

# Populations, Activity and Emissions of Diesel Nonroad Equipment in EPA Region 7

## Survey Questionnaires by Phase Appendix AK

Assessment and Standards Division  
Office of Transportation and Air Quality  
U.S. Environmental Protection Agency

Prepared for EPA by  
Eastern Research Group, Inc. (ERG)  
EPA Contract No. EP-C-06-080

## Appendix AK\_1: PSU1 (Original EOI) Questionnaire, 12/21/06

### Populations, Usage and Emissions of Diesel Nonroad Equipment in EPA Region 7 Equipment Ownership Questionnaire

[12/21/06]

**NOTE TO INTERVIEWER:** The equipment ownership questionnaire will be administered to respondents in both the Establishment and Equipment samples. It is intended to support our evaluation of the sample frames in relation to our target study population, to obtain direct estimates of proposed measures of establishment size, and to estimate the proportions of eligible establishments in each sector.

Hello. May I speak with <FIRST NAME> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the diesel equipment and machinery used in their daily operations.

REPEAT INTRO ONLY IF REFERRED TO A MORE KNOWLEDGEABLE RESPONDENT (Q.3)

Hello, Mr./Ms. <FIRST NAME—DO NOT READ> <LAST NAME>? . My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the diesel equipment and machinery used in their daily operations. IF NEEDED: Examples of the types of equipment that we're interested in include,

Loaders	Dozers	Generator sets
Cranes	Excavators	Backhoes
Paving/surfacing equipment	Backhoes	Forklifts
Graders	Off-highway trucks	

We would like to do a very brief survey with you that lasts only about 4 minutes. Your company was scientifically selected for this study. Your participation is voluntary and your name and company will not be connected with your answers in any way. .

1. First, I would like to verify that your organization is <Establishment Name> and that your address is <Establishment Address>. Is this correct?

YES	01
NO	02
DK	98
RF	99

IF 'NO,' OBTAIN UPDATED ADDRESS OR ESTABLISHMENT NAME.

2. Now, I would like to verify that your organization's primary function is construction-related. Please specify whether you perform one or more of the following construction-related services.

Building, developing and general contracting	01
Heavy construction	02
Special trade contractor	03
Concrete contractor	04
Water well drilling	05
Structural steel erection	06
Excavation	07
Wrecking and demolition	08
Machinery or equipment installation	09

- |                 |              |
|-----------------|--------------|
| OTHER (SPECIFY) | 97           |
| DK              | 98 TERMINATE |
| RF              | 99 TERMINATE |
3. Does your organization own, rent or lease at least one item of equipment or machinery that runs on diesel fuel? IF UNSURE READ EXAMPLES FROM ATTACHED LIST FOR APPROPRIATE PRIMARY FUNCTION SPECIFIED IN Q2.
- |     |                                      |
|-----|--------------------------------------|
| YES | 01                                   |
| NO  | 02 TERMINATE                         |
| DK  | 98 ASK FOR MORE KNOWLEDGEABLE PERSON |
| RF  | 99 TERMINATE                         |
4. Aside from owners, proprietors or partners, did your organization have one or more paid employees at any time during the last twelve months?
- |     |              |
|-----|--------------|
| YES | 01           |
| NO  | 02 TERMINATE |
- IF NECESSARY, CLARIFY THAT 'PAID EMPLOYEE' INCLUDES FULL OR PART TIME, PERMANENT, TEMPORARY OR SEASONAL EMPLOYEES.
5. How many paid employees work for your organization?
- |                               |                 |
|-------------------------------|-----------------|
| Specify Number                | _____ SKIP to 7 |
| DK → PROBE FOR BEST GUESS Q.6 | 98              |
| RF → PROBE FOR BEST GUESS Q.6 | 99              |
6. I'm going to read you some numbers. Stop me when you think I get to the one that best describes your organization.
- |                      |    |
|----------------------|----|
| 2 to 4 employees     | 01 |
| 5 to 9 employees     | 02 |
| 10 to 19 employees   | 03 |
| 20 to 49 employees   | 04 |
| 50 or more employees | 05 |
| DK                   | 98 |
| RF                   | 99 |
7. Earlier you mentioned that you owned, rented or leased at least one piece of equipment. About how many pieces of diesel equipment or machinery are used by your organization?
- |                |                 |
|----------------|-----------------|
| SPECIFY NUMBER | _____ SKIP to 9 |
| DK             | 98              |
| RF             | 99              |
8. I'm going to read you some numbers. Stop me when you think I get to the one that best describes the number of equipment units or machines are used by your organization
- |                   |    |
|-------------------|----|
| 1 to 4 pieces     | 01 |
| 5 to 9 pieces     | 02 |
| 10 to 19 pieces   | 03 |
| 20 to 49 pieces   | 04 |
| 50 or more pieces | 05 |
| DK                | 98 |

