

Rule Summary and Fiscal Analysis (Part A)**Department Of Commerce**

Agency Name

Division Of State Fire Marshal

Division

Kevin Schmidt

Contact

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1301:7-9-13

Rule Number

NEW

TYPE of rule filing

Rule Title/Tag Line

Petroleum UST Corrective Action.**RULE SUMMARY**

1. Is the rule being filed consistent with the requirements of the RC 119.032 review? **No**

2. Are you proposing this rule as a result of recent legislation? **No**

3. Statute prescribing the procedure in accordance with the agency is required to adopt the rule: **119.03**

4. Statute(s) authorizing agency to adopt the rule: **3737.88, 3737.882**

5. Statute(s) the rule, as filed, amplifies or implements: **3737.88, 3737.882**

6. State the reason(s) for proposing (i.e., why are you filing,) this rule:

Five year rule revision required under ORC 119.032.

7. If the rule is an AMENDMENT, then summarize the changes and the content of the proposed rule; If the rule type is RESCISSION, NEW or NO CHANGE, then summarize the content of the rule:

Rule 1301:7-9-13 describes requirements for the investigation of suspected releases of petroleum from UST systems, and corrective action for releases of petroleum from UST systems. The rule requires identification of the complete vertical and horizontal extent of contamination and the review and implementation of corrective

actions sufficient to protect human health and the environment. Levels of chemicals of concern that are protective of human health and the environment are developed using a risk based approach that incorporates known health risks of specific chemicals as well as information about their rate of transport through the environment that can change depending on site specific conditions.

The applicability section has been altered to reflect changes in OAC 1301:7-9-01, Applicability (there is no change in the type of UST systems BUSTR regulates). The rule has been restructured to clarify requirements for the reporting of releases and suspected releases, investigation of suspected releases, and immediate corrective actions for releases. Sampling requirements for soil borings taken in response to the investigation of a suspected release have been altered to match sampling requirements for soil borings taken as part of the assessment of a release, for the purpose of allowing analytical results from suspected release investigations to be used in release assessment.

The requirement that the owner and operator determine the saturation levels of soil contaminated with petroleum has been removed, and in its place sampling requirements for Total Petroleum Hydrocarbons have been added for light distillates (this requirement already exists for medium and heavy distillates). The number of analytical groups has been increased from 3 to 5, for the purpose of eliminating unnecessary sampling requirements for some heavy distillate products. The standards for classifying ground water use at the UST site have been re-written in order to provide regulatory clarity. Releases at UST sites where ground water use has been classified as ??non-drinking water?? must still define the extent and direction of the contaminant plume to newly defined ??delineation standards?? that are less restrictive than drinking water standards. A multiple chemical adjustment has been added to ensure cumulative effects of known or suspected carcinogenic chemicals of concern are accounted for.

The location of points of exposure used to estimate the threat to human health and the environment from the ingestion of drinking water has been changed to provide better protection of off-site sources of drinking water. The option to submit a 95% Upper Confidence Level calculation to estimate peak chemical of concern concentrations at a UST site is no longer available until later in the assessment process. Advanced modeling options in a Tier 3 analysis conducted as an alternative to active remediation are now subject to the same public notice requirements as an active remediation proposal.

8. If the rule incorporates a text or other material by reference and the agency claims the incorporation by reference is exempt from compliance with sections 121.71 to 121.74 of the Revised Code because the text or other material is **generally available** to persons who reasonably can be expected to be affected by the rule, provide an explanation of how the text or other material is generally available to those persons:

Referenced standards are generally available to all affected parties. The reference standards can easily be purchased from the standard making organization. The affected parties typically will be professional engineers or otherwise professionals in the field of underground storage tank installation, removal and repair. These parties would be expected to already own these standards in order to conduct their business.

9. If the rule incorporates a text or other material by reference, and it was **infeasible** for the agency to file the text or other material electronically, provide an explanation of why filing the text or other material electronically was infeasible:

It was infeasible for the agency to file the text electronically due to copyright issues with the standards making organizations. The standards are generally available.

10. If the rule is being **rescinded** and incorporates a text or other material by reference, and it was **infeasible** for the agency to file the text or other material, provide an explanation of why filing the text or other material was infeasible:

Not Applicable.

11. If **revising** or **refiling** this rule, identify changes made from the previously filed version of this rule; if none, please state so:

The rule was refiled to address formatting problems identified by the Ohio Legislative Service Commission. The content of the rule is unchanged.

12. 119.032 Rule Review Date:

(If the rule is not exempt and you answered NO to question No. 1, provide the scheduled review date. If you answered YES to No. 1, the review date for this rule is the filing date.)

NOTE: If the rule is not exempt at the time of final filing, two dates are required: the current review date plus a date not to exceed 5 years from the effective date for Amended rules or a date not to exceed 5 years from the review date for No Change rules.

FISCAL ANALYSIS

13. Estimate the total amount by which *this proposed rule* would **increase / decrease** either **revenues / expenditures** for the agency during the current biennium (in dollars): Explain the net impact of the proposed changes to the

budget of your agency/department.

This will have no impact on revenues or expenditures.

\$0

This rule should not significantly change revenues or expenditures for the agency.

14. Identify the appropriation (by line item etc.) that authorizes each expenditure necessitated by the proposed rule:

Not applicable.

