

Statement of Basis

**Permit to Construct No. P-2008.0153
Project No. 60879**

**HK Contractors, Inc.
140 Hot Plant
Idaho Falls, Idaho**

Facility ID No. 777-00442

Final

**September 2, 2011
Kelli Wetzel *KW*
Permit Writer**

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE.....	3
FACILITY INFORMATION.....	5
Description.....	5
Permitting History.....	5
Application Scope.....	5
Application Chronology.....	5
TECHNICAL ANALYSIS.....	6
Emissions Units and Control Devices.....	6
Emissions Inventories.....	6
Ambient Air Quality Impact Analyses.....	8
REGULATORY ANALYSIS.....	9
Attainment Designation (40 CFR 81.313).....	9
Permit to Construct (IDAPA 58.01.01.201).....	9
Tier II Operating Permit (IDAPA 58.01.01.401).....	9
Registration Procedures & Requirements for Portable Equipment (IDAPA 58.01.01.500).....	9
General Restrictions on Odors (IDAPA 58.01.01.776).....	9
Visible Emissions (IDAPA 58.01.01.625).....	9
Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70).....	9
PSD Classification (40 CFR 52.21).....	10
NSPS Applicability (40 CFR 60).....	10
NESHAP Applicability (40 CFR 61).....	10
MACT Applicability (40 CFR 63).....	10
Permit Conditions Review.....	10
PUBLIC REVIEW.....	17
Public Comment Opportunity.....	17
APPENDIX A – EMISSIONS FROM PETROLEUM CONTAMINATED SOIL	
APPENDIX B – FACILITY DRAFT COMMENTS	
APPENDIX C – PROCESSING FEE	

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal units
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gph	gallons per hour
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
Rules	Rules for the Control of Air Pollution in Idaho

scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
TAP	toxic air pollutants
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

The H K Contractors, Inc. 140 Hot Plant is a hot-mix asphalt (HMA) plant that consists of a drum mix dryer, an asphalt tank heater, a baghouse, asphalt oil storage tanks, fuel storage tanks, and materials transfer equipment. Materials transfer equipment may include front end loaders, storage bins, conveyors, stock piles, and haul trucks.

Stockpiled aggregate is transferred to feed bins. Aggregate may consist of up to 50% recycled asphalt pavement (RAP). Aggregate is dispensed from the bins onto feeder conveyors, which transfer the aggregate to the drum mix dryer. Aggregate travels through the drum-mix dryer and when dried is mixed with liquid asphalt cement. The resulting HMA is conveyed to hot storage bins until it can be loaded into trucks for transport off site or transferred to silos for temporary storage. Electrical power is supplied to the plant from the local power grid.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

February 19, 2009 P-2008.0153, Initial PTC, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is for a minor modification at an existing minor facility.

The applicant has proposed to replace part of the design aggregate with petroleum contaminated soil. The petroleum contaminated soil will be crushed, placed on a designated clay liner, and covered. The contaminated aggregate will then be conveyed into the feed end of the drum mix dryer where the petroleum hydrocarbons are volatilized and partially destroyed by incineration prior to the addition of the hot asphalt cement to produce hot-mix asphalt. Heavier hydrocarbon fractions that are not volatilized are expected to be solidified or encapsulated in the asphalt/aggregate matrix.