- |    |    |  |
|----|----|--|
| RF | 99 |  |
|----|----|--|
9. Of the equipment you've told me about, does at least one piece have a 25-horsepower or larger engine?
- |     |    |  |
|-----|----|--|
| YES | 01 |  |
| NO  | 02 |  |
| DK  | 98 |  |
| RF  | 99 |  |
10. Does at least one piece have a 50-horsepower or larger engine?
- |     |    |  |
|-----|----|--|
| YES | 01 |  |
| NO  | 02 |  |
| DK  | 98 |  |
| RF  | 99 |  |
11. Do you buy any or have you bought of the equipment that you use?
- |     |    |          |
|-----|----|----------|
| YES | 01 |          |
| NO  | 02 | CONCLUDE |
| DK  | 98 | CONCLUDE |
| RF  | 99 | CONCLUDE |
12. When your company buys equipment, do you finance the purchase?
- |     |    |  |
|-----|----|--|
| YES | 01 |  |
| NO  | 02 |  |
| DK  | 98 |  |
| RF  | 99 |  |

Thank you. Those are all the questions I have. We appreciate your taking time to help with this study.

## **Appendix AK\_2: Integrated EOI for Phase 1, PSU1 and part of PSUs 2&3: May 9, 2007**

### **Populations, Usage and Emissions of Diesel Nonroad Equipment in EPA Region 7 Integrated Sample Full Interview Phase 01 (EOI) and Phase 02 (Inventory/Instrumentation) [Final May 9, 2007]**

#### **INTRO PHASE 01**

Hello. May I speak with <FIRST NAME> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the diesel equipment and machinery used in their daily operations.

REPEAT INTRO ONLY IF REFERRED TO A MORE KNOWLEDGEABLE RESPONDENT

Hello, Mr./Ms. <FIRST NAME—DO NOT READ> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the diesel equipment and machinery used in their daily operations. IF NEEDED: Examples of the types of equipment that we're interested in include,

Loaders	Dozers	Generator sets
Cranes	Excavators	Backhoes
Paving/surfacing equipment	Backhoes	Forklifts
Graders	Off-highway trucks	

We would like to do a brief survey with you that lasts less than ten minutes. Your company was scientifically selected for this study. Your participation is voluntary and your name and company will not be connected with your answers in any way. .

1. First, I would like to verify that your organization is <Establishment Name> and that your address is <Establishment Address>. Is this correct?

YES	01
NO	02
DK	98
RF	99

IF 'NO,' OBTAIN UPDATED ADDRESS OR ESTABLISHMENT NAME.

2. Now, I would like to verify that your organization's primary function is construction-related. Please specify whether you perform one or more of the following construction-related services.

Building, developing and general contracting	01
Heavy construction	02
Special trade contractor	03
Concrete contractor	04
Water well drilling	05
Structural steel erection	06
Excavation	07
Wrecking and demolition	08
Machinery or equipment installation	09
OTHER (SPECIFY)	97
DK	98
	TERMINATE 01

RF

99 TERMINATE 01

8. Does your organization own, rent or lease at least one item of equipment or machinery that runs on diesel fuel? IF UNSURE READ EXAMPLES FROM ATTACHED LIST FOR APPROPRIATE PRIMARY FUNCTION SPECIFIED IN Q2.

YES	01
NO	02 TERMINATE 01
DK	98 ASK FOR MORE KNOWLEDGEABLE PERSON
RF	99 ASK FOR MORE KNOWLEDGEABLE PERSON

9. Aside from owners, proprietors or partners, did your organization have one or more paid employees at any time during the last twelve months?

YES	01
NO	02 TERMINATE 01

IF NECESSARY, CLARIFY THAT 'PAID EMPLOYEE' INCLUDES FULL OR PART TIME, PERMANENT, TEMPORARY OR SEASONAL EMPLOYEES.

10. How many paid employees work for your organization?

Specify Number	_____	SKIP to Q.7
DK → PROBE FOR BEST GUESS Q.6	98	
RF → PROBE FOR BEST GUESS Q.6	99	

11. I'm going to read you some numbers. Stop me when you think I get to the one that best describes your organization.

2 to 4 employees	01
5 to 9 employees	02
10 to 19 employees	03
20 to 49 employees	04
50 or more employees	05
DK	98
RF	99

12. Earlier you mentioned that you owned, rented or leased at least one piece of equipment. About how many pieces of diesel equipment or machinery are used by your organization?

