EPA Flexible Permit Implementation Review: Lasco Permit Review Report

Source: Lasco Bathware Corporation - Yelm, Washington

Permitting Authority: Olympic Air Pollution Control Authority (OAPCA)

Flexible Permit: Title V air operating permit, Permit No. 01-97, issued on June 7, 1997 and expired on July 7, 2001; as of July 2001, Lasco is working with OAPCA to write the next permit.

1. BACKGROUND

General Questions for Permitting Authority

1.1 Agency name

Olympic Air Pollution Control Authority (OAPCA)

1.2 Number of major sources (title V)

OAPCA indicated that there are currently 12 major sources in OAPCA's jurisdiction in the State of Washington that require a title V permit.

1.3 Number of permit actions per year

1.3.a Minor NSR

1.3.b Major NSR

1.3.c Operating permits

(1) Title V issuance

(2) Title V revisions

1.3.d Other permits

OAPCA representatives reported that the agency processed about 37 minor New Source Review (minor NSR) permit applications in 2000, and that the agency has processed 58 in 2001 (as of July 2001). Fourteen of these minor NSR applications were processed for major sources in 2000 and 10 in 2001. OAPCA does not have jurisdiction over major New Source Review (major NSR) permitting. The Washington Department of Ecology is responsible for issuing major NSR permits in OAPCA's jurisdiction. As of July 2001, OAPCA has issued 10 of its 12 title V permits.

1.4 Number of permit writers

1.4.a Workload (permit actions per year per permit writer)

As of July 2001, OAPCA had three permit writers. Workload depends on the permit writer and sources covered.

1.5 Minor NSR provisions (summary of requirements, citation(s))

Applicability: A pre-construction permitting process is required for approving proposed new

sources of air pollution and proposed modifications to existing sources of air pollution. A Notice of Construction (NOC) application is to be completed and a minor NSR permit must be approved by OAPCA prior to establishing, constructing, installing, reconstructing, altering or modifying an air pollution source. Approval is contingent on a final determination by OAPCA that the proposed source will comply with all applicable air regulations and standards. Modifications and alterations trigger NSR requirements when the proposed change will result in an emissions increase. Section 5.01(b) of OAPCA Regulation 1 defines the exemption thresholds for OAPCA's Registration program. These same thresholds are incorporated by reference in Article 7 of Regulation 1 as *de minimis* thresholds for NSR. Therefore, sources not required to register with OAPCA are exempt from NSR.

Approval Criteria:

- To obtain approval for a NOC, the subsequent minor NSR permit must assure proposed new source or modification compliance with all applicable NSPS, NESHAPs, and other applicable state and local emissions standards.
- The permit must also assure that the proposed new source or modification will employ best available control technology for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification.
- The permit must verify that the proposed new source or modification will not cause or contribute to a violation of any ambient air quality standard.
- If the proposed new source or modification will emit any toxic air pollutants regulated under the Washington Administrative Code, the permit must demonstrate how it meets state toxics requirements.

1.6 Public participation provisions (summary of requirements, citation(s))

Public Notice and Comment: Public notice and an opportunity for public comment are required for any permit approval or denial of a NOC if:

- the proposed action would cause a significant increase in the potential to emit;
- the applicant requests a limit on the potential to emit;
- the proposed installation or modification involves refuse burning equipment;
- the Director determines that there may be substantial public interest in the proposal; or
- any of the thresholds specified in WAC 173-400-171(1) are triggered.

Public Notice: Public notice is to include the following.

- availability for public inspection in at least one location near the proposed project, of the nonproprietary information submitted by the applicant and of any applicable preliminary determinations, including analyses of the effects on air quality.
- publication in a newspaper of general circulation in the area of the proposed project of notice. This is to include:
  - a description of the proposal;
  - the location of the documents available for public inspection;
  - the thirty-day period that comments can be submitted; and
  - that a public hearing may be held if OAPCA determines within a thirty-day period that significant public interest exists.

  A copy of the notice must also be submitted to the EPA administrator.

Public Hearings: The applicant, any interested governmental entity, any group, or any person may request a public hearing within the thirty-day period published. Any such request is to indicate the interest of the entity filing it and why a hearing is warranted. Any hearings are to be held upon notice and at a time and place deemed reasonable by OAPCA.

Public Information: Copies of Notices of Construction, orders, and modifications thereof which are issued are to be available for public inspection on request at OAPCA.

1.7 Reporting and feedback mechanisms (summary of requirements)

The following is required, per WAC 173-400-105.

- An emissions inventory is to be submitted on an annual basis. The inventory must include stack and fugitive emissions of PM, PM10, sulfur dioxide, carbon monoxide, total reduced sulfur compounds, fluorides, lead, VOCs, and other contaminants.[1]
- OAPCA may require that a source test be conducted of the source using approved EPA methods from 40 CFR parts 51,60, 61, and 63, or approved procedures contained in "Source Test Manual - Procedures for Compliance Testing," State of Washington, Department of Ecology, as of July 12, 1990, on file at the Department.

1.8 Requirements and/or ability to be more stringent than EPA rules

State of Washington NSR regulations, under WAC 173-400-113(2), require BACT for any new source or modification that increases air pollutant emissions. BACT is defined as an emissions limitation based on the maximum degree of reduction for each air pollutant subject to regulation emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification. A BACT limitation can be more stringent than an applicable federal standard or limitation, such as a federal new source performance standard.

1.9 Status of initial title V issuance (i.e., number issued, renewed, in process)

See section 1.3.d.

1.10 Number of flexible permits written and public reaction to them

Lasco Bathware's Yelm facility is the only source under OAPCA's jurisdiction to obtain a flexible permit as of July 2001.

1.11 Air quality status of area where flexible pilot permit was issued

Lasco's Yelm facility is in an area classified as attainment for all criteria pollutants.

1.12 Number of inspections that have occurred re: flexible permit

Three inspections of the Lasco Yelm facility have been conducted by OAPCA since the flexible permit was issued in June 1997.

On June 1, 1998, OAPCA inspected the Yelm facility in response to a citizen complaint regarding

[1] PM and PM_{10} are tracked separately. PM is defined as total cumulative emissions of all sized particulate matter emitted. PM is inclusive of PM_{10}, which is defined to include particulate matter of 10 microns or less in diameter.

a release of fugitive dust. OAPCA indicated that Lasco contacted them immediately regarding the release and followed the required steps and procedures for responding to the release. A compliance report was submitted and a $500 fine was issued to Lasco (see section 3.5 for additional discussion).

On June 29, 1999, OAPCA conducted an unannounced inspection of the Lasco facility. OAPCA reported that Lasco was doing an "excellent job" implementing a P2 program, but identified P2 reporting shortfalls (the inspection report indicates that the 1999 Annual P2 Progress Report had not been submitted, as required). OAPCA also found open containers of VOC-containing materials (flushed resin) stored in the resin room. OAPCA sent Order to Comply letters to Lasco regarding both of these items. OAPCA representatives indicated that Lasco promptly addressed the open container issue. Lasco representatives reported that the company has contested the Order to Comply related to the submittal of the P2 Progress Report, indicating that they sent a 1999 P2 progress report in April 1999.

On September 20, 2000, OAPCA inspected Lasco in conjunction with a regenerative thermal oxidizer (RTO) installation. The OAPCA inspector reported that Lasco was in compliance with the conditions of the air operating permit during this 2000 inspection.

1.13 Authority to impose P2 requirements and/or additional safeguards suggested by WPN3 (e.g., monitoring, notices, up-front magnitude limits)

OAPCA indicated that P2 initiatives can be part of a strategy to comply with the BACT requirement. However, OAPCA cannot impose one technology or control method over another when both qualify as BACT. When the control efficiency is equal between competing control methods, it is up to the source to determine which strategy to use.

1.14 Agency's overall orientation to P2 (e.g., how is P2 considered in permit writing?)

OAPCA indicated that the Lasco permit was the first permit in which the agency has incorporated P2 provisions. OAPCA representatives reported that they plan to include P2 requirements in the next Lasco permit.

1.15 Time required to issue flexible permit

The development of Lasco's flexible title V permit spanned approximately 16 months, from initiation of discussions (e.g., P4 group discussions) until the permit was issued. However, in addition to this being a team-oriented "demonstration" project necessitating additional review and public participation (see below), this was OAPCA's first title V permit. OAPCA representatives reported that these factors contributed to the overall length of the permit development process. In the future, OAPCA indicated that flexible title V permits will likely take only slightly more time to develop and issue than conventional title V permits (e.g., approximately 180 hours versus 160 hours).

1.16 Time required to issue conventional title V permits (on average)

OAPCA representatives that it is difficult to estimate the time that it takes to develop and issue a "typical" permit, since the factors that influence the time frames often vary from permit to permit. They also indicated that, with time, OAPCA is becoming more efficient at issuing permits and permit modifications. Also, certain case-specific factors contribute to the time it takes to draft and issue a permit, such as the compliance history of the source, the concern of the surrounding public over the source, the compliance record of the source and the willingness of the source to contribute cooperatively to the permit process. As mentioned above, OAPCA representatives estimated that approximately 160 hours of OAPCA staff time (e.g., application review, meetings, permit writing,

noticing, final issuance) over a 12 month time period are required to develop and issue a conventional title V permit.

1.17 History of any deviations, violations, and/or enforcement actions over the period before the effective date of the flexible permit

OAPCA representatives indicated that in 1995, prior to the issuance of the flexible permit, Lasco's Yelm facility received 8 odor complaints and 8 odor violations associated with these complaints as well as a total of $11,500 in associated penalties.

1.18 Compare characteristics of flexible permits vs. conventional permits.

1.18.a Considering all the different types of sources for which you issue Title V permits, what are some examples of good candidates for flexible permits?

1.18.b What are some examples of sources that are not good candidates?

1.18.c Keeping in mind these two different groups of sources (one that contains good P4 candidates and the other that contains sources that are not good P4 candidates) consider the following characteristics. Which characteristics are similar between the two groups of sources? Which are different?

1.18.d Have you ever turned down a facility that asked for a flexible permit? If so, what reasons did you have for making this decision? What facility characteristics were important in making this decision? Could we get a copy of applications that were turned down?

OAPCA representatives indicated that, to consider flexibility provisions for a source, they want to feel confident that a source has:

(1) the ability to track and respond to requirements;
(2) trained, competent environmental staffing;
(3) a technical capacity to track emissions; and
(4) good relations with the community and the state regulatory authority.

OAPCA representatives stated that they believe that a source's compliance history and community relations history are the primary factors that indicate that a particular source meets the characteristics identified above. While OAPCA representatives indicated that they do not believe that past compliance violations or issues should necessarily exclude a source from receiving a flexible permit, they indicated that compliance history would be considered by OAPCA when determining whether flexibility provisions are appropriate for a given source.

Currently, Lasco is the only facility in the State of Washington with a flexible permit. OAPCA representatives reported that, as of July 2001, they have not received any source requests for flexible permits aside from the Lasco Yelm facility permit. OAPCA representatives expressed interest in issuing additional flexible permits, but have decided to hold off until EPA guidance or rulemaking provides additional support for flexible permitting techniques. Due to the challenges associated with operating outside of conventional permit procedure and interpretations (e.g., need for additional legal review, senior management attractiveness, and public agreement) that OAPCA experienced with the initial development of the Lasco permit, they plan to wait until flexible permits become more routine, providing them with more experience and examples on which to draw.

Questions Specific to the Pilot Source

1.19 Source description, types of operations, and applicable requirements

Lasco Bathware, located in Yelm, Washington, produces bath fixtures including fiberglass reinforced plastic (FRP) bathtubs, shower stalls, and whirlpools in a variety of sizes and styles. Bathware fixtures are produced in continuous assembly lines, with two overhead production conveyors that move molds throughout the process area to allow for open mold spray-up of resins. The facility has two production lines, the gelcoat line and the acrylic line, housed in separate (but connected) buildings. The basic process involves spraying several coats of plastic resin onto a mold (gelcoat line) or onto a preformed acrylic surface (acrylic line) to form the bathware product. The liquid plastic mixture is sprayed onto the mold in successive layers, and each layer is allowed to cure partially before the next lamination is applied. After the final layer has been cured, the product is separated from the mold. Additional manufacturing processes include grinding and trimming, part repair, and whirlpool assembly.

The production equipment for both lines consists of mixing tanks, and spray application equipment (i.e, spray guns). The first step of the gelcoat production line consists of spraying a gelcoat resin onto a mold to form the bathware surface. The gelcoat is followed by a second "basecoat" (or "barrier coat"), and then by two additional "laminate" coatings of glass-fiber reinforced resin to provide the structural strength of the product. Once cured, the product is physically removed from the mold and the mold is reused. The spray application of the gelcoat, basecoat, and laminate coats is conducted within separate open-ended spray booths through which the product is moved sequentially via a conveyor. Each spray booth has a separate air handler which draws ventilating air into the booth, across the spray zone, through a particulate matter filter located in the booth sidewall, and out of the booth and building via a stack. The airflow through each of the booths is designed to minimize the styrene exposure of the worker(s) within the booth (i.e, to minimize the styrene concentration in the worker's breathing zone). The entire ventilation of the building is achieved via the spray booth air handlers; i.e., all ventilation air is drawn into the building, through the booths, and out of the building via the booth stacks. Consequently, the building is essentially totally enclosed.

