOC emitted and of VOC emitted on a 12 month rolling period. Although implied, the permit does not specifically state that the 112 ton VOC limit applies over a 12 month rolling period. The permit package contains a table which sets forth in easily understood format the existing source's PTE [143 TPY, VOC], the new equipment's PTE [112 TPY, VOC], the project's net emissions increase [88 TPY] and the revised PTE of the source after the modification. The permitted equipment replaced equipment at the source. The permit states that none of the NSPS or NESHAPs will apply to the facilities; the statement does not set forth the basis for the decision. The permit package contains an ambient impact analysis section (because, as explained by DNR, the PTE increases from

the source will be greater than the de minimi level); modeling was done for the HAPs but regarding other pollutants, the Permitting Section simply states that the impacts are not expected to adversely affect the ambient air quality.

A construction permit was issued on Aug 24, 1990, for a maintenance paint booth. Emission restrictions were set forth for paint and for thinning solvent in terms of allowed gallons per year and VOC content. The permit imposed monthly record keeping.

Cover Sheet, Item 3: Title V Operating Permit

For paint booths and EDP coating process.

The file contains discussion/correspondence between EPA and DNR and between EPA and the source regarding NSPS/Dc and Region VII's reduced record keeping/reporting requirements. EPA/VII granted reduced record keeping requirements to the source on Aug 2, 1999. The Title V permit issued by DNR on 12/30/99 contains those reduced record keeping requirements.

Wilson Trailer Sales, Moberly

Permit Summary...

01/17/96	MDNR issued "No Permit Required" notice
08/20/98	Company notified MDNR that permit required... based on new estimates
09/02/98	MDNR notified company to file construction and Part 70 applications, along with EIQ
01/25/99	"After the fact" construction permit issued

The Wilson Trailer file was randomly selected for review.

In early 1996, Wilson Trailer constructed a new facility without a permit. Wilson constructed based on a determination by MDNR in January, 1996, that no construction permit was required because the potential to emit for the facility was below de minimis levels. In August, 1998, Wilson notified MDNR that, based on a consultants review, they believed the facility was not de minimis and that a permit was required. The consultant noted that since the source had not received a permit with limits necessary to validate the PTE calculations, the PTE would be much higher than originally projected. Shortly thereafter, MDNR re-evaluated the project and determined that a construction permit should have been required. The state also notified Wilson that they would have to submit a Part 70 operating permit application and emission inventory questionnaire (EIQ).

In January, 1999, MDNR issued an "after the fact" construction permit. However, the permit contained no restrictions -- other than the standard conditions -- and no record keeping. The problem with this approach is that, absent detailed records, it could be nearly impossible to verify whether the source continues to remain below the PSD major source thresholds. The final PTE estimate [69 TPY VOC and 77.1 TPY HAPs] was premised solely on information

listed in the application and essentially relied on a bottleneck in the trailer production line to limit emissions. Any time surface coating is involved, there are a lot of assumptions that can be made. Interestingly, none of these important limitations - such as "production is limited to two shifts" or "production is limited to 12 trailers per day" -- were included in the permit. These assumptions can easily change over time; maybe even to the extent that PSD could be triggered. A better approach in this case would have been to use an emissions cap similar to that used in other VOC projects. That way, the company must maintain adequate records and perform a mass balance calculation to show that they remain below the cap.

Even though the permit contained a standard condition that the "permit application is incorporated by reference", it remains unclear exactly what this means. We understand MDNR's desire to have sources build and operate the way they document in their application. However, when push comes to shove, can the state and EPA really distinguish whether the source is in compliance with the application or not? If a source indicates that it will operate two shifts a day, are they in violation if they only operate one? If they use different coatings or different application equipment -- say with a different transfer efficiency coefficient - is that a violation? What if the source doesn't exceed its original potential to emit estimates but makes other physical changes? It is best not to have this confusion. Therefore, we recommend that if major assumptions are used to limit potential to emit, then they should be highlighted in the permit as enforceable conditions.

The state ultimately decided to take no enforcement response; presumably because of the equity problem raised by their prior "no permit required" assurance. While this may have been the appropriate decision in this case, we urge caution that "no permit required" determinations should not be used to shield sources from enforcement, whether the state concurred with the sources' erroneous assumptions, or not.

On the plus side, MDNR performed a HAP evaluation for three pollutants. All were shown to be below the state's acceptable ambient level thresholds.

[End of Individual Source File Comments]