SPECIFY NUMBER	_____	SKIP to Q.9
DK	98	
RF	99	

8. I'm going to read you some numbers. Stop me when you think I get to the one that best describes the number of equipment units or machines are used by your organization

1 to 4 pieces	01
5 to 9 pieces	02
10 to 19 pieces	03
20 to 49 pieces	04
50 or more pieces	05
DK	98

RF

99

12. Of the equipment you've told me about, does at least one piece have a 25-horsepower or larger engine?

YES	01
NO	02
DK	98
RF	99

13. Does at least one piece have a 50-horsepower or larger engine?

YES	01
NO	02
DK	98
RF	99

14. Do you buy any or have you bought any of the equipment that you use?

YES	01
NO	02 GO TO Q.13
DK	98 GO TO Q.13
RF	99 GO TO Q.13

12. When your company buys equipment, do you finance the purchase?

YES	01
NO	02
DK	98
RF	99

13. Would you say that your company is a prime contractor or a subcontractor? (IF NEEDED: By "prime contractor" I mean that your company typically has a direct contract for an entire project; as the "prime contractor" you may, in turn, assign portions of the work to subcontractors.)

PRIME CONTRACTOR	01
SUBCONTRACTOR	02 TERMINATE 01

<SCRIPT NOTE: END OF EOI>

IF FLAGGED FOR INCENTIVE:

Thank you for cooperating with us and answering these questions. Now, we will continue onto the next part of the study. I want to let you know that we will be mailing your company a \$100 check. Ok....

<INTERVIEWER NOTE: IF NEEDED, READ EXACTLY: The \$100 check will be sent to your company regardless of your participation in the study. It's just for your consideration and not for participation.

14-INTRO: FOR ALL RESPONDENTS:

To help EPA gather emissions data on diesel off-road equipment we'd like to list the equipment your company uses and then take measures on one or two pieces. This would involve sending a technical specialist to inventory the equipment at one of your worksites and scientifically selecting one or two pieces for instrumentation. Trained technicians would install the instrument before a workday begins and remove it after the workday ends. The process doesn't affect equipment performance in any way. And you or someone from your company are welcome to observe the installation.

Do you have any questions about this phase of the study before I ask you just a few more questions?

PROGRAMMER NOTE:

- NEED A DISPOSITION AT THIS POINT TO MONITOR RESPONDENT BAIL OUT RATE.

14. Is all of your equipment located at your company address <READ ADDRESS> or do you also have equipment located or in use at other work sites?

|                                     |    |              |
|-------------------------------------|----|--------------|
| Equipment is all at company address | 01 | Skip to Q.17 |
| Equipment is at other work sites    | 02 |              |
| DK                                  | 98 |              |
| RF                                  | 99 |              |

IF Q14 = DK/RF (98 or 99) ASK FOR MORE KNOWLEDGEABLE PERSON AND REPEAT 14-INTRO, PREFACED WITH THE FOLLOWING:

Hello. My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the off-road diesel equipment and machinery used in their daily operations. <INSERT NAME OF PREVIOUS RESPONDENT> has been participating with us on this study and has referred me to you as the person more knowledgeable about the equipment and machinery used by your company. Let me tell you about it. CONTINUE WITH 14-INTRO.

15. At how many sites or facilities do you have equipment stored or in operation?

ENTER NUMBER: \_\_\_\_\_

16. Okay, we would like to select one of those sites at random, list the equipment there and select at least one piece of equipment for instrumentation. What is the name and location (address and city is okay) of each of the sites or facilities where you have equipment stored or in operation?

LIST ALL SITES: \_\_\_\_\_

INTERVIEWER OR PROGRAMMER: RANDOMLY SELECT ONE SITE.

17. We would like to inventory equipment at the <SITE DESCRIPTION>site. Is there someone at the site that we should contact to schedule an appointment and let know that we have permission to visit the site and inventory the equipment?



- NO, I AM THE CONTACT 01 SKIP TO Q19.  
YES 02
18. What is the name and phone number of this person(s)?  
ENTER NAME1: \_\_\_\_\_  
ENTER PHONE1: \_\_\_\_\_  
  
ENTER NAME2: \_\_\_\_\_  
ENTER PHONE2: \_\_\_\_\_
19. What would be the best times to contact < you or that person/them>?  
ENTER TIME1: \_\_\_\_\_  
ENTER TIME2: \_\_\_\_\_
20. At this site, do you have equipment operating around the clock, in shifts?  
YES 01  
NO 02 TERMINATION 02  
DK/NOT CERTAIN 98 TERMINATION 02
21. Does the equipment operate more than one shift in a 24-hour period?  
YES 01  
NO 02 TERMINATION 02  
DK/NOT CERTAIN 98 TERMINATION 02
22. Okay, what are the shifts that typically operate over a 24-hour period?  
RECORD TIMES OF SHIFTS \_\_\_\_\_ TERMINATION 02  
DK/NOT CERTAIN \_\_\_\_\_ TERMINATION 02

TERMINATION TEXT:

TERMINATION 01 (RESPONDENT IS NOT QUALIFIED). Thank you. Those are all the questions I have. We appreciate your taking time to help with this study.

TERMINATION 02 (RESPONDENT IS QUALIFIED). Thank you. In the next few days, a technical specialist will call to schedule a time to perform the inventory at <name of site>. We appreciate your taking time to help with this study.