The process for the acrylic production line is very similar to the gelcoat line. However, for this process a preformed acrylic plastic sheet is used as the product surface rather than forming the product surface by spraying a gelcoat onto a mold. The use of the acrylic plastic sheet as the product surface results in a higher quality (but more expensive) product. The process consists of spraying two laminate coats of glass-fiber reinforced resin onto the back of the preformed acrylic plastic sheet; the resulting glass-fiber reinforced plastic provides the structural strength to the product. Unlike the gelcoat line, the spray application is conducted in one large booth because a gelcoat and basecoat are not being applied. However, like the gelcoat line, the entire ventilation of the building is achieved via the spray booth air handlers; i.e., all ventilation air is drawn into the building, through the booth, and out of the building via the booth stacks. Consequently, this building is essentially totally enclosed.

The VOC emission streams for this facility are:

- Emissions Unit 1 (EU1) comprised of the uncontrolled emissions from the gelcoat process line located in building 1 and vented to the atmosphere through multiple (10) stacks; the primary source of emissions is the spraying operations. For monitoring and reporting purposes, the new thermal oxidizer will be included in EU1.
- Emissions Unit 2 (EU2) comprised of the uncontrolled emissions from the acrylic process line located in building 2 and vented to the atmosphere through multiple stacks; the primary source of emissions is the spraying operations.

- Emissions Unit 3 (EU3) comprised of emissions from resin mixing operations which support both the gelcoat and acrylic process lines; the mixing room is a separate room adjacent to EU1 and EU2 which is vented to atmosphere via a roof vent.

The resin contains the monomer styrene which is both a VOC and a hazardous air pollutant (HAP). The styrene is the reaction product which cures to form the polymer (plastic). Styrene emissions occur primarily when the thermosetting plastic mixture is being applied and initially cured. Lasco purchases various resins used for the different process steps. The styrene content of the different resins vary and may change from time to time. The manufacturer of each resin provides Lasco with a *Certificate of Analysis* of the resin's styrene content. The primary types of resins used and the typical styrene content (percent by weight) of these resins (1997 data) are:

Resin type	Styrene content (weight percent)
Gelcoat	36%
Barrier Coat	45%
Acrylic Resin	45%
FRP Resin	35%

Since the facility emits more than 100 tons/year of Volatile Organic Compounds (VOCs), it is classified as a "major source" under the title V program, and requires a title V air operating permit.

1.20 Actual and allowable source emissions (tpy) for every year since flexible permit issuance

The actual emissions for the plant during the permit term (1997-2001, as of July 2001) were reported in the facility's annual emissions inventories submitted to OAPCA. Annual actual VOC emissions are presented in Table 1.20 below.

TABLE 1.20 **Lasco Yelm Facility Emissions Inventory (1997-2001)**

Year	VOC Emissions (tons/year)
2001	230.7
2000	227.4
1999	240.6
1998	244.5
1997	248.6

Prior to obtaining the permit, Lasco voluntarily tested its styrene emissions and found that actual emissions were approximately 100 tons/year higher than previously calculated using the widely used emission factor for styrene. In response to these test results, Lasco voluntarily reduced VOC emissions by approximately 100 tons/year to reside below a Potential to Emit (PTE) cap. The PTE cap contained in the title V permit set allowable source emissions at 249 tons per consecutive 12-month period.

1.21 Amount and nature of fugitive emissions

The VOC fugitive emissions that are a normal part of the operation (e.g., resin holding tanks, mixer emissions, curing emissions) are accounted for by the emission factor. Because the building was maintained under negative pressure during the emission factor tests, any VOC emissions emitted into the building from fugitive sources ultimately were emitted through the spray booth stack(s) and were measured. During the tests, the separate vent which normally vents the mixing room to atmosphere was sealed so that the emissions would be drawn into the spray area and would be emitted through the spray booth. Consequently, VOC "fugitive" emission sources actually are incorporated into the emission factor. Only VOC fugitive emissions resulting from activities inconsistent with normal operating procedures (e.g., spills, staff leaving containers of solvents or resins open, leaving holding tanks open) would result in emissions not accounted for by the emission factors. These emissions are expected to be negligible because they are the result of improper work practices.

The Yelm facility has negative pressure within the building to minimize fugitive emissions from the manufacturing processes (from spray booths), and tests have confirmed that negative pressure in the booths minimizes fugitives. Fugitive emissions also occur from holding tanks located throughout the building, and a continuous mixer in the "mixing room" produces a negligible amount of fugitive emissions. Fugitive emissions also result from the production of parts as they go through the final curing after demolding. Finally, particulate dust is generated during the finishing of cured parts from drilling and grinding processes.

1.22 Source flexibility needs

1.22.a Characterization of pre-flexible permit regulatory concerns

1.22.b Type and number of source changes potentially subject to air permitting

1.22.c Which changes incur an opportunity cost of being 'late to market' due to permitting "delays," and the potential extent of that cost

1.22.d Why conventional permitting process may not be sufficient for certain types of changes

Lasco needs to seek ways to improve processes constantly resulting in a higher quality and/or less expensive product to maintain or increase profit margins. The bathtub industry is constantly making minor product modifications, rather than launching new products as with the semiconductor or pharmaceutical industries. Therefore, Lasco's competitive strategy is to increase material utilization continually (also often resulting in decreased styrene vapor loss and solid waste generation). To achieve yield improvements, Lasco continually seeks ways to utilize less and/or increase the capture of its input materials on a per unit basis. Process and/or physical changes desired by Lasco include adding spray booths, changing spray equipment, adding spray equipment, changing mechanical equipment (e.g., adding a stack), or changing the facility's mold conveyor system. Many of these changes enable Lasco to decrease production costs, minimize styrene use, and/or reduce styrene emissions. On the other hand, these changes often could potentially trigger NSR and frequent, time consuming negotiations and/or determinations.

Many of the changes Lasco believed could help improve its product would also trigger permit requirements. Adding or replacing equipment often triggers NSR regardless of whether emission increases occur. Under OAPCA's rules, major equipment changes, even in the absence of emissions increases, trigger minor NSR. As well, temporary physical or operational changes in production are likely to require permit modifications, because such changes are operational alterations affecting source capacity and result in emissions unit increases, regardless of emissions decreases made elsewhere.

To meet difficult to predict short-term product demand increases, Lasco also wanted flexibility to rapidly change production lines. To achieve this flexibility, Lasco was willing to offset emissions increases at one part of the facility with emissions decreases at another part of the facility, effectively keeping overall facility-wide emissions constant.

While many of the changes envisioned by Lasco could result in reduced emissions per unit produced (i.e., pollution prevention), many factors previously deterred Lasco from making these changes. Prior to the flexible permit, Lasco Bathware had not made any changes subjecting the facility to minor NSR permit review. Lasco indicated this history is consistent with corporate policy directing manufacturing sites, absent a compelling operational justification, to avoid all changes requiring NSR permitting. This policy derived from Lasco's belief that NSR involves considerable uncertainty and requires frequent, time consuming case-by-case negotiations and decisions.

Permit processes held the potential to be particularly lengthy for Lasco's Yelm facility due to the styrene odors often associated with FRP industries and the Yelm community's concern over emissions from the Lasco facility. Under OAPCA's rules, the Director can subject any permit action to public notice, and, based on interest received, a public hearing. Lasco indicated that having to wait up to nine months (or longer) for permit approval would potentially preclude any benefit associated with making the change. Lasco representatives indicated that even relatively straightforward changes can result in lengthy permit delay, noting that its Anaheim facility had already waited eight months for the South Coast Air Management District to permit a stack height increase.

Because OAPCA has substantial discretion regarding how they might respond to changes made at a source, Lasco believed there was often uncertainty associated with determining when changes trigger permit requirements. At the time the permit was written, minor NSR was triggered when there is a "modification" to an existing "stationary source," or a new "emissions unit." Therefore, minor NSR "triggers" were dependent upon how these terms were defined and applied. As well, many changes requiring permit action were subject to BACT requirements. Because BACT determinations are also made at OAPCA's discretion, Lasco viewed them as potentially unpredictable, thereby inhibiting the source's ability to estimate project costs adequately. Lasco representatives, therefore, indicated that they are often hesitant to make changes triggering BACT due to the uncertainties associated with the potential cost and burden of meeting the requirement. Lasco's sense of these uncertainties made operational planning difficult, and substantially constrained Lasco from making changes that might subject them to minor NSR requirements, even if such changes would have resulted in pollution prevention.

Similarly, having never made permit-triggering changes prior to the flexible permit, the Yelm facility was considered a "grandfathered" source with minimal permit requirements. As such, Lasco's "aversion" to change also arose from the belief that any new permitting regime would likely create a more complicated regulatory and operating environment. Uncertainties associated with this new regulatory regime only confounded the problem and exacerbated disincentives to making facility modifications.

Finally, a Lasco corporate policy that no money is to be spent on a project until all necessary permits are in hand added to any potential delay associated with permitting facility changes. Unlike some facilities that begin making project investments while the permitting process progresses, Lasco's

policy is to ensure regulatory approvals are obtained prior to making such financial expenditures. As a result, the total length of time from project conception to completion can be even more lengthy and more likely to act as a disincentive for making the change.

Lasco indicated that the Yelm facility's flexible permit eliminated or significantly lessened previous disincentives to change, such that the facility was much better able (and much more likely) to make changes, including changes that result in pollution prevention. Lasco's flexible permit enabled research and development into alternative processes and, when research uncovered a process or technique worth changing, Lasco could immediately make the change. Lasco's putty station, discussed in Section 4.1, is one example of a change that demonstrates the value of the flexible permit. The putty station was viewed as a worthwhile change to make at all of Lasco's facilities. While this type of change was advance-approved in the Yelm facility's flexible permit (and therefore implemented in a streamlined manner), the putty systems are far more complicated at the other facilities because they were implemented in ways that would ensure permit review would not be triggered. This reinforces the notion that Lasco is highly resistant to making changes that would trigger the permit system, and much more willing and able to make these changes under a flexible permit that reduces the time and uncertainty associated with the regulatory process.

1.23 What has been the frequency of required NSR permits over the period before the effective date of the flexible permit?

The Yelm facility did not undergo any minor or major NSR permit processes prior to the flexible title V permit. The original owner, Hytec, built the facility in 1981 under a Notice of Construction (#310), approved by OAPCA. This gave unconditional approval to build a fiberglass reinforced plastics plant in Yelm. No other modifications subsequent to NOC #310 were made. However, in June of 1996, Lasco accepted a voluntary, enforceable limit on VOC emissions, requiring an approval order from OAPCA under WAC 173-400-091.

1.24 Flexible permit's inspection history

See section 1.12.

1.25 Source's history of P2 commitment

At the time Lasco's flexible permit was written, Washington Department of Ecology P2 experts indicated that Lasco was a P2 leader in the Fiberglass Reinforced Plastic (FRP) business sector, having made substantial P2 progress. The Ecology representative made these observations on the basis of having provided technical assistance to, and comparing the efforts of, numerous FRP companies in Washington State. Lasco's P2 progress, which was derived from the process efficiency improvements that did not involve Clean Air Act equipment modifications or that were made in conjunction with permit renewals to minimize case-by-case NSR permitting, was a natural consequence of the very high relative expense of styrene. Lasco, therefore, was (and remains) highly motivated to continually investigate ways to use and/or lose less styrene in its manufacturing process.

2. FLEXIBLE PERMIT DESIGN FEATURES

2.1 What flexible permit tools contained within this permit accomplish advance approvals (ROPs, PTE limits, PALs, clean buildings, category of changes, etc.)?[2]

Lasco Bathware's title V permit contained the following flexibility provisions.

Plant-wide PTE Emissions Cap:

This cap (PTE limit) is a federally enforceable limitation on plant-wide potential to emit (PTE), set at no more than 249 tons per consecutive 12 month period (see permit condition E2). Lasco and OAPCA developed this cap to establish "synthetic minor" source status for Lasco with regard to Prevention of Significant Deterioration (PSD) applicability determination.

Minor NSR Advanced Approvals:

The permit advance approves certain types of modifications that trigger minor NSR (for criteria pollutants and toxics; see condition E3(f) and Table 6 in the permit). Applicable requirements for these changes are advance-approved through the issuance of the title V permit. Advance-approved changes include:

- adding new emissions units;
- modifying stationary source/emissions units;
- replacing emission units;
- replacing control technology; and/or
- substantially altering control technology.

