



# \*Draft-Air Quality Management Plan

Judge Orr Ready Mix Plant

\*Conditions and standards in this plan will be updated to comply with requirements in final APEN and county permits before implementation.

November 19, 2018

## Revision History

Revision No.	Description of Change	Effective Date	Updated By

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# Glossary of Abbreviations

Table 1: Glossary of Abbreviations

Acronym	Definition
AQMP	Air Quality Management Plan
PLS	Pete Lien & Sons, Inc.
CDPHE	Colorado Department of Public Health & Environment
APEN	Air Pollutant Emissions Notice

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# 1. Background

## 1.1 Introduction

This AQMP forms a summary of environmental controls within the future APEN:

- Project: Judge Orr Ready Mix Plant
- Construction location: Judge Orr Rd. & Stapleton Dr.  
Peyton, CO 80831
- Construction start date: TBD
- Construction finish date: TBD

The AQMP addresses the potential air quality impacts and associated controls with operation and maintenance of a ready mix plant.

## 1.2 Purpose and Scope

The purpose of this AQMP is to facilitate the avoidance, remediation and mitigation of any adverse effects of discharges of particulate or other regulated emissions generated from the ready mix plant operation as provided in the future APEN.

The AQMP identifies the following:

- Sources of dust that may be created during operation of the plant.
- Dust mitigation and prevention methods
- Monitoring methods
- Methods for managing complaints regarding discharges into air and keeping records related to compliance

The AQMP will be updated, with the necessary approvals, throughout the course of construction and operation to reflect changes associated with techniques or to the natural environment. Any relevant revisions to the AQMP will be reviewed by management.

## 1.3 Plant Description

The Judge Orr Ready Mix Plant is a central mix plant with an attached batch office, QC building and washdown platform. The plant consists of sand and aggregate transfer system and weigh hopper loading and mixer loading system. Material and aggregate delivery and storage will occur with the transfer via along the ready mix plant.

A shop with a returned concrete and block storage area is along the ready mix plant. Precast products are produced and stored at this location.

On-site fueling and washout takes place within secondary containment.

## 1.4 Location of Plan

This plan will be maintained on-site by Management and electronic copies will be maintained with the Environmental Department.

## 1.5 Air Quality Environmental Permit

Formal APEN conditions will be adopted into this plan upon issuance from the CDPHE.

## 1.6 APEN Conditions

The objective of the AQMP is to ensure that operations and maintenance is undertaken in a manner that complies with regulatory requirements. The regulations all have a common aim, which is to avoid, remedy, or mitigate adverse effects on the environment, including effects on the health of people and ecosystems and amenity effects.

In order for the operation of the Judge Orr Ready Mix plant to comply with all statutory requirements, the discharge of any applicable dust, odour, or hazardous air pollutants from this site must comply with the following:

APEN No.: TBD

Conditions for air quality are addressed in the AQMP in the following sections:

**Table 1:** APEN Conditions

APEN Section	Condition	Relevant Section of the AQMP

## 2. Environmental Management

### 2.1 Environmental Impacts Summary

The potential environmental inputs of the construction activities include:

- Dust
- Odour
- Hazardous air pollutants (HAPs)

### 2.2 Activity Description

Below is a list of activities that have a potential to generate particulate matter.

**Table 2:** Construction activities with the potential to generate discharges into the air.

Temporary / Continuous	Discharge	Activity
Temporary	Particulate	Material Transfers
Temporary	Particulate	Mixing Operations
Continuous	Particulate	Vehicle Traffic
Temporary	HAPS/Particulate	Water Heater

### 2.3 Receiving Environment

The Plant Supervisor will ensure that all personnel are aware of APEN conditions and neighbours when carrying out activities that have the potential to generate dust, odour and hazardous air pollutants.

## 3. Implementation and Operation

### 3.1 Roles and Responsibility

All personnel working at the Judge Orr Ready Mix Plant Operation have responsibility for following the requirements of the APEN and the AQMP. Specific responsibilities are as follows:

**Division Manager:** Responsible for overall management of plant and implementation of AQMP and APEN conditions, including annual review and/or revisions to AQMP.

**Plant Manager:** Responsible for day to day operation of plant and implementation of AQMP and APEN Conditions.

**Site Personnel:** Responsible for specific tasks and adherence to AQMP and APEN conditions.

**Environmental Coordinator:** Responsible for coordinating APEN permitting actions, AQMP reviews and revisions, and guidance where required with implementation and compliance with the AQMP and APEN conditions.

**Manager of Environmental and Safety Affairs:** Responsible for oversight of external communications, coordinating APEN permitting actions, AQMP reviews and revisions, and guidance where required with implementation and compliance with the AQMP and APEN conditions.

### 3.2 Training

Environmental training for all staff will be undertaken as part of this AQMP and APEN reviews. Details of training are included in the site specific training program, which includes onboarding, mentorship, environmental inspections, etc. The environmental training will include the following information specific to this Plan:

- Information about the activities and stages of operation that may cause dust and odour impacts within the plant area and property;
- APEN conditions;
- Complaints management procedures;
- Dust /odour management procedures; and
- Description of dust odour/air pollutant monitoring for the plant

### 3.3 Operating and Management Procedures

#### 3.3.1 Factors Influencing Dust Generation

There are five primary factors which influence the potential for dust to be generated from the site.