## Appendix AK\_3: PSU 2&3 (8/16/07), after relaxing eligibility on Q13.

### Populations, Usage and Emissions of Diesel Nonroad Equipment in EPA Region 7

#### Full Interview

#### PSU 2 & 3

[Draft August 16, 2007—Version 5]

#### INTRO PHASE 01

Hello. May I speak with <FIRST NAME> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. [We are conducting a study with construction companies about the equipment and machinery used in their daily operations.](#)

REPEAT INTRO ONLY IF REFERRED TO A MORE KNOWLEDGEABLE RESPONDENT

Hello, Mr./Ms. <FIRST NAME—DO NOT READ> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. [We are conducting a study with construction companies about the equipment and machinery used in their daily operations.](#) IF NEEDED: Examples of the types of equipment that we're interested in include,

|                            |                    |                |
|----------------------------|--------------------|----------------|
| Loaders                    | Dozers             | Generator sets |
| Cranes                     | Excavators         | Backhoes       |
| Paving/surfacing equipment | Backhoes           | Forklifts      |
| Graders                    | Off-highway trucks |                |

We would like to do a brief survey with you that lasts less than ten minutes. Your company was scientifically selected for this study. Your participation is voluntary and your name and company will not be connected with your answers in any way.

1. First, I would like to verify that your organization is <Establishment Name> and that your address is <Establishment Address>. Is this correct?

|     |    |
|-----|----|
| YES | 01 |
| NO  | 02 |
| DK  | 98 |
| RF  | 99 |

IF 'NO,' OBTAIN UPDATED ADDRESS OR ESTABLISHMENT NAME.

2. Now, I would like to verify that your organization's primary function is construction-related. Please specify whether you perform one or more of the following construction-related services.

|  |                 |
|--|-----------------|
| Building, developing and general contracting | 01              |
| Heavy construction                           | 02              |
| Special trade contractor                     | 03              |
| Concrete contractor                          | 04              |
| Water well drilling                          | 05              |
| Structural steel erection                    | 06              |
| Excavation                                   | 07              |
| Wrecking and demolition                      | 08              |
| Machinery or equipment installation          | 09              |
| OTHER (SPECIFY)                              | 97              |
| DK   | 98 TERMINATE 01 |
| RF   | 99 TERMINATE 01 |

3. A. Within your organization, what percentage of your equipment/machinery runs on GASOLINE?

- |                   |    |                                   |
|-------------------|----|-----------------------------------|
| 100%              | 01 |                                   |
| Between 99% - 74% | 02 |                                   |
| Between 75% - 51% | 03 |                                   |
| Between 50% - 26% | 04 |                                   |
| Between 25% - 1%  | 05 |                                   |
| Less than 1%      | 07 |                                   |
| DK                | 98 | ASK FOR MORE KNOWLEDGEABLE PERSON |
| RF                | 99 | ASK FOR MORE KNOWLEDGEABLE PERSON |

B. How about the percentage of your equipment/machinery that runs on DIESEL?

- |                   |    |                                   |
|-------------------|----|-----------------------------------|
| 100%              | 01 |                                   |
| Between 99% - 74% | 02 |                                   |
| Between 75% - 51% | 03 |                                   |
| Between 50% - 26% | 04 |                                   |
| Between 25% - 1%  | 05 |                                   |
| Less than 1%      | 07 | TERMINATE                         |
| DK                | 98 | ASK FOR MORE KNOWLEDGEABLE PERSON |
| RF                | 99 | ASK FOR MORE KNOWLEDGEABLE PERSON |

INTERVIEWER PROBE, IF NEEDED: JUST TO CLARIFY, NOT EVEN 1 PIECE OF EQUIPMENT RUNS ON DIESEL, IS THAT CORRECT?

4. Aside from owners, proprietors or partners, did your organization have one or more paid employees at any time during the last twelve months?

- |     |    |              |
|-----|----|--------------|
| YES | 01 |              |
| NO  | 02 | TERMINATE 01 |

IF NECESSARY, CLARIFY THAT 'PAID EMPLOYEE' INCLUDES FULL OR PART TIME, PERMANENT, TEMPORARY OR SEASONAL EMPLOYEES.

5. How many paid employees work for your organization?

- |                               |       |             |
|-------------------------------|-------|-------------|
| Specify Number                | _____ | SKIP to Q.7 |
| DK → PROBE FOR BEST GUESS Q.6 | 98    |             |
| RF → PROBE FOR BEST GUESS Q.6 | 99    |             |

6. I'm going to read you some numbers. Stop me when you think I get to the one that best describes your organization.

- |                  |    |
|------------------|----|
| 2 to 4 employees | 01 |
|------------------|----|