NSR requirements are met in the following manner:

BACT determinations: control technology preapprovals (See condition E3(g))

- The permit specifies and approves BACT for the advance-approved modifications, provided that the following P2 and emissions control conditions are met.
    - The permittee shall implement a P2 program which meets the requirements of conditions E3.a and E3.b.
    - New, modified, or replaced spray booths shall be designed, installed, and operated such that overspray and fugitive emissions are captured, controlled with a filter to remove particulate, and exhausted through a vertical stack.
    - Height of exhaust stacks from ground level for new spray booths shall be at least 1.3 times the height of the highest point of the building roof line from ground level.
    - High-volume-low-pressure (HVLP), airless, air-assisted airless, or electrostatic spray equipment shall be used in new, modified, or replaced production lines. For touch-up and repair, a hand-held, air-atomized spray gun which has a container for resin as part of the gun may be used.
    - New, modified, or replaced product grinding and finishing stations that exhaust to the outside shall be controlled with a dust collection device capable of achieving 98 percent control of 10 microns or larger airborne dust.
    - For resin as applied in new, modified or replaced production lines, the weight loss due to VOC emissions shall not exceed sixty (60) grams per square meter of exposed surface area during resin polymerization as determined by Method 9 of the South Coast Air Quality Management District (Method 309 also referred to as "can

[2]Terms used in this document are defined in White Paper Number Three.

lid test").

- Percent by weight of styrene monomer in resin and gel coat as applied use in new, modified, or replaced production lines shall not exceed the following limits: General Purpose Polyester Resin - 35 material weight percent; Corrosion-Resistant- 48 material weight percent; Fire-Retardant - 42 material weight percent; High-Strength - 48 material weight percent; Clear Gel Coat - 50 material weight percent; and Pigmented Gel Coat - 45 material weight percent.

- An approved P2 program is part of the approved BACT determination. As a result, implementation of a pollution prevention program is a pre-requisite for advance approval of changes. Once any advance approval is exercised, the P2 program becomes an enforceable requirement thereafter.

NAAQS (criteria) and ASIL (toxics) demonstration: Stationary Source Cap (See condition E3(i))

- This is a cap over combined stationary source emissions, set at 3,419 pounds of VOCs per day. This cap was intended for NAAQS (and air toxic) protection, as this is the daily rate which corresponds to the facility as originally approved.

Other preapproval requirements include:

- No new air toxics;
- No new applicable requirements; and/or
- No changes in monitoring/recordkeeping.

Replicable Testing Procedures for Modifying Emission Factors:
The permit provides procedures which enable Lasco to modify emission factors, based on OAPCA-approved source tests, without re-opening the title V permit. See section 2.4a for a description of this permit provision.

Pollution Prevention Program:
The permit incorporates the a pollution prevention program for Lasco. As mentioned, this program is voluntary until an advance-approved change occurs which relies in part on the BACT requirement. The permit thus establishes an explicit link between the adoption of an approved pollution prevention program and the flexibility conditions in the permit. An approved P2 program is part of BACT for the advance-approved changes. (See Condition E3(a)-(g)) P2 program requirements include:

- a P2 training program;
- pollution prevention investigation into ways to reduce product input and emissions, and implementation of techniques found to be technically and economically feasible;
- research in new P2 technologies;
- P2 tracking and reporting;
- P2 program performance demonstration; and
- public meetings.

Because Lasco had been substantially engaged in P2 prior to the flexible permit, the P2 program requirement formalized and broadened Lasco's ongoing efforts to reduce styrene.

2.1.a Describe the information and level of detail provided in the application to support these flexible permit provisions.

Lasco's original permit application does not include information on its flexible permit provisions. This resulted because Lasco's flexible permit provisions were developed through a team-oriented

demonstration project initiated after Lasco had already submitted its permit application.

2.1.b Describe the types of information needed in or required by the permit to support the ongoing implementation of the flexible permit provisions.

The following types of information are required by the permit to support flexible permit implementation.

- Records of approved emission factors and source test reports which support those factors.
- For advance-approved new *construction* activities, as indicated in the permit, Lasco is "within 15 days from completion of any advance-approved construction activity, a notice stating the date construction was completed and the date operation will commence."
- Lasco-Yelm is also required to maintain a record of all *installations* or *modifications* made under the advance approval conditions. These records must include technical descriptions of the equipment installed or modified, and other information which is necessary to compute air pollutant emissions or impacts. This information also includes the approved emission factors and source test reports which support these factors.
- Lasco is to submit a semi-annual report of the advance-approved transactions made during the previous 6-month period, if any. This report is to include a technical description of the equipment installed or modified, and other necessary information for computing air pollutant emissions or impacts. This report must also include a record of the approved emission factors and source test reports which support the emission factors utilized.
- Lasco is to submit annually, along with the annual compliance certifications, the amount of emission reductions achieved during the reporting period through implementation of the P2 Program.
- Lasco is to submit an annual P2 Progress Report, which documents P2 techniques implemented, any findings regarding investigation of new applicable P2 techniques, progress toward meeting the prescribed P2 goals, and any other P2 accomplishments. Additionally, prior to the end of the third and fifth year of the permit term, Lasco is to submit a report demonstrating compliance with the P2 Program.

2.1.c How were any18-month "commencement of construction" requirements met?

The approval to construct remains in effect for all advance-approved changes provided that Lasco submits an annual request for extension of this provision.

2.1.d What were the processes, if any, for extending any BACT determinations (i.e., keeping them contemporaneous)?

OAPCA's annual extension of the construction approval provision is based on a finding that the requirements of this condition continue to constitute BACT and assure compliance with all applicable requirements for the approved new installations, replacements, and modifications.

2.2 If the flexible permit contains a PAL, how was the PAL baseline set?

Not applicable, since the permit does not contain a Plantwide Applicability Limit (PAL). The permit contains a Potential to Emit (PTE) limit that is set at 249 tons/year of VOCs. This limit was set to enable the source to achieve "synthetic minor" source status with regard to Prevention of Significant Deterioration (PSD) applicability. Two hundred fifty (250) tons/year is the applicable threshold level for a source such as Lasco to trigger "major" source status with regard to PSD.

2.3 How was the PAL monitoring, recordkeeping, and reporting approach justified?

2.3.a What is the rationale for the monitoring approach and averaging time?

2.3.b What data conversions are required?

2.3.c What is the averaging time for each emissions cap and/or the duration of the cap?

2.3.d What is the rationale supporting the use of any longer (e.g., longer than one month) duration?

As mentioned, the Lasco title V permit contains a PTE limit, and does not contain a PAL. OAPCA representatives indicated that a material usage approach to monitoring VOC (styrene) emissions is the most appropriate monitoring approach given the nature of source operations.

The emissions monitoring procedure used by the facility is a straight forward approach which relies on the measurement of three major components: 1) raw material usage, 2) VOC (styrene) content of the raw materials, and 3) site specific emission factors (pound [lb.] of emissions per lb. of available styrene).

Material usage is based on a daily inventory obtained by measuring the beginning and ending levels in each of the various resin tanks. Currently, the tank levels are measured by manually "dipping" the tanks with a dipstick to determine the depth of the material in the tank. Each tank has a chart which converts tank level to gallons. The density of the material is used to convert gallons to pounds of resin used. Manufacturer's *Certificate of Analyses* provide the percent VOC composition of each resin (i.e., lb. styrene /lb. resin) which is used to convert the weight (lbs.) of resin used to the weight (lbs.) of available styrene. The site-specific emission factors, based on source testing, are then used to calculate actual VOC emissions. See section 2.4 for additional discussion of the emissions monitoring practices used by Lasco to meet the permit requirements.

The facility is in the process of placing the resin tanks on weigh cells (scales) to provide automatic and continuous measurement of tank weight. This modification will provide a direct measure of the weight of material (resin) in the tank at all times. This monitoring change will eliminate the conversion from volume (gallons) to mass (pounds) of material used.

Material usage is calculated on a daily basis. Total material usage, available styrene, and total emissions are calculated and reported for each month. The monthly emissions are used to calculate a 12-month rolling total. These averaging times are consistent with EPA policy, as outlined in the EPA Office of Air Quality Planning and Standards' (OAQPS) January 20, 1984 Memorandum titled "Averaging Times for Compliance With VOC Emissions Limits - SIP Revision Policy". This memorandum stipulates that VOC emission averaging periods must not exceed 30 days.

2.4 Where applicable, describe the following aspects of the permit that are used for purposes of tracking emissions under a PAL or an emissions cap:

2.4.a Details regarding source emission factors and processes for changing emission factors

The permit provides that changes to emission factors used for determining compliance (i.e., the method of compliance demonstration) do not require a re-opening of the permit, if Lasco follows certain replicable administrative procedures. Emission factors are to be based on EPA Method 18, and are to be based on measured pollutant concentrations from OAPCA approved source tests. At least 30 days prior to any scheduled source test date, Lasco is to submit a source test protocol to OAPCA which identifies proposed test methods, operational conditions, and other details regarding

the proposed source test. Prior to testing, this source test plan must be approved by OAPCA. No more than 60 days after the source test, Lasco is to submit to OAPCA test results and calculations supporting the new emission factor. Once OAPCA submits written approval, Lasco can use the new emission factors to verify compliance with the permit. OAPCA uses an administrative amendment to incorporate the new emission factors into the title V permit.

As of July 15, 2001, Lasco had conducted two source tests, one as part of the permit development process, and one during the permit term. OAPCA indicated that Lasco followed all procedures as dictated by the permit.

2.4.b Tracking emissions from startups, shutdowns, and malfunctions of monitoring, control, and/or process equipment

Lasco must track and record emissions on a daily frequency based on material use monitoring and material balance calculations. This requirement applies regardless of the operating status of the facility. The permit also requires Lasco to monitor the operational status of the oxidizer. Lasco utilizes continuous monitoring of temperature in the combustion zone of the oxidizer. If temperature in the combustion zone is less than the minimum temperature needed to assure adequate destruction of VOCs, then emissions calculations do not account for oxidizer control during the period. Therefore, Lasco adjusts emissions calculations for the degree of control due to startup, shutdown or malfunction of the oxidizer.

2.4.c Requirements for tracking emissions from insignificant emissions units

Insignificant emissions units and activities at Lasco's Yelm facility include natural gas-fired make-up air space heaters, gas-fired radiant space heaters, resin storage tanks, process dust emissions from trimming, drilling, and abrasive forming of finished products, minor uses of materials containing VOCs such as PVC glue, cans of spray paint, minor amounts of cleaning solvents, an above ground propane storage tank, and the use of fork lifts.

The permit does not require separate testing, monitoring, reporting, or recordkeeping for insignificant emission units or activities. The monitoring to determine compliance with the PTE caps accounts for all emissions resulting from use of VOC-containing materials. Condition E2 is stated as follows, "total usage of VOC containing material during any consecutive 12-month period is limited to an amount which ensure that the potential to emit volatile organic compounds shall not exceed 249 tons per year." The compliance monitoring approach required in the permit relies on daily monitoring of the amount of total gelcoat and resin used and the compositions (percent styrene) of these materials. Monitoring is accomplished by directly measuring bulk material storage vessels such as day tanks and drums. Since these measurements are taken before the materials are distributed to various areas at the facility, the measured amounts reflect total usage by the facility, covering both emissions units and insignificant emissions units. However, upon request from the permitting authority, Lasco must provide sufficient documentation to enable the permitting authority to determine that an emissions unit or activity has been appropriately listed as insignificant.

2.4.d Requirements for quantifying fugitive emissions

Much of the fugitive VOC emissions are vented to the exhaust stacks. Therefore, the source tests and resulting emission factors include these conditions. The permit also specifies processes for preventing the release of contaminants from operations which are a source of fugitive emissions. These include requirements to perform all spray coating in functioning spray booths, promptly repair any leaks and ducts in air pollution control equipment, store and mix volatile materials in covered containers, store all solvents or solvent containing cloths in closed containers, and minimize and

promptly clean up all spills and VOC-containing material leaks. Lasco is also to perform monthly audits of the facility to assure that the minimum reasonable precautions for preventing fugitive emissions are implemented. OAPCA representatives reported that they have verified through inspections that these audits do occur.

The permit also contains provisions to ensure fugitive dust control. These include performing all grinding, drilling, trimming, and cutting operations in designated areas controlled by dust collection systems, cleaning and properly disposing of accumulated dust throughout the facility, inspecting the dust collection systems followed by maintenance as appropriate, and disposing of collected dust in fully enclosed, covered, or otherwise secured containers. The permit also requires monthly audits to assure minimum reasonable precautions for controlling fugitive dust are in place.

Additional Permitting Authority Inquiries

2.5 How did the source articulate its need for flexibility?

See section 1.22.

2.6 What were your key rule interpretations?

The primary rule interpretation in development of this permit involved the definition of "stationary source". OAPCA, in consultation with the Washington Department of Ecology, decided that "stationary source" could be defined as a "building", with buildings #1 and #2 each considered separate stationary sources. The WAC defined "stationary source" as "any building, structure, facility or installation which emits or may emit any contaminant...."