These are:

- **Wind speed across the surface.** Dust emissions from exposed surfaces generally increase with increasing wind speed. However dust pick up by winds is only significant at wind speeds above 5m/s (11 knots or a Beaufort scale number of 3 – see Appendix G.A of this Plan). Above wind speeds of 10m/s (20 knots) dust pick up increases rapidly.
- **Moisture content of the material.** Moisture binds particles together, preventing them from being disturbed by winds or vehicle movements. Similarly, vegetated surfaces are less prone to wind erosion than bare surfaces.
- **The area of exposed surface.** The larger the area of exposed surfaces the more potential there will be for dust emission.
- **The percentage of fine particles in the material on the surface.** The smaller the particle size of material on an exposed surface the more easily the particles are able to be picked up and entrained in the wind.
- **Disturbances such as traffic and loading and unloading of materials.** Vehicles travelling over exposed surfaces tend to pulverise any surface particles. Particles are displaced from rolling wheels and the surface. Dust is also sucked into the turbulent wake created behind moving vehicles.

### 3.3.2 Dust Sources and Controls

The dust prevention methods summarised in Table 3 below will be employed:

**Table 3:** Sources of dust and recommended controls to be employed.

Source of Dust	Control
<b>Stockpiles (including material placement and removal)</b>	<ul style="list-style-type: none"> <li>• Limit the height and slope of stockpiles to reduce wind entrainment.</li> <li>• Orientate stockpiles to maximise wind sheltering as much as possible.</li> <li>• Maximise shelter from winds as far as practicable.</li> <li>• Apply wet suppression to stockpiles (as needed) and during transfer to storage bins or stockpiles.</li> </ul>
<b>Unpaved surfaces such as roads and storage areas</b>	<ul style="list-style-type: none"> <li>• Limit the amount of exposed surfaces as much as possible.</li> <li>• Retain as much vegetation as possible.</li> <li>• Keep unpaved roads and exposed surfaces damp.</li> <li>• Cover surfaces with coarse materials where practicable.</li> <li>• Compact all unconsolidated surfaces where practicable.</li> <li>• Regularly maintain roads by grading and the laying of fresh gravel.</li> </ul>

	<ul style="list-style-type: none"> <li>Stabilise cleared areas not required for construction or operations, access or for parking, if liable to cause excessive dust during windy conditions.</li> </ul>
<b>Paved surfaces</b>	<ul style="list-style-type: none"> <li>Regular removal of dust through washing or vacuum sweeping.</li> </ul>
<b>Vehicles</b>	<ul style="list-style-type: none"> <li>Limit vehicle speeds on unsealed surfaces to 15 mph.</li> <li>Limit load sizes to avoid spillages.</li> <li>Minimise travel distances through appropriate site layout and design.</li> <li>Minimise mud and dust track out from unsealed areas by establishing stabilised entranceways at all ingress and egress points to sealed roads.</li> <li>Ensure proper washout within designated secondary containment areas.</li> </ul>
<b>Material Transfers</b>	<ul style="list-style-type: none"> <li>Limit drop heights.</li> <li>Ensure quick recovery and placement of material to designated stockpiles or storage bins.</li> </ul>
<b>Plant Operation</b>	<ul style="list-style-type: none"> <li>Ensure sufficient water is available on site.</li> <li>Ensure baghouses are operated maintained per manufacturer's recommendations at all times.</li> <li>Keep annual production under the limit as allowed by the APEN.</li> <li>Take account of daily forecast wind speed, wind direction and soil conditions before commencing an operation that has a high dust potential.</li> <li>Minimise the area of surfaces covered with fine materials.</li> </ul>

### 3.3.3 Complaints

The procedure for managing complaints associated with the Judge Orr Ready Mix Project is detailed as follows.

The Division Manager or Manager of Environmental and Safety Affairs has the responsibility to respond to and follow up all complaints regarding dust or any other environmental air release, and furthermore to ensure that suitable trained personnel are available to respond to complaints at all times.

#### **Actions to be taken as soon as possible by Plant Manager/Supervisor**

- Provide notification to Division Manager.
- Note the time and date of the complaint/s and (unless the complainant refuses to provide them) the identity and contact details of the complainant. Ask the complainant to describe the discharge: is it constant or intermittent, how long has it been going on for, is it worse at any time of day, does it come from an identifiable source. Wind direction and strength and weather conditions are to be recorded. Note if the complaint has been referred to the any Regulatory Authority.

- As soon as possible after receipt of a complaint, undertake a site inspection. Note all **dust or odour** producing activities taking place and the mitigation methods being used. If the complaint was related to an event in the recent past, if possible note any **dust or odour** producing activities that were underway at that time. Initiate any remedial action necessary.
- As soon as possible (within 2 hours, where practicable), visit the area (if possible) from where the complaint originated to ascertain if **dust or odour** is still a problem.
- If it becomes apparent that there may be a source of **dust or odour** other than the Judge Orr Ready Mix Plant causing the complaint, it is important to verify this. Document the source of emissions.
- As soon as possible after initial investigations have been completed, contact the complainant to explain any problems found and remedial actions taken. Initiate a damage assessment if required.
- If necessary update any relevant procedures to prevent any recurrence of problems and record any remedial action taken.

