

September 22<sup>nd</sup>, 2009

The following issued guidance memorandum, “Source Determinations for Oil and Gas Industries” has since been withdrawn. Please refer to Gina McCarthy’s memorandum, “Withdrawal of Source Determinations for Oil and Gas Industries” provided via the link below.

<http://www.epa.gov/region07/programs/artd/air/nsr/nsrmemos/oilgaswithdrawal.pdf>



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 12 2007

OFFICE OF  
AIR AND RADIATION

**MEMORANDUM**

**SUBJECT:** Source Determinations for Oil and Gas Industries

**FROM:** William L. Wehrum  
Acting Assistant Administrator (6101A)

A handwritten signature in black ink, appearing to read "W. L. Wehrum", written over the typed name and title.

**TO:** Regional Administrators I-X

The purpose of this memorandum is to provide guidance to assist permitting authorities in making major stationary source determinations for the oil and gas industry. This guidance extends to oil and gas operations on land, in state waters, and on the federal Outer Continental Shelf (OCS).<sup>1</sup>

Currently, significant oil and gas development is occurring in the Western United States. With this development, we expect issues to arise related to whether exploration, extraction or production activities need to be aggregated together to determine whether the activities qualify as a "major stationary source" for purposes of the major New Source Review (NSR) and the Title V permitting programs.<sup>2</sup> As explained in detail below, we suggest that permitting authorities begin the analysis by evaluating whether each individual surface site qualifies as a separate stationary source, and then aggregating two or more surface sites only if the surface sites are under common control and are located in close proximity to each other. The term "surface site" generally refers to a single area of development and includes any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed. *See e.g.* 40 CFR 63.761.

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<sup>1</sup> On the OCS, "emissions from any vessel servicing or associated with an OCS source, including emissions while at the OCS source or en route to or from the source within 25 miles of the OCS source, shall be considered direct emissions from the OCS source." See CAA §328(a)(4)(C). This memorandum does not supercede our existing interpretation of this regulatory language.

<sup>2</sup> Oil and gas development activities include such things as geological and geophysical exploration for petroleum deposits, drilling oil and gas wells, and separating natural gas liquids from crude oil. The activities generally fall into the major Standard Industrial Code (SIC) 13 including SIC 1311, 1321, 1381, 1382, and 1389.

The Federal NSR regulations define a “major stationary source” as any “stationary source” that emits or has the potential to emit above certain specified emissions thresholds (ranging from 10-250 tons per year) depending on the attainment status of the area. The Federal NSR regulations define “stationary source” to mean “any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under the Act.”<sup>3</sup> The regulations establish three criteria for identifying emissions activities that belong to the same “building,” “structure,” “facility,” or “installation”: (1) whether the activities are under common control, (2) whether the activities are located on one or more contiguous or adjacent properties; and (3) whether the activities belong to the same major industrial grouping.<sup>4</sup> The Title V program also considers whether activities are under common control and located on contiguous or adjacent property.<sup>5</sup>

In implementing the stationary source definition for the major NSR and Title V permit programs, the foremost principle that guides our decision-making is that we should apply a “common sense notion” of a plant. In *Alabama Power v. Costle*, the court cautioned that “...EPA cannot treat contiguous and commonly owned units as a single source unless they fit within the four permissible statutory terms,” and that “EPA should ...provide for the aggregation, where appropriate, of industrial activities according to considerations such as proximity and ownership.”<sup>6</sup> In 1980, we expressed the view that *Alabama Power* set boundaries on our discretion to interpret the component terms of “stationary source.” Specifically, we indicated that we must (1) reasonably carry out the purposes of Prevention of Significant Deterioration (PSD); (2) approximate a common sense notion of a “plant”; and (3) avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of “building,” “structure,” “facility” or “installation.”<sup>7</sup> Accordingly, we follow these overarching principles in interpreting the three regulatory criteria in context of a given source determination.