Application Chronology

June 13, 2011	DEQ received an application and an application fee.
June 21 – July 6, 2011	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
June 28, 2011	DEQ determined that the application was incomplete.
August 8, 2011	DEQ determined that the application was complete.
August 15, 2011	DEQ made available the draft permit and statement of basis for peer and regional office review.
August 18, 2011	DEQ made available the draft permit and statement of basis for applicant review.
August 19, 2011	DEQ received the permit processing fee.
September 2, 2011	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
Drum Dryer	<u>Hot Mix Asphalt Drum Dryer:</u> Manufacturer: Astec, Inc. Model: RDB-9640 (parallel-flow drum mix) Burner Model: Phoenix Talon PT-100U-G-OH Manufacture Date: 2008 Max. production: 350 T/hr and 1,000,000 T/yr Fuel: natural gas, distillate fuel oil ASTM Grade 1 and Grade 2, reprocessed fuel oil Design Aggregate: Up to 50% RAP, may use petroleum-contaminated soil & aggregate Fuel consumption: 730 gal/hr	<u>Pulse Jet Baghouse</u> Manufacturer: Astec, Inc. Model: RBH-68 Type: Pulse Jet	Exit height: 30 ft Exit diameter: 4.2 ft Exit flow rate: 68,194 acfm Exit temperature: 293 °F
Tank Heater	<u>Asphalt Tank Heater</u> Fuel Types: Natural gas, Distillate fuel oil ASTM Grade 1 and Grade 2, reprocessed fuel oil Maximum Fuel Usage: 20.6 gal/hr	None	Exit height: 12 ft Exit diameter: 1 ft Exit temperature: 300 °F
Fugitives	<u>Materials transfer points</u> (includes fugitives) Aggregate dump to ground, Aggregate dump to conveyor, Aggregate conveyor to elevated storage	Minimized drop heights, water sprays, or equivalent control methods	Fugitive points

Emissions Inventories

An emission inventory was developed for the HMA plant in the previous permitting action. Emissions information can be seen in the Statement of Basis from the previous permit, issued May 7, 2009. The emission inventory is based on emission factors from Section 11.1 of AP-42 (04/04), the sources and emission controls descriptions summarized in Table 1, the fuel types summarized in Table 1, and the following operational limits: 350 T/hr and 1,000,000 T/yr maximum asphalt production.

Emissions estimates were calculated separately for each fuel evaluated for use in the HMA. An emission estimate for each emission source was then developed by selecting the maximum value for each pollutant and each fuel type evaluated for that source, as provided in Table 2. This represents a worst-case approach for conservatively evaluating the maximum potential emissions from each source regardless of which fuel the facility chooses to use.

The data available in AP-42 Section 11.1.1.3 does not discern differences in emissions between parallel-flow and counter-flow designs. As a result, recycled asphalt pavement (RAP) should be able to be processed at ratios up to 50% with little to no observed effect on emissions. This permit allows processing of design aggregate that is comprised of up to 50% RAP.

Emission estimates were calculated separately to determine the maximum amount of petroleum contaminated soil and aggregate that could be remediated while ensuring compliance with the screening emission levels for both non-carcinogenic and carcinogenic TAPs.

The soil and aggregate proposed for remediation is contaminated primarily with gasoline and diesel fuel. Of the hydrocarbons contained in these two fuels, benzene, toluene, ethyl benzene, and xylene (also known as BTEX) are the most toxic and the most strictly regulated when emitted into the air. Of the four pollutants, benzene is the only suspected carcinogen compound.

Gasoline can contain up to 36% BTEX by weight, whereas diesel fuel contains up to only 1% by weight. In addition, gasoline is far more volatile than diesel fuel. Based on these two factors, it is assumed that demonstration of compliance with BTEX in gasoline inherently demonstrates compliance with BTEX in diesel fuel. Because benzene has the lowest screening emission level of the four pollutants, benzene was used to determine the maximum amount of petroleum contaminated soil that could be remediated based on benzene comprising 2% gasoline concentration by weight.

As part of the permit application, HK Contractors chose a limit of 5,000 milligrams of gasoline per kilogram of soil (mg/kg). A typical hydrocarbon destruction efficiency of 50% was used for this HMA plant.

Emission estimates for the petroleum contaminated soil can be found in Appendix A.

Uncontrolled Emissions:

The following table presents the post project uncontrolled emissions for criteria pollutants as submitted by the Applicant and verified by DEQ staff with the previous permitting action.

Table 2 POST PROJECT UNCONTROLLED EMISSIONS FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Point Sources						
Drum Dryer	1800	88.9	84.3	199.3	49.1	11.5
Hot Oil Heater	0.297	12.8	1.8	1.02	0.23	0.068
Total, Point Sources	1800.30	101.70	86.10	200.32	49.33	11.51
Fugitive Sources						
Emissions Unit	PM ₁₀ ^a	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Fugitive Sources						
Loadout & Silo Filling	1.7	0.00	0.00	3.88	6.18	0.00
Total, Fugitive Sources	1.70	0.00	0.00	3.88	6.18	0.00