- |                      |    |  |
|----------------------|----|--|
| 5 to 9 employees     | 02 |  |
| 10 to 19 employees   | 03 |  |
| 20 to 49 employees   | 04 |  |
| 50 or more employees | 05 |  |
| DK                   | 98 |  |
| RF                   | 99 |  |
7. Earlier you mentioned that you owned, rented or leased at least one piece of diesel equipment. About how many pieces of diesel equipment or machinery are used by your organization?
- |                |       |             |
|----------------|-------|-------------|
| SPECIFY NUMBER | _____ | SKIP to Q.9 |
| DK             | 98    |             |
| RF             | 99    |             |
8. I'm going to read you some numbers. Stop me when you think I get to the one that best describes the number of equipment units or machines are used by your organization
- |                   |    |  |
|-------------------|----|--|
| 1 to 4 pieces     | 01 |  |
| 5 to 9 pieces     | 02 |  |
| 10 to 19 pieces   | 03 |  |
| 20 to 49 pieces   | 04 |  |
| 50 or more pieces | 05 |  |
| DK                | 98 |  |
| RF                | 99 |  |
9. Of the equipment you've told me about, does at least one piece have a 25-horsepower or larger engine?
- |     |    |             |
|-----|----|-------------|
| YES | 01 |             |
| NO  | 02 | Skip to Q11 |
| DK  | 98 |             |
| RF  | 99 |             |
10. Does at least one piece have a 50-horsepower or larger engine?
- |     |    |  |
|-----|----|--|
| YES | 01 |  |
| NO  | 02 |  |
| DK  | 98 |  |
| RF  | 99 |  |
11. Do you buy any or have you bought any of the equipment that you use?
- |     |    |            |
|-----|----|------------|
| YES | 01 |            |
| NO  | 02 | GO TO Q.13 |
| DK  | 98 | GO TO Q.13 |
| RF  | 99 | GO TO Q.13 |
12. When your company buys equipment, do you finance the purchase?
- |     |    |  |
|-----|----|--|
| YES | 01 |  |
| NO  | 02 |  |
| DK  | 98 |  |
| RF  | 99 |  |

13. Would you say that your company is a prime contractor or a subcontractor? (IF NEEDED: By “prime contractor” I mean that your company typically has a direct contract for an entire project; as the “prime contractor” you may, in turn, assign portions of the work to subcontractors.)

|                  |    |
|------------------|----|
| PRIME CONTRACTOR | 01 |
| SUBCONTRACTOR    | 02 |

PROGRAMMER NOTE: FLAG SUBCONTRACTORS

<SCRIPT NOTE: END OF EOI. WHEN QUOTA ON INVENTORY RECRUITMENT (Q14-Q22 IS MET, INTERVIEW CAN QUIT HERE.>

PROGRAMMING NOTE: “COIN TOSS” RANDOM ASSIGNMENT (50/50) FOR INCENTIVE

IF FLAGGED FOR INCENTIVE, CONTINUE WITH THE FOLLOWING:

Thank you for cooperating with us and answering these questions. Now, we will continue onto the next part of the study. I want to let you know that we will be mailing your company a \$100 check. Ok....

<INTERVIEWER NOTE: IF NEEDED, READ EXACTLY: The \$100 check will be sent to your company regardless of your participation in the study. It's just for your consideration and not for participation.>

14-INTRO: FOR ALL RESPONDENTS:

To help EPA gather emissions data on diesel off-road equipment we'd like to list the equipment your company uses and then take measures on one or two pieces. This would involve sending a technical specialist to inventory the equipment at one of your worksites and scientifically selecting one or two pieces for instrumentation. Trained technicians would install the instrument before a workday begins and remove it after the workday ends. The process doesn't affect equipment performance in any way. And you or someone from your company are welcome to observe the installation.

Do you have any questions about this phase of the study before I ask you just a few more questions?

PROGRAMMER NOTE:

- NEED A DISPOSITION AT THIS POINT TO MONITOR RESPONDENT BAIL OUT RATE.

14. Is all of your equipment located at your company address <READ ADDRESS> or do you also have equipment located or in use at other work sites?

|                                     |    |              |
|-------------------------------------|----|--------------|
| Equipment is all at company address | 01 | Skip to Q.17 |
| Equipment is at other work sites    | 02 |              |
| DK                                  | 98 |              |
| RF                                  | 99 |              |

IF Q14 = DK/RF (98 or 99) ASK FOR MORE KNOWLEDGEABLE PERSON AND REPEAT 14-INTRO, PREFACED WITH THE FOLLOWING:

Hello. My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the off-road diesel equipment and machinery used in their daily operations. <INSERT NAME OF PREVIOUS RESPONDENT> has been participating with us on this study and has referred me to you as the person more knowledgeable about the equipment and machinery used by your company. Let me tell you about it. CONTINUE WITH 14-INTRO.

15. At how many sites or facilities do you have equipment stored or in operation?  
ENTER NUMBER: \_\_\_\_\_

16. Okay, we would like to select one of those sites at random, list the equipment there and select at least one piece of equipment for instrumentation. So that we can select the site randomly, what is the name of up to five sites or facilities where you have equipment stored or in operation?