Also for the purposes of this permit, "emissions unit" was defined as the entire production line from mold preparation through final product storage. WAC defines "emissions unit" as any part of a stationary source which emits or would have the potential to emit any air pollutant subject to regulation...." OAPCA indicated that there was much discussion relating to clearly defining "source", "emission unit", and "control device" for the Lasco facility. Though there was some difficulty in coming up with definitions that worked well for both Title V and NSR, once the definitions were established, stakeholders agreed (i.e., EPA, Lasco, Washington Department of Ecology, OAPCA). The results are as found in the Technical Support Document for Lasco's permit.

(1) Individual buildings are considered as separate "Stationary Sources" for NSR purposes.
(2) Entire production lines are considered as a single "Emission Unit"
(3) Spray booths within a production line are considered as "control devices".

These interpretations allow emissions increases/decreases from individual pieces of equipment to be managed in a manner to stay at or below the caps and to manage operations in such a way that the individual equipment changes do not necessarily trigger a construction permitting action.

2.7 Was there a need for follow-up rulemaking?

OAPCA representatives reported that they did not need to conduct any follow-up rulemaking.

2.8 Might you include additional flexible approaches for this source in the future?

Lasco's flexible title V permit expired in July 2001, and OAPCA indicated that they intend to provide similar flexibility in the next permit issued to the source.

3. PUBLIC PARTICIPATION AND PUBLIC PERCEPTION

3.1 Were comments received from the public? Please provide a summary of any comments and of your response(s) to them.

3.1.a In what venues/times were public comments received? (formal permit process,

public information sessions not required by the permit process, permit implementation, etc.)

3.1.b How many public meetings/information sessions were requested and subsequently held?

When Lasco was preparing their title V permit application in 1996, many in the Yelm community did not view Lasco as a "good neighbor" due primarily to past odor issues. During the Lasco permit development process, OAPCA surpassed standard title V public review and comment procedures by holding several public information sessions about Lasco's draft title V air operating permit and its innovative flexibility and P2 provisions developed through EPA's Pollution Prevention in Permitting Program (P4). On April 25, 1996, approximately 60 people attended an informational workshop explaining the operational flexibility in Lasco's draft permit. With several active environmental participants, the Yelm community was skeptical about the effectiveness of the P4 approach, given Lasco's performance history.

Due to this skepticism, OAPCA invited environmental interests in Thurston County, including the Sierra Club, City of Yelm, Department of Ecology, Clean Air, Washington Toxics Coalition, Washington Environmental Council, and American Lung Association, to smaller meetings explaining the P4 program and specifically discussing the Lasco permit. These meetings were held August 19, 1996 and September 23, 1996. On January 9, 1997, the environmental community was invited again to discuss Lasco's final draft of the title V air operating permit. The public was invited to a final informational workshop on February 27, 1997, describing Lasco's final draft air operating permit. At this point in time, the community's concerns about the permitting approach had greatly diminished. The public hearing on April 9, 1997 had very few attendees. Few public comments were made at this final meeting, and no concerns were voiced with regard to the draft permit. Lasco representatives indicated that the Sierra Club submitted a follow-up letter supporting Lasco's flexible permit and thanking EPA Region 10, OAPCA, and Lasco for their proactive efforts to involve the community in the permit development process.

OAPCA indicated that the initial public concerns had been successfully addressed for several reasons. First, as mentioned, Lasco took voluntary steps which addressed key public concerns. Lasco increased stack heights to reduce odor impacts on the local community. Lasco also reduced VOC emissions by approximately 100 tons/year to accept the PTE cap of 249 tons/year contained in the draft permit. Second, as a Pollution Prevention in Permitting Program (P4) pilot project, OAPCA and EPA placed a high priority on community outreach, awareness raising, and involvement related to the permit development process. OAPCA appreciated the close proximity of the EPA Region 10 representatives and their assistance with facilitation of the flexible permit development process. OAPCA was proactive about notifying participants of community meetings and associated information, issuing fact sheets about the Lasco P4 permit project, releasing newsletters, including project status updates in the OAPCA newsletters, and updating OAPCA board members monthly. Lasco's management also focused increased attention to improving communications between the facility, the local community, and environmental agencies.

OAPCA, consistent with state policy, focuses on constantly improving community relations. For the Lasco facility, OAPCA worked with the EPA and a private contractor to facilitate the public workshops to educate the community about P2 efforts and the flexible permit. OAPCA representatives emphasized the importance of EPA's involvement to clarify what is required in the initial writing and implementation of Lasco's permit.

3.2 Was there a discussion in notices, meetings, and/or public comments of the source's need for flexibility, possible environmental benefit, and/or administrative burden from getting additional permit(s) or permit revisions?

The notice of the draft air permit addressed Lasco's needs for operational flexibility while promoting

pollution prevention. The notice discussed the planned flexibility in the permit that was designed to enable Lasco to expand operations, install new equipment, and make modifications, provided that plant-wide emissions did not increase above existing emission limitations and provided that certain other conditions were met. Other letters of correspondence between the public and the regulating authority address Lasco's needs for flexibility, and the environmental benefit associated with the new flexible permit. See section 3.1 for additional discussion of communication with the public related to the draft title V permit.

3.3 Were there any environmental justice issues? If so, how were they addressed?

No environmental justice issues were identified by OAPCA representatives, although they did indicate that there has been significant historical public concern related to odor and air emissions associated with the Lasco facility. Lasco is located in Yelm, Washington, a rural community, 20 miles from Olympia. Another fiberglass factory, Amtec, is located in Yelm on the neighboring lot. The community is located in a lower middle to middle class area. Yelm is the fastest growing community in Thurston County, and one of the five fastest in Washington State. Prior to the flexible permit, the Yelm community had lodged a series of odor complaints about Lasco. During the initial pubic meeting held to support permit development, odor issues were a primary topic. Complaints continued up until Lasco lowered its styrene emissions and increased the stack heights.

3.4 Were there any CBI issues? If so, how where they addressed?

Lasco did not claim confidential business information (CBI) for any data associated with the title V permit.

3.5 What was the ongoing level/adequacy of information flow to the public?

3.5.a What was the amount and type of information available during the title V permit development and public notice/comment period?

3.5.b What input was obtained back from the public beyond initial comments?

3.5.c What level of detail of source activity was provided to the permitting authority, and/or the public for flexible permit changes that took place during the permit term (e.g., logs and other records)?

- **What required information was submitted directly to the permitting authority?**
- **What and how much information submitted by the source was claimed as CBI?**
- **What additional information was available to the public only through FOIA requests?**

3.5.d What was the timing of the availability of relevant information to the public during permit implementation and development?

3.5.e What was the level of interest in annual P2 reports provided?

3.5.f Were advance notices circulated or made publicly available?

The level of information flow to the public surrounding the Lasco permit development consisted of several meetings, many public notices, and extensive communication with the site and OAPCA. OAPCA held several information sessions informing the public about permit development. These sessions were not specifically requested by the public, but OAPCA believed they would be beneficial. (See section 3.1) The draft of the title V permit was made available for public review February 7, 1997 in conformance with standard title V notice and comment procedures. The public also had access to the Lasco facility's historical file at OAPCA that included information associated with each public session, old air operating permits, correspondence between OAPCA and Lasco, inspection reports, and any public comments.

During Lasco permit development and implementation, OAPCA believed that the overall timeliness of information to the public was either earlier or identical to that of other conventional permits. Due

to previously existing community concerns, OAPCA and Lasco decided to educate the public about P2 and flexible permits during the development of Lasco's title V permit. During development, the flexible permit required Lasco to describe plans for, and the nature of, operational changes that could occur during permit implementation. This provided the public with essentially equivalent information regarding changes, but at a time earlier than would have been available under a conventional permitting process. OAPCA, as an agency with significant experience in communicating with the public about air permitting actions, also strongly believed that describing and limiting all the changes up front that could occur was a superior approach. It allowed OAPCA to better schedule major meetings at times accommodative to the public since only one would be needed to convey the five year picture verses the current piecemeal approach which lacks such context and scheduling flexibility.

The permit also requires Lasco to submit notices of construction completion to OAPCA for each advance-approved change undertaken. This requirement, as it does under a conventional, case-by-case permitting action, informs OAPCA (and the public) that a proposed and approved modification has been implemented and is operational. The timing and content of these notices is identical to conventional permitting. The permit also requires Lasco to submit a semi-annual summary of advance-approved changes undertaken at the source. There is no equivalent requirement associated with OAPCA's implementation of conventional NSR permitting.

During the permit term, a citizen noticed fugitive dust being emitted from the Lasco grinding room on May 30, 1998. Lasco received the complaint on June 1, 1998. Production was immediately stopped in the grinding room, a check was made to verify that no fugitive emissions left Lasco property, and Lasco filled out a complaint report and a permit deviation report on June 1, 1998. The equipment was immediately locked out to assure no unauthorized use. OAPCA was informed of this release and an inspection was set for June 1, 1998. The conveyor belt was removed and all employees were educated on fugitive dust prevention measures on June 2, 1998. A compliance report was submitted and a $500 fine was issued to Lasco.

Prior to raising the stack heights in 1998, the public submitted several odor complaints to OAPCA regarding Lasco's emissions. Since the dust and odor complaints were resolved, the public has not submitted any comments regarding Lasco's performance.

Lasco was not required to submit advanced notices for advance-approved changes. Lasco did not make any CBI claims during the permit term. OAPCA indicated that there were no public requests for any of Lasco's P2 reports.

3.6 Based on document/record review, compare conventional regulatory permitting versus flexible permits in terms of:

3.6.a How provisions are described to the public
3.6.b Number of comments received
3.6.c Number of complaints received
3.6.d Level of ongoing public interest
3.6.e Amount of information (if any) not available to the public (e.g., logs) and how this may or may not contribute to the public's understanding of the permit
3.6.f Amount of P2 information made available

Compared to a conventional permit, OAPCA representatives reported that they received more initial public interest and comments for the Lasco permit than is typical for a conventional permitting action. This occurred, at least in part, as an intentional result of a deliberate process to inform and generate interest in the permit. From the beginning, OAPCA integrated the public into the permit development process. OAPCA, for example, provided extra public meetings and information sessions. OAPCA indicated that, during the subsequent permit implementation, there were no public comments relating

to the flexible permit conditions because the public meetings had addressed the issues of concern. Odor complaints did continue during initial permit implementation until Lasco raised its stack heights.

For changes under conventional permits, OAPCA issues Notice of Construction Preliminary Determinations to the source, indicating temporary approval or disapproval of the proposed project. Simultaneous, OAPCA issues public notice to several local newspapers. This notice includes:

- the preliminary determination;
- a general project description, and a summary of emissions that will result from the change;
- a description of applicable air regulations and standards that apply to the change; and
- recommended conditions of approval.

The permittee must then submit a Notice of Construction Completion within fifteen days of completion of construction.

Under the Lasco permit, classes of advance-approved changes are described up-front in the title V permit. Because these changes must comply with the daily and annual emissions limits, "worse-case" emissions at the source remain at or below these pre-determined environmentally appropriate levels. As well, all applicable requirements associated with each advance-approved change is identified up-front in the permit, so the public has a long-term view of permit implementation and outcomes. OAPCA indicated that they designed the level of detail in the permit articulating the advance approval categories and requirements to be equivalent to the amount of information available under conventional minor NSR. (These documentation requirements are described in detail in section 2.1.b.)

Any information concerning the Lasco permit that is contained in OAPCA's files and that is not classified as CBI is available to the public. In conformance with the permit, this documentation includes construction completion notices (that have content identical to those provided under conventional NSR) and semi-annual reporting of changes/modifications made (this reporting is not required under conventional NSR). Other reporting, such as emissions achieved as a result of P2 initiatives and the P2 annual report are not required under conventional permits.

4. IMPLEMENTATION OF FLEXIBLE PERMIT PROVISIONS (ON-SITE VERIFICATION)

Utilization

4.1 What was the source's overall flexibility provision utilization throughout the permit term?

4.1.a How often were the flexible approaches used?

- **Describe the nature of the changes that occurred at the facility under the flexibility provisions.**
- **Identify which changes took advantage of which flexibility provisions (e.g., new unit A was added pursuant to advance approval and within a PAL emissions limit).**

Listed below are all the advance-approved changes that Lasco implemented during the permit term.

(1) Lasco raised (1998) stack heights to remedy styrene odor complaints and an associated notice of violation from OAPCA. The source and permitting authority held initial discussions to ensure this type of change fell into the category of advance-approved changes. Lasco then provided OAPCA with several modeled stack height scenarios that could remedy the situation. OAPCA responded by selecting the highest stack height, which increased the stack from 30 to 75 feet.