Post Project Potential to Emit

The following table presents the post project potential to emit for criteria pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff with the previous permitting action. Note that this permitting action does not include a change in PTE for criteria pollutants.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr ^a	T/yr ^b	lb/hr	T/yr								
Point Sources												
Drum Dryer	8.05	11.5	20.3	29	19.25	27.5	45.5	65	11.2	16	3.75	0.0075
Hot Oil Heater	0.0679	0.97	2.92	1.43	0.412	0.59	0.232	0.33	0.0152	0.2	0.22	0.00044
Loadout & Silo Filling	0.388	1.43	0.00	0.00	0.00	0.00	0.885	1.26	1.41	2.0	0	0
Post Project Totals	8.51	13.90	23.22	30.43	19.66	28.09	46.62	66.59	12.63	18.20	3.97	0.01

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
- b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

As demonstrated in Tables 2 and 3, this facility has uncontrolled potential to emit for PM₁₀, CO, and SO₂ emissions greater than the Major Source threshold of 100 T/yr and a controlled potential to emit for all pollutants emissions less than the Major Source threshold of 100 T/yr. Therefore, this facility is designated as a Synthetic Minor facility. As demonstrated in Table 3 the facility's PTE for all criteria pollutants is less than 80% of the Major Source thresholds of 100 T/yr. Therefore, this facility will not be designated as a SM-80 facility.

Non-Carcinogenic TAP Emissions

A summary of the estimated uncontrolled and controlled non-carcinogenic emissions increase of toxic air pollutants (TAP) is provided in the following table. The estimated controlled emissions increases of TAP were below applicable emissions screening levels (EL). Estimated controlled TAP emissions were below the annual major source threshold.

Pre- and post-project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

**Table 4 PRE- AND POST PROJECT NON-CARCINOGENIC TAP EMISSIONS SUMMARY
POTENTIAL TO EMIT**

Non-Carcinogenic Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Chromium	2.3E-04	2.3E-04	0.0000	5.6E-07	No
Ethyl benzene	0	1.9E-03	1.9E-03	29	No
Toluene	0	4.8E-03	4.8E-03	25	No
Xylene	0	6.4E-03	6.4E-03	29	No

Therefore, modeling is not required for any TAPs because the 24-hour average non-carcinogenic screening EL identified in IDAPA 58.01.01.585 was not exceeded.

Carcinogenic TAP Emissions

A summary of the estimated uncontrolled and controlled carcinogenic emissions increase of toxic air pollutants (TAP) is provided in the following table. The estimated controlled emissions increases of TAP were below applicable emissions screening levels (EL). Estimated controlled TAP emissions were below the annual major source threshold.

Pre- and post-project, as well as the change in, carcinogenic TAP emissions are presented in the following table:

Table 5 PRE- AND POST PROJECT CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Carcinogenic Toxic Air Pollutants	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Acetaldehyde	1.48E-01	1.48E-01	0.0000	3.00E-03	No
Arsenic	3.07E-04	3.07E-04	0.0000	1.5E-06	No
Benzene	4.52E-02	4.60E-02	0.0008	8.0E-04	No
Formaldehyde	3.64E-01	3.64E-01	0.0000	5.1E-04	No
Cadmium	2.18E-04	2.18E-04	0.0000	3.7E-06	No
Nickel	3.32E-02	3.32E-02	0.0000	2.7E-05	No
Benzo(a)pyrene	2.02E-06	2.02E-06	0.0000	2.6E-06	No

- a) Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

Therefore, modeling is not required for any TAPs because the annual average carcinogenic screening EL identified in IDAPA 58.01.01.586 was not exceeded.

Ambient Air Quality Impact Analyses

An ambient air quality impact analyses was not performed for this project as there was no change in emission that necessitated the need to model. For further detail regarding ambient modeling performed for this facility, refer to the Statement of Basis from the previous permit, issued May 7, 2009. The permit no. is P-2008.0153.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart I.....Standards of Performance for Hot Mix Asphalt Facilities

§ 60.90 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

§ 60.92 Standard for particulate matter.

In accordance with §60.92, no owner or operator shall discharge or cause the discharge into the atmosphere from any affected facility any gases which contain particulate matter in excess of 0.04 gr/dscf or exhibit 20 percent opacity or greater. This NSPS emission limit is included as a permit condition in the PTC.