Source determinations within the oil and gas industries are not always straightforward. Even when two or more pollutant-emitting activities are clearly under common control and belong to the same 2-digit SIC code, the unique geographical attributes of the oil and gas industry necessitate a detailed evaluation of whether the activities are contiguous and adjacent. For example, well sites can be located hundreds of miles from the natural gas processing plant, and some oil and gas operations (*e.g.*, a production field) can cover many square miles. Moreover, unlike many industries, land ownership and control are not easily distinguished in this industry, because subsurface and surface property rights are often owned and leased by different entities, and drilling and exploration activities are contracted to third parties. While it is not uncommon for a single company to gain the use of a large area of contiguous property through

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<sup>3</sup> See *e.g.* 40 CFR 52.21(b)(5)

<sup>4</sup> Under this definition, activities are within the same industrial grouping if they share the same two-digit Standard Industrial Classification (SIC). Exploration, extraction or production activities in the oil and natural gas development industry share the same two-digit SIC code – “13”.

<sup>5</sup> 40 CFR 70.2 also includes a SIC reference which is not contained in the statute. We have proposed to delete this reference from the title V regulations.

<sup>6</sup> *Alabama Power Co. v. Costle* 636 F.2d 323, 397 (D.C. Cir. 1979)

<sup>7</sup> 45 FR 52676, 52695 (August 7, 1980)

these lease and mineral rights agreements, owners or operators of production field facilities typically control only the surface area necessary to operate the physical structures used in oil and gas production, and not the land between well drill sites.<sup>8</sup>

The concept of “contiguous and adjacent” considers whether the land associated with the pollutant-emitting activity is connected to, or is nearby, land associated with another pollutant-emitting activity. Historically, we also have used such factors as operational dependence and proximity to inform our analysis of whether two properties are contiguous or adjacent.<sup>9</sup> The concept of “operational dependence” considers the extent to which each activity relies on the other for its operations. In the oil and gas industries, materials are transferred between pollutant-emitting points and many activities are physically connected via pipelines, but the extent of the operational reliance may vary widely from point to point.

Notably, in 1980, we declined to add a specific “functionality” criteria to the definition of source because we believed that “assessments of functional interrelationships would be highly subjective” and “embroil[] the Agency in fine-grained analysis.”<sup>10</sup> We also made clear that we do not intend “source” to encompass activities that would be many miles apart along a long-line. For instance, EPA would not treat all of the pumping stations along a pipeline as one source.<sup>11</sup> Accordingly, for this industry, we do not believe determining whether two activities are operationally dependent drives the determination as to whether two properties are contiguous or adjacent, because it would embroil the Agency in precisely the fine-grained analysis we intended to avoid, and it would potentially lead to results which do not adhere to the common sense notion of a plant.

The concept of proximity considers the physical distance between two activities. EPA has not specifically defined an exact separation of distance that would cause two activities to be considered contiguous or adjacent. Nonetheless, we have stated that proximity can be the most informative factor in determining whether two activities are contiguous or adjacent. For example, we stated that when two facilities are close together, a permitting authority can consider the two facilities as a single source irrespective of an absence of physical connection and operational dependence.<sup>12</sup> We also think that the opposite is equally true. A permitting authority can find that two pollutant-emitting activities are separate sources when they are located far apart, irrespective of the presence of physical connections and operational dependence between the sites.

Given the diverse nature of the oil and gas activities, we believe that proximity is the most informative factor in making source determinations for these industries. We do not believe that it is reasonable to aggregate well site activities, and other production field activities that

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<sup>8</sup> We recognized the unique challenges this industry presents in our discussion of the facility definition in the section 112 rulemaking. 64 FR 32620, 32617 (June 17, 1999).

<sup>9</sup> See e.g. Memo. from Winston Smith, Director Air, Pesticides and Toxics Management Division to Randy C. Poole, Air Hygienist II, *Applicability of Title V Permitting Requirements to Gasoline Bulk Terminals Owned by Williams Energy Ventures, Inc.* (May 19, 1999)

<sup>10</sup> 45 FR 52676, 52694 (August 7, 1980).

<sup>11</sup> *Id* at 52695

<sup>12</sup> Memo. from Winston Smith at 6.

occur over large geographic distances, with the downstream processing plant into a single major stationary source. Aggregation of such geographically-dispersed activities defies the concept of contiguous and adjacent. While the land mass may be “contiguous or adjacent” when viewed as a whole, the limited portion of the properties physically associated with the pollutant-emitting activity are not necessarily nearby, connected, or in any way proximate to each other.

Congress also recognized the unique geographic attributes of the oil and gas industries when it provided specific direction on how emission sources in the oil and gas exploration and production industry should be grouped together for purposes of defining a major source under the Section 112 Air Toxics Program.<sup>13</sup> Specifically, Section 112(n)(4) of the Act states:

[E]missions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources, and in the case of any oil or gas exploration or production well (with its associated equipment), such emissions shall not be aggregated for any purpose under this section.