(2) Lasco utilized the streamlined emission factor modification procedure once during the permit term. This modification occurred after a source test was conducted following process efficiencies made at the facility. The efficiencies resulted in improved emissions/product output (i.e., pollution prevention). OAPCA stated that procedures for modifying the emission factors were followed, as articulated in the permit.

(3) Lasco installed a new gelcoat resin spray station for making colored bathtubs (1998). This change was made under the categorical per-approvals provided for in the permit and consistent with conditions requiring no changes to monitoring, recordkeeping, and reporting and maintaining emissions at or below the daily and annual caps.

(4) Lasco introduced a new putty station into the product production line. The station allows Lasco to attach boards to the inside of the unit, resulting in material and emissions savings. Lasco made this change consistent with the permit conditions identified above in #3.

(5) After Lasco installed the regenerative thermal oxidizer (RTO) control equipment (utilizing a case-by-case construction approval action), the company desired to expand its emissions control capacity by connecting a lamination booth (LAM1) via ducting to the RTO. Connecting the lamination booth to the thermal oxidizer decreased overall emissions, allowing Lasco to increase production while remaining below their cap. Lasco originally submitted a Notice of Construction permit application to OAPCA to get approval for implementing this change. OAPCA, however, determined that the proposed reconfiguration to the exhaust system qualified as an advance-approved modification under conditions E3(f) of the permit.

4.1.b How many minor NSR permits and/or title V permit revisions were necessary (i.e., not covered under the advance approval)?

Adding the thermal oxidizer in April 2000 required Lasco to obtain a separate minor NSR permit including the required changes in monitoring, recordkeeping, and reporting methods. Lasco submitted an application for this permit, and, with the assistance of OAPCA, also went through the necessary steps to make a minor permit modification to the title V permit. This included writing an amendment to the current permit and the technical support document, submitting a public notice, and holding a public meeting.

4.1.c Contrast these results with implementation under a conventional permit design for the same source.

- **What approach would the source have taken for each change that utilized a**

flexible permit provision, absent that provision?

(1) not made the change

(2) taken steps to avoid triggering requirements (e.g., netted out of major NSR)

(3) complied with full major/minor NSR permitting

- **Were any other conditions taken to address applicable requirements other than NSR? If so, which ones?**
- **How much time & resources were saved by utilizing the flexible permit provision(s), compared to the option you would have chosen above?**

Lasco representatives indicated that becoming a synthetic minor source for major NSR purposes would have been a desirable approach under either a conventional or flexible permit. However, Lasco would not have made certain changes addressed by the advance approval provisions without the certainty provided by the flexible permit. Lasco stated that the benefits of potential operational changes are often somewhat speculative. In this context, Lasco indicated that delay associated with administrative requirements and uncertainty associated with case-by-case construction permitting could well decrease the attractiveness of the changes to a point where they would not be undertaken.

- Lasco increased its stack height to address public odor concerns. Lasco indicated that the degree of public concern made it desirable that they would undertake some form of change to address odor. However, had Lasco undertaken the stack height change under a conventional permit, the construction would have required a case-by-case construction approval action and may have been postponed or not made.

- Lasco and OAPCA indicated that, in the absence of the flexible permit and its expedited updating procedure, the initial testing to develop a site-specific emission factor and to subsequently change the emission factor would not have been undertaken.

- Under a conventional permit design, Lasco indicated they would not have added an additional spray booth for spraying the resin of colored units. In the past, Lasco made due by flushing out the spray gun with extra gelcoat. Since the demand for colored units is low, the savings associated with eliminating the flushing process probably could not outweigh the potential expense of a minor NSR permit issuance process followed by a title V permit modification procedure.

- Lasco indicated that implementation of the putty system would have been substantially constrained or not have taken place at all under a conventional permit. For example, although Lasco did implement the putty system at other facilities, it did so with a more complex (and less efficient) configuration to avoid triggering a case-by-case construction permit action. At Yelm, rather than integrating the putty system into an existing spray booth operation, they constructed, utilizing the preapproval permit conditions, an entirely new spray booth. Lasco indicated that optimal implementation of the new putty system at other facilities would only occur during the title V permit renewal process, if at all.

- Connecting the LAM 1 station to the RTO would have triggered the conventional minor NSR process and minor title V permit revision process. As in the case of the putty system, Lasco would have delayed this change until the title V permit renewal process.

Timing and Resources:

- Lasco indicated that under a conventional permit certain of the changes (e.g., adding the additional color gelcoat operation), if still cleared for implementation, would be delayed until permit renewal. Others (e.g., adding taller stacks), however, would experience a 3 to 6 month delay associated with OAPCA's conventional construction permitting process.

OAPCA's typical construction approval process requires between 90 and 150 days (OAPCA has a maximum of 30 days to review the permit modification, 60 days to prepare a preliminary determination, 30 days for public comment if undertaken, with 30 days added for any needed BACT analysis).

- Lasco has a corporate policy that no money is to be invested into changes until the permit is in hand. Lasco estimated that waiting for the permitting authority's approval causes implementation delays of approximately 9 months to order the parts, implement them into the factory, and then integrate them into the process.
- Lasco indicated that the estimated administrative time saved for the flexible permit compared to the conventional permit ranges from 20 to 40 staff hours for each of the five advance-approved changes. Including the costs saved from submitting public notices and holding public meetings, Lasco representatives indicated that the facility has saved thousands of dollars in administrative costs under the flexible permit.[3]
- Under the flexible permit, Lasco indicated they increased production from 108,260 units/year (in 1997) to 132,548 units/year (in 2000) generating a significant annual increase in profit.

Documentation

4.2 What problems, if any, did you encounter regarding the following:

4.2.a Tracking of fugitive emissions
4.2.b Inclusion of emissions from startups, shutdowns, and malfunctions
4.2.c Inclusion of emissions from insignificant emissions activities
4.2.d Missing data
4.2.e Use of/updates to emission factors
4.2.f Application of ROPs (amount of errors noted) and missing critical assumptions
4.2.g Required content of logs
4.2.h Use of advance notices

Because the emissions units (buildings) essentially comprise building enclosures, any fugitive emissions are contained in the building and were accounted for during development of the emission factors. Consequently, there has been no problem with accounting for fugitive emissions or for emissions from startups, shutdowns, or malfunctions.

The permit identifies several sources of insignificant VOC emissions (see section 2.4.c for additional discussion). The permit does not require separate testing, monitoring, reporting or recordkeeping for insignificant emission units or activities. However, OAPCA can request that Lasco provide documentation to demonstrate that the emissions unit or activity has been appropriately listed as insignificant. OAPCA representatives did not note any problems associated with emissions from insignificant emission units or activities.

The monitoring approach is based on material usage derived from daily measurements of tank volumes; tanks volumes are measured every day and missing data are not a problem.

Lasco updated its emission factor once during the permit term, to account for increased material efficiencies. This process is advance-approved in the permit, provided that Lasco follows the identified procedure. OAPCA did not identify problems regarding this process. The use of site-specific emission factors determined through emission testing was a condition of the permit. Emission tests were conducted in August 1996 and July 1997. During the tests, the emissions (lb styrene/hr) from each separate stack of the gelcoat process line were measured, the material (resin) usage was measured and documented, and the production rate was documented. The data from these tests were used to determine separate emission factors for the gelcoat, barrier coat, and laminate coat

[3]Lasco representatives indicated that they regard specific cost and profit information as confidential, due to the highly competitive and low-margin nature of their industry.

operations because the resin properties and spraying conditions (e.g., spray atomization, application rate) are different for these operations. Separate factors were not determined for the gelcoat line (FRP) and acrylic line (ACR) laminate operations because these processes are similar. Also, note that during these tests the mix room (EU3) vent to atmosphere was sealed and the mix room emissions were measured as a part of the total emissions for EU1. Consequently, the mix room emissions are included in the emission factors for the gelcoat line. The factors determined during these tests are presented in Table 4.2.

Table 4.2. **Lasco VOC Emission Factors**

PROCESS OPERATION	EMISSION FACTORS (lb. VOC emitted/lb. styrene)	
	August 1996	July 1997
Gelcoat	0.526	0.494
Barrier Coat	0.452	0.35
Laminate Coat	0.202	0.155

The July 1997 emission factor tests were conducted because the emission factors determined from the August 1996 tests were higher than Lasco expected (based upon data from other Lasco facilities). The factors from the latest test, July 1997, are the factors currently approved by OAPCA and used by Lasco. During the site visit, company personnel indicated that the factors for the gelcoat and barrier coat steps are expected to be higher than the laminate coat step because the spray is more highly atomized than for the laminate coat application.

Note that prior to the effective date of the permit, AP-42 emission factors were used because emissions tests had not been required and site-specific emission factors were not available. The AP-42 emission factors used were 0.300, 0.060, 0.060 lb VOC emissions/lb styrene available for the gelcoat, barrier coat and laminate coat processes, respectively. As indicated in Table 1, the site-specific emission factors are significantly greater than the general AP-42 based emission factors existing at the time. These data show the value of using site-specific emission factors for situations where the process to which factors are being applied is a major contributor to the total emissions under the cap, and a high degree of confidence in the factor is required.

OAPCA representatives identified one minor issue associated with logs required by the permit. During an inspection, OAPCA noted that the time of measurements had not been monitored on the Daily Material Use Log (note: this log is to include material, date, and time of the recording, and the total amount of material used in pounds during the day). OAPCA recommended that the time of day be added to each recording. OAPCA identified no other issues with logs. An OAPCA inspection report from June 1999 indicates that all required logs were maintained and available for review, and that they included the appropriate information.

Under the permit, Lasco is not required to provide OAPCA with advance notice of advance-approved changes implemented under the permit. See section 2.1.b for information on the notice requirements associated with the advance-approved change provisions in the permit.

Quality/Quantity of Information

4.3 What was the quality and the quantity of monitoring data received?

4.3.a. Are CEMS in place? If yes, were data provided?

4.3.b. Were stack tests performed? If yes, were results provided?

4.3.c. Was parametric monitoring performed? If yes, were results provided?
4.3.d. Were any other monitoring approaches used? If yes, were data provided?
OAPCA representatives stated that they believe that the quality and quantity of monitoring data required by the permit is appropriate and very good, and that all data required by the permit are available. The EPA Review Team participants agreed with this assessment, based on review of Lasco's monitoring data and calculations. Additional information is provided below on monitoring approaches and data associated with the title V permit.

CEMS are not used at this facility. Stack tests were performed to determine emissions and to determine emission factors for future calculation of emissions based upon material usage. As of July 2001, Lasco had performed two stack tests – one in August of 1996 (as part of the permit development process) and one in July 1997. OAPCA indicated that Lasco conducted these tests and submitted results consistent with requirements (see section 4.2 for additional discussion of stack tests).

Parametric monitoring was not used for monitoring of VOC emissions (or emissions control) because under the original permit and during the permit period under review (July 1997 - July 2001), no active (add-on) VOC control equipment was installed. However, the facility recently installed a regenerative thermal oxidizer (RTO) to control emissions from the gelcoat and barrier coat spray booths of the gelcoat production line. In July 2000, OAPCA issued an addendum to Lasco's operating permit for installation of the RTO. The performance test for the RTO was scheduled for August 2001. Parametric monitoring of the RTO operating parameters will be appropriate in the future for this facility.

The monitoring procedure used by Lasco to calculate total VOC emissions is based on an emission factor approach. The emission factors are site-specific emission factors expressed in terms of pounds of styrene emitted per pound of available styrene used during the spray operations (lb styrene/lb styrene-available). Thus the basic calculation is:

$$E = \sum_{j=1}^{N} \left[EF_j \times \left(\sum_{i=1}^{N} \left(R_i \times S_i \right) \right)_j \right]$$

Where:

E	=	Total emissions, lb VOC as styrene
R_i	=	Amount of resin i used in process j, lb
S_i	=	Concentration of styrene in resin i, weight fraction
EF_j	=	Site specific emission factor for process j, lb styrene emitted/lb available styrene
i	=	number of resins used each day
j	=	gelcoat, barrier coat, or laminate coat process step

Consequently, the three important measurements for calculating the emissions are: (1) the daily amount of each resin used in the processes, (2) the styrene content of each resin, and (3) the emission factor for each process.

Documentation of the key parameters comprising the input to the emissions rate calculations (raw material usage, styrene content, and emission factors) were available for review on site. Records of the emissions rate calculations (data records and electronic spreadsheet) also were available and were reviewed by the EPA Review Team. The EPA Review Team concluded that the quality of the data provided is very good and the emissions rate calculation procedures used by the facility are sufficient to determine continuous compliance with the permit VOC emissions limit cap. The following paragraphs describe the procedures used for tracking material usage and for conducting

the emissions calculations.