§ 60.93 Test methods and procedures.

In accordance with §60.93(a), performance tests shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60.

In accordance with §60.93(b), compliance with the particulate matter standards shall be determined by EPA Reference Method 5, and opacity shall be determined by EPA Reference Method 9. These test requirements are included as a permit condition in the PTC.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Permit Conditions Review

This section describes only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Existing Permit Condition 1.2

Table 1.1 lists all sources of regulated emissions in this PTC.

Table 1.1 SUMMARY OF REGULATED EMISSIONS SOURCES

Permit Section	Source Description	Emissions Controls
2 & 3	<u>Hot Mix Asphalt Dryer (or equivalent)^a</u> Manufacturer: Astec, Inc. Model: RDB-9640(parallel-flow drum mix) Burner Model: Phoenix Talon PT-100U-G-OH Manufacture date: 2008 Maximum capacity: 350 T/hr and 100MMBtu/hr Maximum production: 350 T/hr and 1,000,000 T/yr Fuel: natural gas, distillate fuel oil ASTM Grade 1 and Grade 2, reprocessed fuel oil Maximum fuel usage rate : 730 gal/hr	<u>Hot Mix Asphalt Dry Baghouse (or equivalent)^a</u> Manufacturer: Astec, Inc. Model: RBH-68 Type: Pulse jet
	<u>Asphalt Tank Heater</u> Fuel Types: natural gas, distillate fuel oil ASTM Grade 1 and Grade 2 Max Fuel Usage: 20.6 gal/hr	<u>None</u>
2 & 3	<u>Storage tanks</u> 2-Asphalt Cement Tanks Model: above-ground storage tank Maximum capacity: 25,000 gallons Type: asphalt cement 3-Used Oil Tanks Fuel: above-ground storage tank Maximum capacity : 24,000 gallons Type : used oil	<u>None</u>
2 & 3	<u>Material transfer points (includes fugitives)</u> Aggregate dump to ground, Aggregate dump to conveyor, Aggregate conveyor to elevated storage	<u>Minimized drop heights, water sprays, or equivalent control methods</u>

a. "or equivalent" is defined as equipment which has an equivalent or less maximum capacity (T/hr) than listed in this table, has an equivalent or greater control efficiency than listed in Error! Reference source not found., which does not result in an increase in emissions, and which does not result in the emission of a toxic air pollutant not previously emitted

Revised Permit Condition 4

The emission sources regulated by this permit are listed in the following table.

Table 6 REGULATED SOURCES

Source Descriptions	Emission Controls
<p><u>Hot Mix Asphalt Drum Dryer:</u> Manufacturer: Astec, Inc. Model: RDB-9640 (parallel-flow drum mix) Burner Model: Phoenix Talon PT-100U-G-OH Manufacture Date: 2008 Max. production: 350 T/hr and 1,000,000 T/yr Fuel: natural gas, distillate fuel oil ASTM Grade 1 and Grade 2, reprocessed fuel oil Design Aggregate: Up to 50% RAP, may use petroleum-contaminated soil & aggregate Fuel consumption: 730 gal/hr</p>	<p><u>Pulse Jet Baghouse</u> Manufacturer: Astec, Inc. Model: RBH-68 Type: Pulse Jet</p>
<p><u>Asphalt Tank Heater</u> Fuel Types: Natural gas, Distillate fuel oil ASTM Grade 1 and Grade 2, reprocessed fuel oil Maximum Fuel Usage: 20.6 gal/hr</p>	<p>None</p>
<p><u>Materials transfer points (includes fugitives)</u> Aggregate dump to ground, Aggregate dump to conveyor, Aggregate conveyor to elevated storage</p>	<p>Minimized drop heights, water sprays, or equivalent control methods</p>

This permit condition has been revised to include the design aggregate of up to 50% RAP and the permittee may use petroleum contaminated soil and aggregate. The storage tanks were removed as an emissions source because the emissions from the storage tanks are considered negligible. The working and breathing loss from the storage tanks were less than 1% of total VOC emissions.