Applying our interpretation of the Section 112(a)(1) and (n)(4) statutory language, and our understanding of hazardous air pollutant (HAP) emission sources, we defined the major source under Section 112, for purposes of these industries, in reference to individual surface sites.<sup>14</sup>

For purposes of making source determinations for NSR and Title V, we recommend that permitting authorities first look to the Section 112 approach of segregating each individual surface site.<sup>15</sup> While we do not believe that permitting authorities should strictly apply the Section 112 definition of major stationary source for purposes of the NSR and Title V permit programs, we do believe that the “surface site” is a reasonable place to begin the source determination analysis. This is because we have already determined that a surface site fits within a reasonable interpretation of the term stationary source in context of one regulatory program, and administratively, we think it reasonable for a permitting authority to at least consider whether the same boundaries are appropriate in administering other regulatory programs.

After identifying the individual surface site, the permitting authority should consider aggregating pollutant-emitting activities at multiple surface sites, when the surface sites are under common control and located in close proximity to each other. A reviewing authority can consider two surface sites to be in close proximity if they are physically adjacent, or if they are separated by no more than a short distance (e.g. across a highway, separated by a city block or

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<sup>13</sup> Although Congress provided direction in Section 112(n)(4) absent a specific finding related to whether the activities are within a “contiguous area,” notably, the Congressional Record shows that Congress explained its basis for creating special treatment for these industries under Section 112 partially based on a finding that emissions, “are typically located in widely dispersed geographic areas, rather than concentrated in a single area.” 136 Cong.Rec H12848-01.

<sup>14</sup> See 64 FR 32618 and 40 C.F.R. Part 63, Subpart HH.

<sup>15</sup> It is common practice, when making NSR source determinations, to first look at a small group of pollutant-emitting activities, and then determine whether it is appropriate to aggregate these activities with other activities to define the major stationary source. In the oil and gas industries, we think that a surface site contains an appropriate collection of pollutant-emitting activities to begin this analysis.

some similar distance).<sup>16</sup> Once the stationary source is identified, the permitting authority should consider the emissions from all equipment located either temporarily or permanently on the surface site(s) collectively to determine whether the surface site(s) qualifies as a major stationary source for NSR and Title V.<sup>17,18</sup>

In a great majority of cases, we expect that permitting authorities will find that a single surface site is the most-suitable industrial grouping because it correlates best with the definition of a stationary source. Accordingly, permitting authorities could treat each surface site as a separate stationary source and generally would not need to aggregate activities located on different oil and gas properties (oil and gas lease, mineral fee tract, subsurface unit area, surface fee trace or surface lease tract) or located on the same lease, when the sites are not located in close proximity to each other.

Whether or not a permitting authority should aggregate two or more pollutant-emitting activities into a single major stationary source for purposes of NSR and Title V remains a case-by-case decision considering the factors relevant to the specific circumstances. Nonetheless, today's guidance provides permitting authorities a reasonable analytical approach that simplifies the determination process and assures greater uniformity in permitting decisions. Unless unique factors (such as proximity or interdependence) indicate otherwise, permitting authorities can consider oil and gas exploration and production activity located on a single surface site to be an individual stationary source.

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<sup>16</sup> In making major stationary source determinations for this industry, some southern States apply a rule that generally results in separating pollutant-emitting activities located outside a ¼ mile radius.

<sup>17</sup> This approach differs from the Section 112 approach for these industries. The Section 112 approach exempts activities at the well and its associated equipment from the regulations. 64 FR 32610. Congress' based its direction to disaggregate these emission points for purposes of Section 112 on a finding that these emissions points generally have low HAP emissions.<sup>17</sup> 136 Cong.Rec H12848-01. This is not necessarily the case for criteria pollutants. Drilling sites can contribute high levels of CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from internal combustion engines. Accordingly, a potential to impact ambient air quality exists if these pollutant-emitting activities are closely located, and we believe it appropriate to consider these emissions points in defining the major stationary source for the NSR and Title V permitting programs.

<sup>18</sup> Temporary emissions include emissions from a portable stationary source that would be less than two years in duration, unless the Administrator determines that a longer period would be appropriate. 45 FR 52728. Temporary emissions, however, do not include emissions from non-road engines.