The material tracking system used at Lasco is straightforward. It is based on a daily inventory of material usage obtained by measuring the beginning and ending levels in each of the various resin tanks. These data are manually collected and recorded on a *Daily FRP Production* form. Currently, the tank levels are measured by manually "dipping" the tanks with a dipstick to determine the depth of the material in the tank. Each tank has a chart which converts tank level to gallons. The density of the material is used to convert gallons to pounds. All measured beginning and ending tank levels and all calculations are recorded on the *Daily FRP Production* form. The facility is in the process of placing the tanks on weigh cells (scales) to provide automatic and continuous measurement of tank weight. This modification will provide a direct measure of the weight of material in the tank at all times and will eliminate the need to dipstick tank levels. The primary advantage of using automatic weigh cells is the elimination of the need to open the tanks, thus eliminating fugitive emissions and the exposure of workers to styrene fumes. This change will also eliminate the need to convert the usage rate from gallons to pounds. The *Daily FRP Production* inventory also includes an accounting for resin in the mixer at the time of the inventory and any materials used for flushing lines.

Site specific emission factors were determined by Lasco by conducting emission tests. Emission tests were conducted in August 1996 and July 1997. During the tests, the emissions (lb styrene/hr) from each separate stack of the gelcoat process line were measured, the material (resin) usage was measured and documented, and the production rate was documented. The data from these tests were used to determine separate emission factors for the gelcoat, barrier coat, and laminate coat operations because the resin properties and spraying conditions (e.g., spray atomization, application rate) are different for these operations (see section 4.2 for additional discussion).

4.4 What was the percentage/amount of site-wide emissions subject to enhanced monitoring, recordkeeping, reporting and/or controls that were greater than required by applicable requirements under a traditional permitting approach?

While OAPCA enhanced the monitoring, recordkeeping, and reporting requirements for all of Lasco's emissions when compared to previous requirements at the source, OAPCA crafted the new requirements to apply generically to all FRP industries. The use of site-specific emission factors determined through emissions testing was a condition of Lasco's flexible permit and applies to 100 percent of the styrene (VOC) emissions coming from the facility. The permit limits advance-approved changes to only those actions which do not require any change in the monitoring, recordkeeping, and/or reporting requirements of the permit to assure compliance with all terms and conditions of the permit.

4.5 Did actual changes made match their up-front descriptions? If not, why not and how were the discrepancies addressed?

The advance approvals in the Lasco permit are not for specific changes, but categories of changes around which permit conditions constrain the magnitude of the changes (i.e., through annual and daily VOC emissions limits). OAPCA representatives indicated that they believed changes made by Lasco under the advance approval provisions did fall appropriately under the advance approval categories. For some changes, discussions between Lasco and OAPCA took place to ensure applicability of the advance approval provisions to the change.

4.6 How many changes (e.g., potential NSR triggering events) are identified in the logs?

See section 4.1.a for a list of the changes implemented during the permit term, as of July 2001, that utilize the advance approval provisions contained in the title V permit.

4.7 What types of information and level of documentation detail are included in the logs?

Lasco is required to maintain a record of all installations or modifications made under the preapproval

conditions. See section 2.1.b for a description of the information Lasco maintains regarding changes made utilizing the advance approval provisions of the permit.

4.8 Was there any confusion over the location of new emissions units and what requirements are applicable to them? If so, please describe the confusion and how it was resolved.
OAPCA indicated that they have experienced some difficulty maintaining an awareness of the location of new operational changes. Confusion emerged in part because OAPCA believed insufficient information regarding the nature and location of changes made was available to them in advance of on-site compliance assurance activities. OAPCA indicated that they did not encounter any confusion regarding the applicable requirements for the changes undertaken pursuant to the preapprovalprovisions. OAPCA representatives indicated that a process of advance notice by email of changes made using the advance approval provisions may be added in the next version of the permit.

4.9 What types of information and level of documented detail are included in the notices?
Lasco maintained on-site at its Yelm facility records of installations and modifications made under the preapproval conditions. These records included technical descriptions of the equipment and information pertaining to emissions. At the time of the review, OAPCA did not have notices or other forms of documentation available as part of its records pertaining to the implementation of changes. OAPCA is currently discussing with Lasco the form of required documentation that is needed relative to the changes.

4.10 Were the calculations required by the permit included in or attached to the on-site log?
Emissions measurement data and calculations are available at Lasco in the company's information systems. Lasco personnel enter daily monitoring results into a computer system. Lasco Corporate personnel are able to view and maintain these records on their mainframe computer system located in Anaheim, California, which is networked with the Yelm facility. The system stores information in a database and computes certain production parameters used to evaluate the plant's production and material use efficiency on a monthly basis. Example print-outs of data and calculations were made available to the EPA Review Team during the July 2001 site visit.

5. DESIGN ADEQUACY OF THE FLEXIBLE PERMITS

General inquiries based on subsequent implementation of the flexibility provisions

5.1 Were any applicable requirements omitted?
The EPA Review Team did not find evidence of any applicable requirements that the permit omitted.

5.2 Was monitoring sufficient?

5.2.a Does the permit utilize appropriate monitoring methodologies based on the types of emissions units involved?

OAPCA representatives believed that the monitoring approaches utilized in Lasco's title V permit are fully sufficient to demonstrate compliance with all applicable requirements and to ensure that the permit is practicably enforceable. More specific findings of the EPA Review Team regarding the emission factor use are listed below.

The emission factor procedures used by the facility are sufficient to determine compliance with the permit VOC emission limits. The procedure relies on site-specific emission factors determined from emissions testing, material (resin) usage monitoring and recordkeeping, and manufacturer's Certificate of Analyses for the VOC content of the resins used. Documentation of the key parameters comprising the input to the material usage were available for review on site. Records

of the emissions calculations also were available (electronic spreadsheet), were reviewed, and were user friendly. All data inputs were traceable and all calculations reviewed were verified to be correct.

The use of site-specific emission factors determined through emission testing was a condition of the permit. The site-specific emission factors are significantly greater than the general AP-42 based emission factors available at the time the permit was issued. The emission factor data from this facility show the value of using site-specific emission factors for situations where the process to which factors are being applied is a major contributor to the total emissions under the cap and a high degree of confidence in the factor is required.

Because the RTO was only recently installed and performance testing had not been conducted at the time of the EPA Review Team visit, this review does not address monitoring the performance of the RTO. Once the RTO is operational and a performance test has been conducted, representative operating parameter(s) to monitor performance (capture and destruction efficiency) should be selected and incorporated into the monitoring. Typical monitoring for this type of system would include continuous monitoring of the RTO operating temperature, and periodic monitoring of an indicator of air flow through the spray booth to the control device (e.g., air flow direction, booth differential pressure, fan operating condition).

5.3 Were there any problems translating the advance approval concepts into actual permit provisions?

OAPCA and the EPA Review Team did not identify any difficulties.

5.4 Were the advance-approved categories of changes sufficiently well-defined to cover the actual changes made? If not, how were these changes made?

The EPA Review Team believed the categories of changes were sufficiently well-defined. See also section 4.5. OAPCA indicted that they did not experience any difficulties applying the categories of changes identified in the permit to the actual, specific changes Lasco made. However, on a number of occasions (e.g., stack height change), Lasco did informally consult with OAPCA to clarify the applicability of the advanced approvals to the desired changes. Lasco did submit a NOC application on March 6, 2001 to approve modification to the exhaust system of emissions unit #1 rerouting the exhaust from the lamination spray booth #1 (LAM1). OAPCA responded to this NOC, via a letter explaining how the rerouting of the exhaust system qualifies as an advance-approved modification under condition E#(f).

5.5 Did the permit contain all calculation procedures/ROPs needed by the source to determine applicability and assure practical enforceability? If not, how did the source determine applicability and assure practical enforceability?

The EPA Review Team found that all the calculation procedures for the VOC emissions calculation and for revising emission factors were included in the permit. The effective dates of the permit addressed by this review are prior to the recent installation of the RTO. Therefore, the review did not address the emissions calculation procedures for incorporating the emission reduction achieved by the RTO. Modification of the emissions calculation procedure will involve incorporating a factor for the destruction and removal (DRE) efficiency (based upon the most recent emission test results) to the emissions equation for the processes controlled by the RTO.

5.6 Were all critical assumptions for ROPs use and/or emissions tracking also included in the permit? If not, how were these gaps addressed?

All critical assumptions were included in the permit, or in the test plan for determining the site specific emission factors. The permit states that prior to conducting tests to develop Emission Factors the facility must submit a test plan for approval. All test results must be submitted and approved by the permitting authority before revised Emissions Factors can be used.

Tool Specific Inquiries

5.7 Clean Buildings

5.7.a What safeguards were imposed to prevent the overloading of the control equipment?

5.7.b Were any emissions excluded from the central control device? Were they subject to any applicable requirements, and, if so, how were they accounted for in the permit?

No clean building technique was formally utilized in the Lasco air operation permit.

5.8 Replacement Conditions

5.8.a Were the mass balance based formulae adequate to limit actual emissions? If not, what were the inadequacies and how were they corrected by the source and permitting authority?

5.8.b Were all critical assumptions for using the formulae contained in the permit? If not, what were the inadequacies and how were they corrected by the source and permitting authority?

Not applicable for the Lasco permit.

5.9 P2 Provisions

5.9.a Was P2 adequately recognized and encouraged by the design of the permit? If not, why not and what changes could be made to better recognize and encourage P2?

Pollution prevention is recognized and encouraged in the permit design in a number of ways. First, BACT for advance-approved minor NSR changes includes successful implementation of an approved P2 Program. As such, Lasco's ability to access the advance approvals contained in the permit is dependent upon its successful implementation of such a program. The permit also contains specific P2 goals for Lasco. OAPCA indicated that while the P2 provisions (particularly P2 measurement protocol) took additional time, this approach was worthwhile. OAPCA also indicated that P2 monitoring approaches can be simplified in the next Lasco permit.

Lasco's 249 tons/year PTE cap, in combination with the advance-approved categories of change and the streamlined emission factor update procedure, also substantially encouraged P2. The emissions cap acted as a constraint on Lasco's ability to meet market demand for its product, driving Lasco's interest in lowering emissions per unit of output. The flexibility precautions then combined to favor the utilization of process-based P2 changes, since they were advance-approved while the addition of add on controls would require both the delay and expense of case-by-case construction permitting.

5.10 Fugitive Emissions

5.10.a How dependent on changes in fugitive emissions was the ability of the source to comply with any cap?

The estimated maximum styrene fugitive emission rates for the continuous and batch mixing processes were estimated to be 0.135 pounds of styrene per shift and 0.106 pounds of styrene per shift, respectively. These are considered negligible amounts when compared to stack emissions, and not likely to affect Lasco's ability to comply with the VOC caps.

6. PRACTICAL ENFORCEABILITY OF THE FLEXIBILITY PROVISIONS

6.1 Assess the overall practical enforceability of the permit's flexibility provisions.

6.1a Does the permit require monitoring, recordkeeping and reporting in appropriate time intervals (e.g., daily records for daily limits)?

6.1b Can an inspector visiting the site determine historical and contemporaneous compliance with the flexible permit from records maintained on site?

6.1c Does the permit contain a legal obligation for the source to adhere to the terms and conditions of the limitation?

6.1d Does the permit rely on the efficiency of an air pollution control device for compliance with an emissions limit? If so, how is that efficiency determined and shown to be accurate?

OAPCA representatives and the EPA Review Team indicated that they believe that the VOC emissions limits contained in the Lasco permit are enforceable in a practical manner. All required monitoring and recordkeeping is straight forward. Daily records of material usage are collected and used to calculate monthly emissions for the twelve-month rolling total limit. All records are maintained on site, are available for review, and provide the necessary information for determining compliance. OAPCA's inspector, and members of the EPA Review Team, experienced no problems determining compliance with the emissions limits and replicating the actual results of the company based on records maintained on site and selected by the Team. The permit does include a duty to comply with the terms and conditions of the permit.

During the site visit the emissions monitoring procedures were evaluated by reviewing the material usage data, spreadsheet calculations, and results for a selected reporting period. The purpose of the review included determining if (1) the appropriate records were available, (2) the spreadsheet calculations were correct, and (3) the reported results were traceable. The time period selected was July 1997. This period was selected because it is the month that the approved emission factors were changed to reflect the most recent emission (factor) testing. Review of these data provided an indication of how this changeover was handled. Selected calculations were reviewed and verified as described below. Actual values (calculations) reviewed or calculated on site are not presented in the discussion.

Daily FRP Production Records. The *Daily FRP Production Record* form for July 24, 1997, was reviewed. Facility personnel explained all entries and calculations. The form was concise and provided information necessary to determine material usages. All calculations on the July 24 form were checked and validated as correct.