Existing Permit Condition 2.1

The processes include a HMA plant that consists of a drum mix dryer, an asphalt tank heater, a baghouse, two asphalt oil storage tanks, two fuel storage tanks, and materials transfer equipment. Materials transfer equipment may include front end loaders, storage bins, conveyors, stock piles, and haul trucks.

Stockpiled aggregate is transferred to feed bins. Aggregate may consist of up to 50% recycled asphalt pavement (RAP). Aggregate is dispensed from the bins onto feeder conveyors, which transfer the aggregate to the drum mix dryer. Aggregate travels through the drum-mix dryer and when dried is mixed with liquid asphalt cement. The resulting HMA is conveyed to hot storage bins until it can be loaded into trucks for transport off site or transferred to silos for temporary storage. Electrical power will be supplied to the plant from the local power grid.

Revised Permit Condition 5

The processes include a HMA plant that consists of a drum mix dryer, an asphalt tank heater, a baghouse, two asphalt oil storage tanks, two fuel storage tanks, and materials transfer equipment. Materials transfer equipment may include front end loaders, storage bins, conveyors, stock piles, and haul trucks.

Stockpiled aggregate is transferred to feed bins. Aggregate may consist of up to 50% recycled asphalt pavement (RAP). Aggregate is dispensed from the bins onto feeder conveyors, which transfer the aggregate to the drum mix dryer. Aggregate travels through the drum-mix dryer and when dried is mixed with liquid asphalt cement. The resulting HMA is conveyed to hot storage bins until it can be loaded into trucks for transport off site or transferred to silos for temporary storage. Electrical power will be supplied to the plant from the local power grid.

The facility is also permitted to replace part of the design aggregate with petroleum contaminated soil. The petroleum contaminated soil is crushed, placed on a designated clay liner, and covered. The contaminated aggregate is then conveyed into the feed end of the drum mix dryer where the petroleum hydrocarbons are volatilized and partially destroyed by incineration prior to the addition of the hot asphalt cement to produce hot-mix asphalt. Heavier hydrocarbon fractions that are not volatilized are expected to be solidified or encapsulated in the asphalt/aggregate matrix.

This permit condition has been revised to include the use of petroleum contaminated soil and aggregate.

Existing Permit Condition 2.9

The HMA Dryer shall combust only natural gas, ASTM Grade 1 and Grade 2 distillate fuel oil meeting the specifications of Permit Condition 2.11, or reprocessed fuel oil (RFO) meeting the specifications of Permit Conditions 2.10 and 2.11.

Revised Permit Condition 13

The HMA Dryer shall combust only natural gas, ASTM Grade 1 and Grade 2 distillate fuel oil, or reprocessed fuel oil (RFO).

This permit condition has been updated to exclude references to permit conditions 2.10 and 2.11.

Existing Permit Condition 2.10

The permittee shall comply with the applicable requirements of 40 CFR 279, Subpart B – Used Oil Specifications.

- In accordance with 40 CFR 279.11, with the exception of total halogens which are limited to 1,000 ppm, used oil burned for energy recovery shall not exceed any of the allowable levels of the constituents and property listed in Table Error! Reference source not found..7. In addition, used oil shall not contain quantifiable levels (2 ppm) of polychlorinated biphenyls (PCB).

Table Error! Reference source not found..7 USED OIL SPECIFICATIONS¹

Constituent/property	Allowable level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 deg. F minimum
Total halogens	1,000 ppm maximum
PCBs ²	< 2 ppm

- 1) The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).
- 2) Applicable standards for the burning of used oil containing PCB are imposed by 40 CFR 761.20(e)

Revised Permit Condition 14

In accordance with 40 CFR 279.11, used oil (as defined by ASTM D6488) shall be limited to RFO4, RFO5L, and RFO5H, and shall not exceed any of the allowable levels of the constituents or properties listed in the following table:

Table 8 40 CFR 279.11 - USED OIL SPECIFICATIONS¹

Constituent/Property	Allowable Level
Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
Sulfur	5,000 ppm (0.5% by weight)
Flash Point	A minimum of 100 °F
Total Halogens	4,000 ppm
PCBs ²	< 2 ppm

- ¹ The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).
- ² Applicable standards for the burning of used oil containing PCB are imposed by 40 CFR 761.20(e).