Site #1: \_\_\_\_\_  
Site #2: \_\_\_\_\_  
Site #3: \_\_\_\_\_  
Site #4: \_\_\_\_\_  
Site #5: \_\_\_\_\_

INTERVIEWER AND PROGRAMMER: RANDOMLY SELECT ONE SITE AND TWO BACKUP SITES. READ TEXT BELOW AND THEN COLLECT ITEMS 17 – 22 ON EACH OF THE THREE SITES.

Thank you. We have randomly selected one site and two back up locations. I need to collect information on each of these sites.

17. We would like to inventory equipment at the <SITE DESCRIPTION>site. Is there someone at the site that we should contact to schedule an appointment and let know that we have permission to visit the site and inventory the equipment?

NO, I AM THE CONTACT

01 SKIP TO Q19.

YES

02

18. What is the name and phone number of this person(s)?

ENTER NAME1: \_\_\_\_\_

ENTER PHONE1: \_\_\_\_\_

ENTER NAME2: \_\_\_\_\_

ENTER PHONE2: \_\_\_\_\_

19. What would be the best times to contact < you or that person/them>?

ENTER TIME1: \_\_\_\_\_

ENTER TIME2: \_\_\_\_\_

20. At this site, do you have equipment operating around the clock, in shifts?

YES

01

NO

02 TERMINATION 02

DK/NOT CERTAIN

98 TERMINATION 02

21. Does the equipment operate more than one shift in a 24-hour period?  
YES 01  
NO 02 TERMINATION 02  
DK/NOT CERTAIN 98 TERMINATION 02
22. Okay, what are the shifts that typically operate over a 24-hour period?  
RECORD TIMES OF SHIFTS \_\_\_\_\_ TERMINATION 02  
DK/NOT CERTAIN TERMINATION 02

TERMINATION TEXT:

TERMINATION 01 (RESPONDENT IS NOT QUALIFIED). Thank you. Those are all the questions I have. We appreciate your taking time to help with this study.

TERMINATION 02 (RESPONDENT IS QUALIFIED). Thank you. In the next few days, a technical specialist will call to schedule a time to perform the inventory at <name of site>. We appreciate your taking time to help with this study.

## Appendix AK\_4: PSU 4&5 final survey questionnaire, last date revised 7/2/08

### Populations, Usage and Emissions of Diesel Nonroad Equipment in EPA Region 7

#### Full Interview

#### PSU 4&5

[Draft August 16, 2007—Version 5; Reviewed May 16, 2008; Final June 5, 2008; Revised June 20, 2008 Revised July 2, 2008]

#### INTRO PHASE 01

Hello. May I speak with <FIRST NAME> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with companies about the equipment used in their daily operations.

REPEAT INTRO ONLY IF REFERRED TO A MORE KNOWLEDGEABLE RESPONDENT

Hello, Mr./Ms. <FIRST NAME—DO NOT READ> <LAST NAME>? My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with companies about the equipment used in their daily operations. IF NEEDED: Examples of the types of equipment that we're interested in include,

|                            |  |                    |                |
|----------------------------|--|--------------------|----------------|
| Loaders                    |  | Dozers             | Generator sets |
| Cranes                     |  | Excavators         | Backhoes       |
| Paving/surfacing equipment |  | Backhoes           | Forklifts      |
| Graders                    |  | Off-highway trucks |                |

We would like to do a brief survey with you that lasts less than ten minutes. Your company was scientifically selected for this study. Your participation is voluntary and your name and company will not be connected with your answers in any way.

1. First, I would like to verify that your organization is <Establishment Name> and that your address is <Establishment Address>. Is this correct?

|     |    |
|-----|----|
| YES | 01 |
| NO  | 02 |
| DK  | 08 |
| RF  | 09 |

IF 'NO,' OBTAIN UPDATED ADDRESS OR ESTABLISHMENT NAME. IF A GOVERNMENT ENTITY, TERMINATE AS CODE IV.

2. Now, I would like to verify that your organization's primary function is construction-related. Please specify whether you perform one or more of the following construction-related services.

|  |              |
|--|--------------|
| NO CONSTRUCTION SERVICES                     | 00 TERMINATE |
| Building, developing and general contracting | 01           |
| Heavy construction                           | 02           |
| Special trade contractor                     | 03           |
| Concrete contractor                          | 04           |
| Water well drilling                          | 05           |
| Structural steel erection                    | 06           |



|                                     |                       |
|-------------------------------------|-----------------------|
| Excavation                          | 07                    |
| Wrecking and demolition             | 08                    |
| Machinery or equipment installation | 09                    |
| OTHER (SPECIFY)                     | 97                    |
| DK                                  | 98 MORE KNOWLEDGEABLE |
| PERSON                              |                       |
| RF                                  | 99TERMINATE 01        |