#### Follow-up actions:

- The Division Manager will advise the Manager of Environmental and Safety Affairs and the Regulatory Authority (if applicable) within 24 hours that a complaint has been received, what the findings of the investigation were and any remedial action taken.
- Advise site personnel as soon as is practicable that a complaint has been received, what the findings of the investigation were and any remedial action taken.

### 3.4 Emergency Contacts and Response

**Table 4:** Internal environmental emergency contact details

Title	Name	Group	Phone	Email
Manager of Environmental & Safety Affairs	Danielle Wiebers	Environmental	O: (605) 939-2686 C: (605) 209-2686	dwiebers@petelien.com
Environmental Coordinator	Clinton Beck, P.E.	Environmental	O: (605) 939-2690 C: (605) 519-1213	cbeck@petelien.com
Division Manager	Randy Wochy	Operations	O: (719) 392-0559 C: (719) 641-9218	rwochy@petelien.com

**Table 5:** External environmental emergency contact details

Role	Name	Agency/Division	Phone	Email
State Regulatory	Air Pollution Control Division	CDPHE	(303) 692-3100	Cdphe.commentsapcd@state.co.us
County Regulatory	Air Quality Division	El Paso County	(719) 578-3199	healthinfo@elpasoco.com

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## 4. Monitoring and Review

### 4.1 Compliance Monitoring

#### 4.1.1 Trigger Levels

Visible Emissions shall not exceed 20% opacity. No off-property transport of visible emissions.

#### 4.1.2 Visual Dust Monitoring

Table 6 outlines the dust monitoring program that is to be implemented. The implementation of this program will be the responsibility of the Division Manager in conjunction with site personnel.

**Table 6:** Dust Monitoring Program

Monitoring activities	Frequency
Check weather forecasts for strong winds and rainfall to plan appropriate dust management response.	Daily
Conduct workplace exams, which will include but not limited to, dusty conditions, equipment conditions, plant operation, and housekeeping.	Daily
Keep monthly production records to verify compliance with annual production limit.	Monthly
Inspect baghouses for maintenance and effective operation.	Quarterly
Maintain records of startup, shutdown, and malfunction	On Occurrence

#### 4.1.3 Odour Monitoring

Should odorous material be encountered, odour scouting around the site boundary adjacent to sensitive receptors should be instigated during the following periods:

- When potentially contaminated land is excavated
- When odour complaints have been received

#### 4.1.4 Monitoring of Hazardous Air Pollutants

A monthly log of water heater usage and fuel usage will be maintained. Maintenance and inspection of water heater as required by manufacture's recommendations and air permit will be followed.

### 4.1.5 Reporting

Reporting will follow APEN conditions where applicable. All hard copies of records, logs, and monitoring data will be maintained on-site with electronic copies or reports maintained by the Environmental Department.

The Environmental Coordinator will provide the Regulatory Authority with a copy of the updated AQMP if any significant revisions of the CAQMP are made.

A revised APEN will be filed according to Reg. 3, Part A.II.C where applicable.

## 4.2 Audits

The AQMP will be reviewed and updated, with the necessary approval, throughout the course of the Judge Orr Ready Mix Plant operation that will reflect changes in construction techniques, design, or the natural environment. Approval from the Environmental Coordinator and Division Manager will be required for any relevant revisions of a material nature for the AQMP. The review will take into consideration:

- Any significant changes to construction activities or methods;
- Key changes to roles and responsibilities within the operation;
- Changes in industry best practise standards or recommended dust controls;
- Changes in legal or other requirements (environmental legal requirements, consent conditions, and relevant policies, plans, standards, specifications and guidelines);
- Results of inspection and maintenance programs, logs of incidents, corrective actions, internal or external assessments; and
- The outcome of investigations into discharges of dust/odour/air pollutants

Reasons for making changes to the AQMP will be documented. A copy of the original AQMP document and subsequent versions will be kept for the plant records, and marked as obsolete. Each new/updated version of the AQMP documentation will be issued with a version number and date to eliminate obsolete AQMP documentation being used.

## 4.3 Corrective management

Corrective actions will be documented with the inspection, audit, or maintenance workorder for which the action is generated. The Plant Manager/Supervisor is responsible for ensuring corrective actions are completed in a timely manner with documentation of completion.

## 4.4 Management Review

This plan will be reviewed for accuracy and effectiveness on an annual basis by the Site Manager. Any revisions will be communicated with the Environmental Coordinator, which will incorporate these into the plan for Division Manager review and approval.

## 5. References

CDPHE APEN: TBD

CDPHE Air Quality Division Website:

<https://www.colorado.gov/pacific/cdphe/categories/services-and-information/environment/air-quality/air-emissions-business-and-industry>

El Paso County Air Quality Division Website:

<https://www.elpasocountyhealth.org/services/air-quality>

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