If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste. The Permittee may rebut the presumption by demonstrating that the used oil does not contain hazardous waste.

The previous limit of 1,000 ppm for total halogens has become problematic for other facilities. The CFR states that if the concentration of halogens is between 1,000 and 4,000 ppm; it is the facility's responsibility to treat it as hazardous waste or demonstrate that the used oil does not contain hazardous waste. The updated condition allows for a little more flexibility.

Existing Permit Condition 2.17

The permittee shall monitor and record the daily production on a daily basis and the annual production on a monthly basis to demonstrate compliance with Permit Condition 2.7. Annual production shall be determined by summing each monthly production total over the previous consecutive 12-calendar month period. The recycled asphalt pavement usage shall be monitored and recorded on a daily basis, in tons per calendar day, to demonstrate compliance with Permit Condition 2.7.

Revised Permit Condition 21

For each day that the asphalt drum mixer is operated, the Permittee shall maintain the following records:

- *The amount of asphalt produced in tons per hour and tons per day to demonstrate compliance with the hourly and daily Asphalt Production Limits permit condition.*

Monthly asphalt production shall be determined by summing daily production over the previous calendar month. Consecutive 12-months of asphalt production shall be determined by summing the monthly production over the previous consecutive 12 month period to demonstrate compliance with the consecutive 12-months Asphalt Production Limits permit condition.

This permit condition was updated to reflect updated language to maintain consistency between other newer HMA permits.

Existing Permit Condition 2.18

The permittee shall physically measure and record the minimum setback distance to demonstrate compliance with the setback limits in Permit Condition 2.7:

- *Before initial startup of any emissions source listed in Table 1.1;*
- *Each time any emissions source listed in Table 1.1 is relocated in accordance with IDAPA 58.01.01.500; and*
- *Any time any emissions source listed in Table 1.1 is changed in such a way that the minimum setback distance is reduced compared to previous operations at that location.*

Information recorded shall include, but not be limited to, a brief description of the nearest distance to any area where the general public has access, and the minimum setback distance in meters or feet to an accuracy of plus or minus 1.8 meters (6 feet).

Revised Permit Condition 22

The permittee shall measure and record the distance, to an accuracy of plus or minus six feet, between the property line and the base of the asphalt drum mixer baghouse exhaust stack each time the asphalt drum mixer baghouse is moved to demonstrate compliance with the Setback Distance Requirements permit condition.

The changes were made to make the condition more concise and avoid referencing of specific tables.

Existing Permit Condition 2.19

The permittee shall demonstrate compliance with the used oil fuel specifications in Permit Condition 2.10 by obtaining a used oil fuel certification from the used oil fuel supplier on an as-received basis for each shipment or by having the fuel analyzed by a qualified laboratory. The certification shall include the following information:

- *The name and address of the used oil supplier;*
- *The measured concentration, expressed as ppm, of each constituent listed in Table 2.4;*
- *The flash point of the used oil expressed as degrees Fahrenheit;*

- *The analytical method or methods used to determine the concentration of each constituent and property (flash point) listed in Table 2.4;*
- *The date and location of each sample; and*
- *The date of each certification analysis.*

Revised Permit Condition 23

On an as-received basis for each shipment of used oil, the permittee shall maintain the following supplier verified and certified information or the fuel may be analyzed by a qualified laboratory:

- *The name and address of the used oil supplier;*
- *The measured concentration, expressed as ppmv, or a certification statement from the used oil supplier that the shipment meets the used oil specifications in the Used Oil Specification permit condition;*
- *The flash point of the used oil expressed as degrees Fahrenheit;*
- *The analytical method or methods used to determine the concentration of each constituent and property (flash point);*
- *The date and location of each sample; and*
- *The date of each certification analysis.*

The changes were made to avoid references to specific permit conditions and make the condition more concise.

Removed Permit Condition 2.23

Performance testing on the HMA dryer baghouse stack shall be performed within 60 days after achieving the maximum permitted production rate in Permit Condition 2.7, but not later than 180 days after initial startup of the HMA plant, in accordance with 40 CFR 60.8.