3. A. Within your organization, what percentage of your equipment runs on GASOLINE?

|                   |  |
|-------------------|--|
| 100%              | 01   |
| Between 99% - 75% | 02   |
| Between 74% - 51% | 03   |
| Between 50% - 26% | 04   |
| Between 25% - 1%  | 05   |
| Less than 1%      | 07   |
| DK                | 08ASK FOR MORE<br>KNOWLEDGEABLE<br>PERSON  |
| RF                | 09 ASK FOR MORE<br>KNOWLEDGEABLE<br>PERSON |

B. How about the percentage of your equipment that runs on DIESEL?

|                   |  |
|-------------------|--|
| 100%              | 01   |
| Between 99% - 75% | 02   |
| Between 74% - 51% | 03   |
| Between 50% - 26% | 04   |
| Between 25% - 1%  | 05   |
| Less than 1%      | 07TERMINATE                                |
| DK                | 08ASK FOR MORE<br>KNOWLEDGEABLE<br>PERSON  |
| RF                | 09 ASK FOR MORE<br>KNOWLEDGEABLE<br>PERSON |

INTERVIEWER PROBE, IF NEEDED: JUST TO CLARIFY, NOT EVEN 1 PIECE OF EQUIPMENT RUNS ON DIESEL IS THAT CORRECT?

4. Aside from owners, proprietors or partners, did your organization have one or more paid employees at any time during the last twelve months?

|     |               |
|-----|---------------|
| YES | 01            |
| NO  | 02SKIP to Q.7 |

IF NECESSARY, CLARIFY THAT 'PAID EMPLOYEE' INCLUDES FULL OR PART TIME, PERMANENT, TEMPORARY OR SEASONAL EMPLOYEES.

5. How many paid employees work for your organization?

Specify Number \_\_\_\_\_ SKIP to Q.7

- |                               |       |
|-------------------------------|-------|
| DK → PROBE FOR BEST GUESS Q.6 | 99998 |
| RF → PROBE FOR BEST GUESS Q.6 | 99999 |
6. I'm going to read you some numbers. Stop me when you think I get to the one that best describes your organization.
- |                      |    |
|----------------------|----|
| 2 to 4 employees     | 01 |
| 5 to 9 employees     | 02 |
| 10 to 19 employees   | 03 |
| 20 to 49 employees   | 04 |
| 50 or more employees | 05 |
| DK                   | 08 |
| RF                   | 09 |
7. Earlier you mentioned that you owned, rented or leased at least one piece of diesel equipment. About how many pieces of diesel equipment or machinery are used by your organization?  
SPECIFY NUMBER \_\_\_\_\_ SKIP to Q.9
- |    |       |
|----|-------|
| DK | 99998 |
| RF | 99999 |
8. I'm going to read you some numbers. Stop me when you think I get to the one that best describes the number of equipment units or machines are used by your organization
- |                   |    |
|-------------------|----|
| 1 to 4 pieces     | 01 |
| 5 to 9 pieces     | 02 |
| 10 to 19 pieces   | 03 |
| 20 to 49 pieces   | 04 |
| 50 or more pieces | 05 |
| DK                | 08 |
| RF                | 09 |
9. Of the equipment you've told me about, does at least one piece have a 25-horsepower or larger engine?
- |     |    |             |
|-----|----|-------------|
| YES | 01 |             |
| NO  | 02 | Skip to Q11 |
| DK  | 08 |             |
| RF  | 09 |             |
10. Does at least one piece have a 50-horsepower or larger engine?
- |     |    |
|-----|----|
| YES | 01 |
| NO  | 02 |
| DK  | 08 |
| RF  | 09 |
11. Do you buy any or have you bought any of the equipment that you use?
- |     |    |            |
|-----|----|------------|
| YES | 01 |            |
| NO  | 02 | GO TO Q.13 |
| DK  | 08 | GO TO Q.13 |
| RF  | 09 | GO TO Q.13 |
12. When your company buys equipment, do you finance the purchase?

|     |    |
|-----|----|
| YES | 01 |
| NO  | 02 |
| DK  | 08 |
| RF  | 09 |

13. Would you say that your company is a prime contractor, a subcontractor, or both? (IF NEEDED: By "prime contractor" I mean that your company typically has a direct contract for an entire project; as the "prime contractor" you may, in turn, assign portions of the work to subcontractors.)
- |                  |    |
|------------------|----|
| PRIME CONTRACTOR | 01 |
| SUBCONTRACTOR    | 02 |
| BOTH             | 03 |

PROGRAMMER NOTE: FLAG SUBCONTRACTORS

<SCRIPT NOTE: END OF EOI. WHEN QUOTA ON INVENTORY RECRUITMENT (Q14-Q22 IS MET, INTERVIEW CAN QUIT HERE.>

. KEEP "COIN TOSS" RANDOM ASSIGNMENT (50/50) FOR INCENTIVE

IF FLAGGED FOR INCENTIVE, CONTINUE WITH THE FOLLOWING:

Thank you for cooperating with us and answering these questions. Now, we will continue onto the next part of the study. I want to let you know that we will be mailing your company a \$100 check. Ok....