Monthly Resin Usage and Emissions. The *Monthly Resin Usage and Emissions* form for July 1997 was reviewed. First, the entries from the *Daily FRP Production Record* for July 24 were validated as correct. Next, the *Certificate of Analysis* for FRP Resin 3000 dated June 17, 1997, was reviewed and checked against the entry in the *Monthly Resin Usage and Emissions* form. The *Certificate of Analysis* identified the styrene content as 32 to 36 percent by weight. The value of 36 percent was correctly used in the *Monthly Resin Usage and Emissions* calculations. Next, the emission factors (gelcoat, barrier coat, and laminate coat) used in the calculations for the periods July 1-28 and July 29-31, were checked against the approved emission factors. All emission factors entered into the spreadsheet were correct. Next, the spreadsheet calculations for total monthly emissions from each process operation (gelcoat, barrier coat, ACR resin laminate coat, and FRP resin laminate coat), as well as the total monthly and 12-month total emissions were checked and found to be valid. Finally, the monthly data in the spreadsheet were compared to the July data reported in the 1997 annual emissions report to OAPCA; the reported data were the same as the calculated data.

Efficiency of Air Pollution Control Devices. For the effective date of the permit reviewed, the permit does not rely on the efficiency of a control device. However, the facility recently installed an RTO to control emissions from the gelcoat and barrier coat spray booths on the gelcoat line. The control efficiency of the RTO will be determined by a performance test scheduled for the near future.

The permit also contains specific operation and maintenance procedures for the spray booth filters

(daily), overall spray booth condition (monthly), and spray booth fans, ducts, and stacks (quarterly). Lasco is to maintain a monitoring log to record spray booth monitoring results, as well as a log of maintenance actions. (Note: Lasco stated that because they're conducting so many air changes in the spray booth, they cannot meet Method 204 criteria for a permanent total enclosure. Therefore, the spray booths are not considered "total enclosures" and cannot be assumed to have 100 percent capture efficiency.)

6.2 Does the permit require the correct type and amount of information (in logs, notices, monitoring data, etc.) to determine the number and duration of any deviations?

OAPCA and the EPA Review Team, based on review of permit requirements for logs, notices, and monitoring data (all described in previous sections), believe these permit requirements are sufficient to detect the number and duration of any deviations if properly implemented.

For the VOC emissions limit, a deviation is an exceedance of the emissions limit and this can be determined from the daily material usage and emission factor calculations. Once the RTO is fully operational, and parameter monitoring for the RTO is established, the permit should include sufficient detail to define a parameter monitoring deviation (i.e., parameter(s) monitored, monitoring frequency, averaging period [if applicable], and acceptable indicator range). Currently, the RTO temperature is monitored as an indicator of performance. The requirement to monitor RTO temperature is a condition of the revised permit. The combustion chamber temperature must be maintained above 1600°F at all times (no averaging period is specified). The set point low is 1500°F the set point high is 1700°F. The RTO shuts down if the temperature reaches 2000°F.

As noted in item 5.2.a, Typical monitoring for this type of air pollution control system includes periodic monitoring of the RTO operating temperature, and periodic monitoring of an indicator of air flow through the spray booth to the control device (e.g., air flow direction, booth differential pressure, fan operating condition). The RTO temperature currently is monitored continuously; however, the spray booth particulate filter condition is monitored on a daily basis, only. Once the RTO performance test is conducted, a destruction efficiency will be applied to the VOC emissions generated from the gelcoat spray operations and directed to the RTO for destruction. Consequently, continuously maintaining the operating conditions (i.e., capture efficiency) of the spray booth at the conditions demonstrated during the RTO performance test becomes important. Monitoring an indicator of air flow into the spray booth more frequently than daily is recommended; furthermore, a specific indicator range for the selected parameter should be established.

6.3 What was the nature and duration of any deviations?

One fugitive dust emissions deviation was identified by OAPCA. On May 30, 1998, a citizen noticed fugitive dust being emitted from the Lasco grinding room and reported the incident to Lasco. OAPCA immediately stopped grinding room production, checked to verify that no fugitive emissions left the property, and completed a complaint report and a permit deviation report on June 1, 1998. Lasco locked the equipment to assure no unauthorized use occurred. OAPCA received the complaint on June 1, 1998 and began an inspection at 11:45am that day. On June 2, 1998, Lasco removed the conveyor belt, and trained employees on fugitive dust preventative measures. OAPCA issued a Compliance Report and a $500 fine to Lasco. Aside from inspection-related issues addressed in section 1.12, no other deviations were reported by OAPCA during the permit term.

6.4 Can all calculations required by the permit, including ROPs, be duplicated? Can anybody understand and apply them consistently?

OAPCA's inspector stated he did not have any problems understanding the calculations or duplicating calculations during inspections. During the review, the EPA Review Team determined that all calculations required by the permit are sufficiently documented and can be readily duplicated. See section 6.1 for additional discussion.

6.5 Does the permit clearly set forth the applicable requirements for every change made by the source? If not, what additional information is necessary

Applicable requirements for advance-approved changes include compliance with the NAAQS, (and the Acceptable Source Impact Level (ASIL) for air toxics) which is done by ensuring the daily VOC emissions limit is not exceeded as a result of the change. BACT for advance-approved changes is also clearly identified up front in the permit. Any questions concerning major NSR applicability are addressed by ensuring compliance with the 249 tons/year PTE limit for VOCs. The permit also states that changes involving the emissions of new air toxics, new applicable requirements, or changes in monitoring/recordkeeping are not eligible for advance approval. OAPCA representatives and the EPA Review Team agreed that the scope of and the applicable requirements for advance-approved changes are clearly stated in the permit. OAPCA also indicated that they did not experience any difficulty applying the applicable requirements in the context of changes made under the advanced approval provisions.

6.6 Were there any issues associated with off-permit notices (e.g., adequacy of descriptions)?

No issues associated with off-permit notices were identified by OAPCA or the EPA Review Team.

6.7 Compare the "ease" of inspecting sources with flexible provisions to that of inspecting similar sources with conventional permits. For the units affected by flexibility provisions, what worked well and what posed difficulties?

OAPCA representatives indicated that conventional permits may (depending on the industry) be more prescribed and have more specific conditions attached to individual units, and therefore may actually have more complicated inspection checklists. OAPCA stated, however, that in comparison to its other FRP source, inspection of the Lasco facility is somewhat more time consuming due to the additional conditions contained in the flexible permit. OAPCA also indicated that, on one occasion, insufficient advanced availability of information related to a modification undertaken using the advance approval provisions created some difficulty inspecting the source.

6.8 Compare the compliance rate (to date) of flexible provisions within the permit with compliance rates of conventional regulatory permits governing the same types of changes at similar sources, and for similar types of changes with the same source under previous conventional permits.

Prior to its flexible title V permit, the Yelm facility received eight violations stemming from odor complaints (see section 1.17 for additional discussion). OAPCA representatives reported that Lasco has not received odor violations during the flexible permit term (see section 1.12 for a discussion of inspections and violations during the title V permit term). Because Lasco did not make any changes requiring permit action prior to the flexible title V permit, a comparison of the compliance rate for changes triggering permit action between pre- and post-title V is not possible.

OAPCA indicated that Lasco and the other FRP industry facility under its jurisdiction have similar compliance histories, considered by the agency to be "reasonably good".

7. PERMIT COSTS, BENEFITS & VALUE ADDED

7.1 Did the flexible permits provide you with benefits in terms of: practical enforceability; information flow; environmental/emissions results; economic results; etc.?

Overall, representatives from OAPCA and Lasco both reported that their organizations along with the public and the environment benefitted from the flexible permit. The initial writing and formulating of the permit required a substantial amount of time and energy but everyone agreed it was a valuable investment.

Community Concerns:
Because community members had previously expressed concerns about the Lasco FRP plant (typically in the form of odor complaints), Lasco, OAPCA, and the EPA permit development team placed substantial emphasis on public education during permit development. Through several notices and meetings, the public was informed of Lasco's operational plans, the flexible permit provisions, and pollution prevention commitments. By the time of this permit review, Lasco had moved (utilizing flexible permit provisions to increase its stack heights) to reduce localized odor impacts with a resultant decrease in odor complaints to OAPCA.

Emissions Impacts:
Lasco voluntary tested its styrene emissions and then subsequently reduced its VOC emissions by approximately 100 tons/year as needed under the newly generated emission factor to reside below a 249 tons/year potential to emit (PTE) cap. This would not likely have occurred but for the requirements to support obtaining its flexible title V permit. Lasco has taken actions to minimize the emissions of styrene per unit of production. Just prior to and soon after permit implementation, Lasco undertook a series of P2 initiatives that resulted in a 14 percent decrease in emissions per unit of production (Lasco verified this decrease through a source test, then used the streamlined update procedure contained in the flexible permit to revise its emission factor and increase production). In April 2000, Lasco voluntarily installed a regenerative thermal oxidizer pollution control device to accommodate production from a third line (which is anticipated to be installed as a advance-approved operational change) while remaining below its PTE cap. From 1996 through 2001, Lasco estimates it has reduced VOC emissions per unit by approximately 32 percent, from approximately 4.6 to 3.13 pounds/unit. Collectively, according to OAPCA representatives, these measures have reduced regional emissions for bathware products since the local need for them would otherwise be met by less efficient sources with more pollution emitted per production unit.

Administrative Costs:
The permit saved OAPCA and Lasco staff time associated with preparing and processing notice of construction applications. During the flexible permit, Lasco made five advance-approved changes that would have otherwise triggered case-by-case minor NSR permit actions. OAPCA estimated that Lasco's flexible permit saved them approximately 20 to 40 staff hours per advance-approved change. The time savings includes time spent drafting a permit to construct, ensuring NAAQS compliance, modifying the title V permit, and conducting the change-specific public review process. At $75/hour, the estimated administrative costs saved by the flexible permit for all five advance-approved conditions ranges from $7,500 to $15,000. Lasco estimated that to execute a construction permit requires approximately 50 staff hours. Additionally, to process a permit modification, Lasco would need to submit a pubic notice (with an estimated cost of $350), and to hold a public hearing (with an estimated cost of $400). For all five changes made using the advance approval provisions, Lasco estimated a cost savings of more than $20,000.

Financial Benefits to Lasco:
As indicated earlier, Lasco engaged in a series of advance-approved changes, updated its emission factor, and voluntarily installed an RTO. These actions combined to create head room under Lasco's cap which Lasco then used to increase production. Lasco indicated that typically (and as reflected by the Yelm plant's lack of operational change prior to the flexible permit and experience at other Lasco facilities) the company is very averse to making changes that trigger permitting actions. At most, they wait to undertake such changes at the time of permit renewal. Contrary to its typical corporate behavior, Lasco Yelm engaged in a series of modifications that created the opportunity to increase production from 126,045 units/year (in 1997) to 132,548 units/year (in 2000) generating a significant annual increase in profit. In 2001, after the RTO was installed, Lasco decreased emissions per unit further to 3.13 lbs./unit allowing production to increase to 147,429 units, reducing costs associated with styrene loss.

7.2 Did the flexible permit allow you (the source) to better plan your operations (e.g., longer planning horizon)? If so, how? Please give examples of activities that could be planned better with a flexible permit, with details as to how typical permits do not allow similar planning.

The flexible permit has enabled Lasco to shorten significantly the time it needs to respond to a change in market demand or the emergence of a process efficiency improvement opportunity. Prior to the flexible permit, case-by-case construction permitting added a minimum of six months (through a combination of the time required to obtain construction approval and Lasco's restriction on expending project funds prior to obtain permits) to Lasco's time frame for responding to operational change requirements. This meant that Lasco had to anticipate change requirements substantially in advance of their actual emergence if they were to achieve a timely response. The flexible permit has, in effect, reduced Lasco's need to predict accurately future market demand requirements, allowing Lasco to initiate operational changes when better and more information is available while making the needed changes in a timely manner.

7.3 What P2 activities did you undertake during the term of the flexible permit?

7.3.a Which P2 activities, if any, would you have performed even without the flexible permit?

7.3.b Did having the flexible permit change the timing or extent of your P2 efforts?

7.3.c What emissions reductions were achieved as a result?

7.3.d How much environmental benefit do you perceive in P2 provisions?

7.3.e Have P2 provisions helped enhance permit flexibility and/or efficiency?

With the help of OAPCA and EPA experts, Lasco initially wrote a P2 program, as required by the permit to access the flexibility provisions. Lasco instituted a "P2 Task Force" at the Yelm facility in response to the P2 Program permit requirement. The Task Force has taken a detailed look at the entire facility, and has found ways to eliminate emissions. Lasco stated that its employees are now more cognizant of how source emissions affect the community. The P2 program provided the incentive for Lasco to introduce P2 efforts at a rapid rate.

Lasco stated that the flexibility provisions allowed them to test and undergo changes that could or did result in pollution prevention per unit produced, and the provisions allowed them this flexibility without having to wait for conventional permit approval processes. This substantially increased the likelihood that Lasco would actually research and implement such changes, and therefore increased the likelihood of improved emissions performance. Lasco representatives indicated that the permit's P2 Program requirements created a formal mechanism by which they could test and implement pollution preventing changes, and also represented a valuable means for obtaining "buy-off" from Lasco Corporate on specific changes desired at the Yelm facility. In this way, Lasco stated that the P2 provisions helped enhance emissions performance.

