

2004 The Dalles Odor Workgroup Status Report

Introduction

In the summer of 2002, the Department of Environmental Quality (DEQ), Kerr McGee Chemical (KMC), and concerned citizens formed a workgroup to address odors emanating from the KMC tie treatment plant. The workgroup met on several occasions and coordinated four odor surveys. This report summarizes the results of the surveys and the workgroup's observations.

Background

The tie treatment plant has been operating in The Dalles since 1922. DEQ issued the first air quality permit for the plant in 1977. KMC has operated the plant since 1987. Over the years, there have been numerous complaints about odors. When KMC took over the operations, they made several improvements at the plant that reduced emissions and the number of complaints decreased dramatically. However, during the permit renewal process in 1996 and 2002, DEQ received numerous comments about odors and other issues. The permit was issued as proposed, but the DEQ committed to work with the concerned citizens and KMC to try and resolve the issues.

A workgroup was formed consisting of concerned citizens, DEQ, and KMC. The workgroup met for the first time in July 2002. Many concerns were brought to the table and discussed at the first meeting. However, due to limited resources many of the things people wanted done (e.g., health effects study, ambient monitoring program, immediate installation of capture and control systems, etc.) were beyond the scope of the work group. Instead, the workgroup decided to concentrate on collecting information that would be useful to the plant for identifying the root cause of the odors. With this information, the plant could possibly make changes to their operations or identify areas that need additional control to abate the odors. To this end, the workgroup agreed to coordinate a series of odor surveys.

Odor Surveys

An odor survey form was developed by the workgroup that would allow the observer to easily record the following information for each odor event:

- Date
- Time
- Odor strength (noticeable, strong, overwhelming)
- Personal impact (no impact, moderate impact, strong impact)
- Time duration (brief, extended, persistent)
- Wind speed (no wind, light breeze, strong)
- Wind direction (East, West)
- Sky conditions (clear, partially cloudy, fog, rain)
- Temperature (cold, cool, warm, and hot)

The form also included space for additional comments.

Once the form was developed, a letter was mailed to everyone that attended the public hearing or provided written comments. The letter announced the first survey period and invited participation. In addition to the letter, a flyer was distributed to the homes in the 4 block area above the plant. The letter and flyer invited interested persons to attend a survey kick-off meeting, which was also announced in an article that ran in The Dalles Chronicle. DEQ also ran display ads in the newspaper after each survey period, briefly summarizing the survey and announcing the next survey.

Since seasonal variations can affect plant fugitive emissions as well as trap emissions during inversions, it was agreed that the surveys should be conducted for a minimum of one month during each season. To this date, five odor surveys have been completed during 1) November 2002, 2) February 2003, 3) June/July/August 2003, 4) October 2003, and 5) January/February 2004. Provided below is a summary of the odor surveys:

Year	Month	Surveys returned	Total number of odor observations	Observations categorized as overwhelming	
				Number	% of total
2002	November	6	22	4	18
2003	February	8	12	0	0
2003	June	6	13	1	8
2003	July	7	34	14	41
2003	August*	4	12	4	33
2003	October	5	32	9	28
2004	January**	7	9	2	22
2004	February	7	10	2	20

*Through 8/21/03

**Beginning about 1/14/04

Observations

- Considering the amount of outreach, not very many people have participated in the odor surveys. This is a little bit surprising considering the effort made to notify people that live above the plant where the greatest impacts were expected to occur. There are probably lots of reasons for the lack of participation, but some of the reasons that the workgroup has suggested are:
 - General acceptance of the odors
 - Odors are less frequent and not as intense as in the past
 - It is difficult to keep records of the odors.

- The surveys are not anonymous
- Concerned that the plant will shut down
- Complaining won't change anything
- People had difficulty filling out the form because it was a rather tedious exercise.
- The observations tended to occur more frequently in the morning and evenings when people were coming or going from their homes.
- There was not much agreement between observers. However, this is probably due more to individual schedules than anything else.
- It is difficult to correlate odors with any particular plant activity because the weather has a significant impact on when odors are detected.
- KMC recorded ambient temperatures and wind conditions for each odor observation, as well as production data (e.g., when charges were pulled from the retorts). At first it appeared that there may be some correlation between odors and the number of charges pulled in a relatively short time period (e.g, # of charges on the drip pad).
- The water spray system over the retort door seems to reduce odors to some degree.
- The water spray system on the drip pad does not seem to be very effective.
- There is no apparent pattern to the odors.
- Several of the observations occurred when the plant was not operating (e.g. Sunday morning) suggesting that the odors may come from other sources than the retort doors and drip pad.
- The strongest odors occur when there is only a light breeze and moderate to warm temperatures.
- Many felt that, overall, the odors were less frequent and less intense than in the past. However, there were still some rather intense odor events.
- Members of the workgroup also noted that while not many people are participating in the surveys, they get lots of comments about odors; especially when passing the plant on the freeway or down at the River Trail Park.
- EPA will be developing an Area Source MACT standard that may address odors, but it could be 10 years before the standard is promulgated and it may only cover arsenic.

Recommendations

1. Continue odor surveys
 - A survey is scheduled for May 2004.
 - Continue to meet to discuss surveys and provide feedback to KM.
2. The department recognizes that KM has made several improvements at the plant that have significantly reduced environmental impacts and possibly reduced the frequency and intensity of odors. However, the odor surveys indicate that odors are still present. KM has committed to form a Quality Action Team (QAT) comprised of 2 to 3 plant employees. This QAT will be charged with identifying areas of potential odors and seeking solutions or modifications that would minimize or eliminate odors related to plant operations. The QAT would be charged with investigating the following areas:
 - Retort doors

- Drip Pad Area
- Treated Tie Inventory
- Other areas that may produce odors

The QAT will meet with or provide input through the plant manager to the workgroup during the scheduled meetings.

KM met with Oregon DEQ on March 12 to discuss the workgroup and ways to achieve continuous improvement. KM is committed to work with the community and DEQ on seeking solutions to minimize odors and to continue to be a good neighbor and environmental steward.