The initial performance test shall measure the PM emission rate in grains per dry standard cubic feet and the opacity to demonstrate compliance with the emission limits and opacity limit in Permit Condition 2.5.

The performance test shall be conducted under worst-case normal operating conditions and in accordance with 40 CFR 60.93, 60.8, and 60.11; Permit Conditions 2.5, 2.25, and 2.26; and General Provision 6 of this permit. The permittee is encouraged to submit a performance testing protocol for approval 30 days prior to conducting the performance tests.

Each performance test shall consist of three separate runs using the applicable test method in accordance with 40 CFR 60.8(f).

This permit condition was removed since the HMA plant is already operating and the initial performance test was already completed in June of 2009.

Existing Permit Condition 2.24

Performance testing on the HMA dryer baghouse stack shall be performed concurrently with the initial performance test required by Permit Condition 2.23, and no less than once every five years following the date the initial performance test is required by Permit Condition 2.23.

The performance test shall measure the PM10 emission rate in pounds per hour and the opacity to demonstrate compliance with Permit Conditions 2.3 and 2.4.

The performance test shall be conducted under worst-case normal operating conditions and in accordance with IDAPA 58.01.01.157; Permit Conditions 2.3, 2.4, 2.5, 2.25, and 2.27; and General Provision 6 of this permit. The permittee is encouraged to submit a performance testing protocol for approval 30 days prior to conducting the performance tests.

Revised Permit Condition 27

Performance testing on the HMA Dryer baghouse stack shall be performed no later than June 2014 and then no less than once every five years.

The performance test shall measure the PM stack gas concentration in grains per dry standard cubic feet, the PM₁₀ emission rate in pounds per hour and the opacity to demonstrate compliance with the Opacity, emissions limit and Particulate Matter permit conditions.

The performance test shall be conducted under worst-case normal operating conditions and in accordance with 40 CFR 60.93, 60.8, 60.11, and the Performance Testing General Provision of this permit. The permittee is encouraged to submit a performance testing protocol for approval 30 days prior to conducting the performance tests.

Each performance test shall consist of three separate runs using the applicable test method in accordance with 40 CFR 60.8(f).

This permit condition was updated to require another performance test five years from the last one conducted in June of 2009.

Existing Permit Condition 2.31

The permittee shall not relocate and operate any equipment listed in Table 1.1 in any PM_{2.5} or PM₁₀ nonattainment area.

Contact DEQ for current nonattainment area status and more specific details about the nonattainment area boundaries. The geographical locations of nonattainment areas in Idaho may be found online at:

http://www.deq.idaho.gov/air/data_reports/monitoring/overview.cfm#AttvNon.

Revised Permit Condition 34

The permittee shall not move into and operate any equipment authorized by this permit to any air quality non-attainment area in the State of Idaho.

This permit condition was updated to remove the link to the DEQ website that is obsolete.

New Permit Condition 36

The petroleum contaminated soil is crushed, placed on a designated clay liner, and covered. The contaminated aggregate is then conveyed into the feed end of the drum mix dryer where the petroleum hydrocarbons are volatilized and partially destroyed by incineration prior to the addition of the hot asphalt cement to produce hot-mix asphalt. Heavier hydrocarbon fractions that are not volatilized are expected to be solidified or encapsulated in the asphalt/aggregate matrix.

This permit condition describes the process for using the petroleum contaminated soil.

New Permit Condition 37

Particulate matter (PM) emissions from the HMA drum dryer are controlled by a pulse jet baghouse.

This permit condition establishes that the PM emissions are controlled by a baghouse.

New Permit Condition 38

The permittee shall comply with emission limits specified in Opacity and Emission Limits permit conditions within the Hot Mix Asphalt Production section.

This permit condition establishes that the opacity and emission limits apply when using petroleum contaminated soil.

New Permit Condition 39

The permittee shall comply with operating requirements specified in the Emission Limits, Setback Distance and the RAP monitoring permit conditions.

This permit condition establishes that the emission limits and setback distances apply when using petroleum contaminated soil.

New Permit Condition 40

The maximum amount of petroleum-contaminated soil and aggregate used to produce HMA shall not exceed 730 tons per consecutive 12-calendar month period.

This permit condition establishes the throughput limit of the petroleum contaminated soil.