Just prior to permit implementation Lasco, in response to production constraints imposed by the new emissions cap and with the understanding that their emission factor could be updated in a streamlined fashion, implemented a series of P2 initiatives including: lowering the styrene monomer content in the resin from 42 percent to 30 percent; improving worker training to reduce overspray; optimizing gun setup to reduce spray atomization; and improving raw material utilization to reduce waste to reduce the styrene emissions rate.

Since the time of the 1997 emission factor update, Lasco has undertaken the following additional P2 projects:

- Reducing styrene content of fugitive emissions by installing fans, blowers, lids, improved containers, holding tanks, dust collection methods, and spray booths;
- Improving recycling methods;
- Adding new spray gun technology;

- Implementing putty gun systems; and
- Installing a spray booth dedicated to colored units.

Lasco reported that these efforts have resulted in reductions in emissions per unit, utility costs, material costs, as well as in improved product quality. A 1997 stack test indicated that P2 initiatives at Lasco had produced a 14 percent decrease in styrene emissions per unit output reducing VOC emissions from 4.60 to 3.95 lbs./unit. Lasco representatives reported that further P2 efforts during 1998, 1999, 2000, and 2001 have reduced VOC emissions per unit to 3.13 lbs./unit.

Lasco did indicate that, given the high relative cost of styrene as a process input material, the company, irrespective of flexible permit conditions, continually focuses on making styrene reduction and utilization improvements. However, Lasco indicated the advance-approved modifications and emission factor made could have been, at minimum, delayed until title V permit renewal consistent with the company's traditional approach to undertaking operational changes. Lasco further indicated that their 249 tons/year cap created a strong P2 and emissions reduction incentive, particularly in light of the fact that the cap created a production constraint.

7.4 How useful is the annual P2 report?

7.4.a How useful was it to have the source track P2 activities and their results?

Lasco stated that the P2 report and tracking activities represented a very useful management tool for the facility and the company as a whole. OAPCA indicated that there has been little or no public interest in the report.

7.5 Describe the type and amount of emissions reductions made to comply specifically with emissions caps/PALs (e.g., when you added or expanded units, or increased use of units, how did you ensure that emissions would stay below the PAL or emissions cap?).

7.5a Did your emissions per unit of production (e.g., lbs/widget or lbs/mmBTU) go down, stay the same or go up during the term of the flexible permit?

7.5.b In the absence of a PAL or emissions cap, please explain how you would have accommodated those same expansions or increases in use.

- **Would emissions have differed?**
- **Would you have been able to net out of NSR/PSD review?**
- **Would you still have triggered Title V permit modification tracks?**
- **Would you not have made the change?**

Lasco was able to ensure facility emissions would remain below the PTE limit through daily monitoring and reporting of material usage. Lasco representatives stated that this process ensures that they know how many pounds of emissions are generated each day.

Prior to the beginning of the permit term, Lasco voluntarily reduced emissions approximately 30 percent to become a synthetic minor source for PSD purposes. Table 7.5 presents information on VOC emissions per unit during the title V permit term. From 1997 to 2001, VOC emissions per unit of production at Lasco decreased approximately 20 percent from 3.95 lbs./unit to 3.13 lbs./unit.

Table 7.5 **Annual Per Unit VOC Emissions Data**

	1997	1998	1999	2000	2001
Units	126,045	120,180	130,967	132,548	147,429
Emissions	248.6 tons	244.5 tons	240.6 tons	227.4 tons	230.7 tons

Emissions/ unit	3.95 lbs./unit	4.07 lbs./unit	3.67 lbs./unit	3.43 lbs./unit	3.13 lbs./unit

7.6 Did the timing and/or design of the PAL influence the timing of additional control equipment and/or pollution prevention? If so, how and why?

Lasco's relatively small margin of compliance under the VOC PTE cap of 249 tons/year has led Lasco to continually seek options for reducing emissions to accommodate increased production needs under the cap. Lasco representatives indicated that this has caused the facility to explore and implement P2 measures during the flexible permit term. They also indicated that the addition of a regenerative thermal oxidizer for VOC emissions control in April 2000 directly related to the facility's desire to create room under the emissions cap to expand production.

7.7 Do you believe any of the flexible approaches are transferable to other jurisdictions/sources? If so, which ones? For what sources? Why are these approaches transferable?

Lasco representatives stated that they believe all of Lasco's plants across the country could utilize and benefit from the type of flexible permit used by the Yelm facility. Lasco has nine plants, five of which currently use incineration to control emissions. Lasco representatives stated that they particularly favor permits that enable the source to make changes that enhance competitiveness and the ability to grow without compromising environmental outcomes, secured by the emissions caps. However, Lasco representatives also stated that they believe other states are currently reluctant to take the "flexibility leap" (and issue flexible permits) at least until they have issued their initial set of title V permits, particularly in the absence of supportive EPA guidance.

OAPCA representatives indicated that they plan to wait until flexible permits become more routine before they write another flexible permit (see section 1.18 for additional discussion).

7.8 Compare a conventional permitting approach to that taken under the flexible permits in terms of:

7.8.a Environmental performance, including emissions trends, emissions increases/reductions, emissions gaps between actual and allowable emissions, and other notable environmental results;

7.8.b Overall development effort and ongoing maintenance costs (what were/ have been the investments of both the permitting authority and the source?)

- **Which type of permit has more up-front costs (uses more resources)?**
- **What is the difference in up-front transaction costs?**
- **Which type of permit has fewer implementation costs?**
- **What is the difference in the implementation costs?**

7.8.c Number of permit actions/modifications required, as well as associated transaction costs or costs avoided (e.g., source reductions in opportunity cost, permitting authority value added for advance notice, of MRR, control devices, etc.)

OAPCA representatives indicated that there is another FRP source under OAPCA's jurisdiction, which they were able to compare to Lasco's flexible permit implementation:

(1) *Environmental performance*: Lasco recently installed a thermal oxidizer to enable increased production under the PTE cap. The other FRP facility does not have an oxidizer, so the amount of styrene emissions in pounds per pound of resin used is considerably less at the Lasco facility. Also, the other facility does not have a P2 program to help identify and guide P2 reductions.

(2) *Costs*: OAPCA indicated that the P2 and flexibility conditions in the Lasco permit do incur

more permit maintenance workload for the permitting authority. Additional workload was estimated by OAPCA to be 18 hours per year, on average. OAPCA indicated that both Lasco and the other FRP source each incurred one title V permit revision, so there was no difference between the two sources in this respect. OAPCA did indicate, however, that inspection of the Lasco facility was slightly more time consuming, given the additional flexibility and P2 provisions in the permit. The added time required to develop flexible permit provisions, however, is offset when advance-approved changes are utilized in lieu of conventional minor NSR, as described in section 7.1.

Lasco indicated that while their other facilities under conventional permits may have lower regulatory costs (for the company) in terms of permit development, the flexible permit in Yelm results in lower operational costs and greater overall profit. In other words, the difference in costs comes primarily from the permit development process, and the costs of engaging in pollution preventing changes, if this is not part of the company's standard operating procedure.

8. OTHER ISSUES

Future Flexible Permit Development

8.1 Do you anticipate any changes in the next version of the flexible permit?

8.1.a If so, what changes would you request/make (e.g., additions and subtractions) and why?

8.1.b Do you believe the existing regulations already provide for such changes? If so, how? If not, why not?

OAPCA representatives indicated that they are pleased with and supportive of the Lasco flexible title V permit. OAPCA representatives indicated that since the Lasco title V permit was issued, they have improved upon the basic design of their title V permits, and these improvements will be incorporated into the next Lasco permit. OAPCA representatives indicated that they may work to simplify the P2 measurement provisions in future versions of the Lasco permit. Otherwise, they have not yet considered any other changes to the permit. Lasco representatives indicated that they have not yet identified any changes that they would like to see in the next version of their flexible permit.

8.2 Do you believe there be any value added by EPA's finalizing guidance in this area? If not, why not? If so, how?

OAPCA representatives indicated that final guidance related to flexible permitting would be helpful, as most permitting authorities will not have the benefit of the intensive team-oriented process provided to OAPCA and Lasco under EPA's Pollution Prevention in Permitting Program (P4). However, OAPCA representatives also stated that guidance should not be overly prescriptive (e.g., "equipment or size-specific"). OAPCA stated that, instead, guidance enable sources to be judged by overall performance.

8.3 Will you have any flexible permit writing/implementation training needs?

OAPCA representatives indicated that they held a day-long title V permit workshop in Fall of 2000 for sources in their jurisdiction, where flexible permit techniques were briefly discussed. They indicated that EPA materials would be useful, and they could be distributed at future training sessions. OAPCA representatives also indicated that OAPCA staff would potentially be interested to participate in EPA training on flexible permit writing.

8.4 Do you have recommendations for web-site materials?

OAPCA representatives indicated that it would be beneficial to have access to the permit monitoring requirements for other major FRP facilities, and to know which monitoring approaches are accepted by EPA. They also indicated that sharing flexible permit condition language that is accepted by EPA

would be beneficial and save time during the permit development process. Examples of approved flexible permits for various source types (e.g., FRP manufacturer, lumber mill) would also be useful, and they could be made available on EPA's web site.

8.5 What else could EPA do to limit the up-front design costs?

OAPCA representatives stated that EPA could limit the up-front design costs associated with flexible permit development by providing standard examples of permit language that is accepted by EPA and is appropriate for use in permits addressing the following areas.

- FRP monitoring conditions for determining compliance with an emissions cap;
- Emission factor conditions establishing the protocol for getting new emission factors approved for use in determining compliance with the permit;
- P2 monitoring conditions; and
- Condition allowing for advance-approved modifications.

8.6 How do you predict your up-front transaction costs would have compared if you had undertaken the same flexible permit for the same source with EPA guidance and the mentioned support structure already in place?

OAPCA representatives stated that they believe that the flexible permit process would have gone significantly faster had EPA guidance been available.

8.7 How much time do you believe must pass before the reduced costs of overseeing the flexible permit would compensate for the higher up-front design cost?

OAPCA representatives indicated that this is a difficult comparison, but that they believe the initial investment in permit development has been or will be offset. They indicated that once the flexibility provisions have been developed for a source, the process of incorporating the provisions into subsequent permits for the source will be minimal. They added that it is difficult to generalize from the initial Lasco flexible permit, since it was the first title V permit developed by OAPCA and it required greater than normal public outreach activities due to the community odor complaints associated with the facility.

Source Screening Criteria

8.8 What criteria should be used to reject inappropriate flexibility proposals from sources (e.g., relevance of compliance history, P2 commitment, potential for environmental benefit, sustainable compliance over the long term)?

OAPCA representatives indicated that flexibility provisions might be best reserved for sources that are able to provide "hard numbers" regarding emissions and emissions quantification. OAPCA also stated it might be appropriate to require enhanced monitoring from sources requesting flexibility that have experienced compliance problems in the past. OAPCA further indicated that compliance history, in and of itself, could be used as a criteria for accepting or rejecting a flexibility proposal. OAPCA viewed compliance history as a useful indicator of both the technical competence and corporate commitment important to effective derivation and implementation of flexibility provisions. See section 1.18 for additional discussion of characteristics to determine appropriate source candidates for flexible permit techniques.

OAPCA representatives indicated that certain flexibility provisions, such as the advance-approved emission factor modifications and replicable testing procedures, should be incorporated into all operating permits when found useful to a source.

Public Outreach

8.9 How can these permits be better communicated to the public (e.g., consistency with air program goals; potential improvements to monitoring, recordkeeping, reporting, etc.)?

OAPCA representatives believe that providing the long-term view of potential source changes up-

front to the public presents a more meaningful opportunity for the public to understand what to expect from the source during the permit term, than would be the case under a case-by-case conventional minor NSR notice of construction process. OAPCA also indicated that flexible permits, particularly for sources with a history of public scrutiny, should have opportunities for public comment beyond what might typically be required under a conventional permitting process. One specific recommendation was to hold public hearings after normal work hours, at a time when there was a higher likelihood of community attendance. OAPCA also believes that it is important to assure the public that flexible permits do not create "loopholes" for sources, but rather alternative administrative methods of complying with all applicable requirements.

8.10 What fact sheets would be useful to the permitting authority, source and the public?

OAPCA representatives indicated that example permit language (discussed in section 8.5) would be useful in the form of a fact sheet. Also, they stated that a fact sheet directed to the public explaining the title V permitting process and the difference between NSR and title V would be helpful.

8.11 When and how should up-front meetings (i.e., before the public comment period) be used to address potential public concerns? How should concerns from those meetings be addressed?

OAPCA representatives indicated that up-front meetings between the source and the permitting authority should be used to "brainstorm" and identify anticipated community comments, concerns, and questions that may arise during subsequent public meetings. This can ensure that the source and permitting authority are prepared to address potential public concerns and questions, and serve to inform the overall permit development process, resulting in a better designed permit.