<INTERVIEWER NOTE: IF NEEDED, READ EXACTLY: The \$100 check will be sent to your company regardless of your participation in the study. It's just for your consideration and not for participation.>

14-INTRO: FOR ALL RESPONDENTS:

To help EPA gather emissions data on diesel off-road equipment we'd like to list the equipment your company uses and then take measures on one or two pieces. This would involve sending a technical specialist to inventory the equipment at one of your worksites and scientifically selecting one or two pieces for instrumentation. Trained technicians would install the instrument before a workday begins and remove it after the workday ends. The process doesn't affect equipment performance in any way. And you or someone from your company are welcome to observe the installation.

14. A Do you have any questions about this phase of the study before I ask you just a few more questions?
- |     |    |
|-----|----|
| YES | 01 |
| NO  | 02 |
| DK  | 08 |
| RF  | 09 |

PROGRAMMER NOTE:

NEED A DISPOSITION AT THIS POINT TO MONITOR RESPONDENT BAIL OUT RATE.  
 OK= Continue with rest of the survey      KB= Call back    SC= Refused to continue, short complete

14.B Is all of your equipment located at your company address <READ ADDRESS> or do you also have equipment located or in use at other work sites?

|                                     |                 |
|-------------------------------------|-----------------|
| Equipment is all at company address | 01 Skip to Q.17 |
| Equipment is at other work sites    | 02              |
| DK                                  | 08              |
| RF                                  | 09              |

IF Q14 = DK/RF (98 or 99) ASK FOR MORE KNOWLEDGEABLE PERSON AND REPEAT 14-INTRO, PREFACED WITH THE FOLLOWING:

Hello. My name is \_\_\_\_\_ and I am calling on behalf of the Environmental Protection Agency. We are conducting a study with construction companies about the off-road diesel equipment and machinery used in their daily operations. <INSERT NAME OF PREVIOUS RESPONDENT> has been participating with us on this study and has referred me to you as the person more knowledgeable about the equipment and machinery used by your company. Let me tell you about it. CONTINUE WITH 14-INTRO.

15. At how many sites or facilities do you have equipment stored or in operation?

ENTER NUMBER: \_\_\_\_\_

Range= 2-97

DK 98

RF 99

16. Okay, we would like to scientifically select one of those sites, list the equipment at the site, and select at least one piece of equipment for instrumentation. So that we can select the site what is the name of up to five sites or facilities where you have equipment stored or in operation?

Site #1: \_

Site #2: \_\_\_\_\_

Site #3: \_

Site #4: \_

Site #5: \_

INTERVIEWER AND PROGRAMMER: RANDOMLY SELECT ONE SITE AND TWO BACKUP SITES. READ TEXT BELOW AND THEN COLLECT ITEMS 17 – 22 ON EACH OF THE THREE SITES.

Thank you. We have -selected one site and two back up locations. I need to collect information on each of these sites.

17. We would like to inventory equipment at the <SITE DESCRIPTION>site. Is there someone at the site that we should contact to schedule an appointment and let know that we have permission to visit the site and inventory the equipment?

NO, I AM THE CONTACT

01 SKIP TO Q19.

YES

02

18. What is the name and phone number of this person(s)?

ENTER NAME1: \_\_\_\_\_

ENTER PHONE1: \_\_\_\_\_

ENTER NAME2: \_\_\_\_\_

ENTER PHONE2: \_\_\_\_\_

19. What would be the best times to contact < you or that person/them>?

ENTER TIME1: \_\_\_\_\_

ENTER TIME2: \_\_\_\_\_

20. At this site, do you have equipment operating around the clock, in shifts?
- |                |    |                |
|----------------|----|----------------|
| YES            | 01 |                |
| NO             | 02 | TERMINATION 02 |
| DK/NOT CERTAIN | 03 | TERMINATION 02 |
21. Does the equipment operate more than one shift in a 24-hour period?
- |                |    |                |
|----------------|----|----------------|
| YES            | 01 |                |
| NO             | 02 | TERMINATION 02 |
| DK/NOT CERTAIN | 03 | TERMINATION 02 |
22. Okay, what are the shifts that typically operate over a 24-hour period?
- |                              |                |
|------------------------------|----------------|
| RECORD TIMES OF SHIFTS _____ | TERMINATION 02 |
| DK/NOT CERTAIN               | TERMINATION 02 |

TERMINATION TEXT:

TERMINATION 01 (RESPONDENT IS NOT QUALIFIED). Thank you. Those are all the questions I have. We appreciate your taking time to help with this study.

TERMINATION 02 (RESPONDENT IS QUALIFIED). Thank you. In the next few days, a technical specialist will call to schedule a time to perform the inventory at <name of site>. We appreciate your taking time to help with this study.