New Permit Condition 41

The gasoline concentration in any petroleum-contaminated soil and aggregate to be remediated shall not exceed 5,000 milligrams per kilogram (mg/kg).

This permit condition establishes the maximum concentration of gasoline in the soil that can be remediated.

New Permit Condition 42

The permittee shall not remediate any soil or aggregate contaminated with waste oil or used oil.

This permit condition establishes that only petroleum contaminated soil can be remediated.

New Permit Condition 43

The permittee shall monitor and record the amount of petroleum-contaminated soil and aggregate remediated by this hot-mix asphalt facility on a monthly and annual basis. The throughput of petroleum-contaminated soil and aggregate shall be recorded in tons per month and tons per consecutive 12-calendar month period.

This permit condition establishes that the permittee shall maintain records of the amount of petroleum contaminated soil remediated.

New Permit Condition 44

All petroleum-contaminated soil and aggregate to be remediated by this hot-mix asphalt facility shall be analyzed by an independent laboratory to demonstrate compliance with the Gasoline Concentration permit condition.

This permit condition requires the petroleum contaminated soil to be analyzed to show compliance with the gasoline concentration permit limit.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there were no comments on the application and there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS FOR PETROLEUM CONTAMINATED SOIL

Calculate the maximum annual throughput limit of petroleum contaminated soil using benzene as the limiting compound.

Benzene EL = 0.0008 lb/hr

$$(0.0008 \text{ lb/hr}) * (1/50\% \text{ destruction eff}) * (1/2\% \text{ benzene}) = 0.08 \text{ lb/hr of soil}$$

$$(0.08 \text{ lb/hr}) * (8760 \text{ hr/yr}) * (1 \text{ Ton}/2000 \text{ lb}) * (1/0.005 \text{ gas concentration}) * (1/0.96 \text{ aggregate}) * (1/0.1 \text{ throughput}) = 730 \text{ Tons/Yr of petroleum contaminated soil}$$

Toluene Emissions

$$(0.08 \text{ lb/hr}) * (12\% \text{ toluene}) * (50\% \text{ destruction eff}) = 0.0048 \text{ lb/hr toluene}$$

Ethyl Benzene Emissions

$$(0.08 \text{ lb/hr}) * (4.7\% \text{ ethyl benzene}) * (50\% \text{ destruction eff}) = 0.0019 \text{ lb/hr ethyl benzene}$$

Xylene Emissions

$$(0.08 \text{ lb/hr}) * (16\% \text{ xylene}) * (50\% \text{ destruction eff}) = 0.0064 \text{ lb/hr xylene}$$

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on August 30, 2011:

Facility Comment: On page 3, please change the storage tanks to the following:

- Asphalt Cement Tanks – Maximum capacity of 50,000 gallons (2-25,000 gallon tanks)
- Refined Fuel Oil (RFO) – Maximum capacity of 75,000 gallons (3-25, 000 gallon tanks)
- Distillate Fuel – Fuel Oil (#2 Diesel), maximum capacity of 8,000 gallons

DEQ Response: The storage tank capacity in the PTC will not be changed but instead removed from the permit. The storage tanks were removed as an emissions source because the emissions from the storage tanks are considered negligible. The working and breathing loss from the storage tanks were less than 1% of total VOC emissions.

Facility Comment: On page 6, regarding used oil certifications, our 2011 certification shows 0 ppm for halogens so the statement about used oil containing 1,000 ppm or greater halogens should not be an issue.

DEQ Response: Permit condition 14 states if the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste. If the certification shows 0 ppm for halogens then the used oil meets the specification of 40 CFR 279.11.

APPENDIX C – PROCESSING FEE

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: HK Contactors, Inc.
Address: PO Box 51450
City: Idaho Falls
State: Idaho
Zip Code: 83405
Facility Contact: Clarence Davis
Title: Environmental Manager
AIRS No.: 777-00442

- N Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- Y Did this permit require engineering analysis? Y/N
- N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 1,000.00		

Comments: This project is to give the facility the ability to remediate petroleum contaminated soil. The TAPs emission increase is only 1.4E-02 T/yr. Thus the processing fee of \$1,000 is appropriate in accordance with IDAPA 58.01.01.225.