15. Provide a summary of the estimated cost of compliance with the rule to all directly affected persons. When appropriate, please include the source for your information/estimated costs, e.g. industry, CFR, internal/agency:

A summary of costs is described in Attachment B. The average cost of corrective action for releases of petroleum using risk based corrective action is approximately \$90,000. It is anticipated that the cost of compliance with this proposed rule will not be significantly different from the cost of compliance with the risk based corrective action rule currently in effect. These cost estimates were received from the Petroleum Underground Storage Tank Release Compensation Board, who compensate owners and operators for expenses incurred in conducting corrective action for releases of petroleum from regulated underground storage tank systems. Rule 1301:7-9-05 requires all owners and operators to maintain coverage through the Petroleum Underground Storage Tank Release Compensation Fund to cover the costs of accidental releases. Owners and operators are also required by Rule 1301:7-9-05 to maintain a mechanism of financial responsibility to cover the amount of the insurance fund deductible. This rule, therefore, will not impose any additional costs to owners and operators who are in compliance with these requirements.

16. Does this rule have a fiscal effect on school districts, counties, townships, or municipal corporations? **Yes**

You must complete Part B of the Rule Summary and Fiscal Analysis in order to comply with Am. Sub. S.B. 33 of the 120th General Assembly.

17. Does this rule deal with environmental protection or contain a component dealing with environmental protection as defined in R. C. 121.39? **Yes**

You must complete the Environmental rule Adoption/Amendment Form in order to comply with Am. Sub. 106 of the 121st General Assembly.

Rule Summary and Fiscal Analysis (Part B)

1. Does the proposed rule have a fiscal effect on any of the following (please check each that applies)?
- | | | | |
|----------------------------|----------------------|-----------------------|------------------------------------|
| (a) School Districts _____ | X (b) Counties _____ | X (c) Townships _____ | X (c) Municipal Corporations _____ |
|----------------------------|----------------------|-----------------------|------------------------------------|

2. Please provide an estimate in dollars of the cost of compliance with the proposed rule for school districts, counties, townships, or municipal corporations. If you are unable to provide an estimate in dollars, please provide a written explanation of why it is not possible to provide such an estimate.

The average cost of corrective action for releases of petroleum using risk based corrective action is approximately \$90,000. It is anticipated that the cost of compliance with this proposed rule will not be significantly different from the cost of compliance with the risk based corrective action rule currently in effect.

These cost estimates were received from the Petroleum Underground Storage Tank Release Compensation Board, who compensate owners and operators for expenses incurred in conducting corrective action for releases of petroleum from regulated underground storage tank systems. Cost estimates are provided in Attachment B.

Rule 1301:7-9-05 requires all owners and operators to maintain coverage through the Petroleum Underground Storage Tank Release Compensation Fund to cover the costs of accidental releases. Owners and operators are also required by Rule 1301:7-9-05 to maintain a mechanism of financial responsibility to cover the amount of the insurance fund deductible. This rule, therefore, will not impose any additional costs to owners and operators who are in compliance with these requirements.

3. If the proposed rule is the result of a federal requirement, does the proposed rule exceed the scope and intent of the federal requirement?

_____	X _____
Yes	No

4. If the proposed rule exceeds the minimum necessary federal requirement, please provide an estimate of, and justification for, the excess costs that exceed the cost of the federal requirement. In particular, please provide an estimate of the excess costs that exceed the cost of the federal requirement for (a) school districts, (b) counties, (c) townships, and (d) municipal corporations.

N/A

5. Please provide a comprehensive cost estimate for the proposed rule that includes the procedure and method used for calculating the costs of compliance. This comprehensive cost estimate should identify all of the major cost categories including, but not limited to, (a) personnel costs, (b) new equipment or other capital costs, (c) operating costs, and (d) any indirect central service costs.

A summary of costs is described in Attachment B.

6. Please provide a written explanation of the agency's and the local government's ability to pay for the new requirements imposed by the proposed rule.

These costs are ordinary costs of conducting the business of the local government entity which will come from the normal operating budgets of the entities.

7. Please provide a statement on the proposed rule's impact on economic development.

This rule should not have any significant impact on economic development should occur.

Rule # 1301:7-9-13

Environmental Rule Adoption/Amendment Form

Pursuant to Am. Sub. H.B. 106 of the 121st General Assembly, prior to adopting a rule or an amendment to a rule dealing with environmental protection, or containing a component dealing with environmental protection, a state agency shall:

- (1) Consult with organizations that represent political subdivisions, environmental interests, business interests, and other persons affected by the proposed rule or amendment.
- (2) Consider documentation relevant to the need for, the environmental benefits or consequences of, other benefits of, and the technological feasibility of the proposed rule or rule amendment.
- (3) Specifically identify whether the proposed rule or rule amendment is being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal environmental law or to participate in a federal environmental program, whether the proposed rule or rule amendment is more stringent than its federal counterpart, and, if the proposed rule or rule amendment is more stringent, the rationale for not incorporating its federal counterpart.
- (4) Include with the proposed rule or rule amendment and rule summary and fiscal analysis required to be filed with the Joint Committee on Agency Rule Review information relevant to the previously listed requirements.

(A) Were organizations that represent political subdivisions, environmental interests, business interests, and other persons affected by the proposed rule or amendment consulted?

 Yes No

If YES, please list each contact.

See Attachment A

If NO, please explain why affected organizations were not contacted.

(B) Was documentation that is relevant to the need for, the environmental benefits or consequences of, other benefits of, and the technological feasibility of the proposed rule or amendment considered?

 Yes No

Rule # 1301:7-9-13

If YES, please list the information provided and attach a copy of each piece of documentation to this form (A SUMMARY OR INDEX MAY BE ATTACHED IN LIEU OF THE ACTUAL DOCUMENTATION).

The requirements for the investigation of suspected releases and cleanup of releases of petroleum from underground storage tank systems are described in the Code of Federal Regulations (40 C.F.R. 280). Other sources include:

EPA – “Methods for Chemical Analysis of Water and Wastes”, Environmental Protection Agency, 1979, Revised March 1983.

EPA – “Methods for Determination of Metals in Environmental Samples”, Environmental Protection Agency, May 1994.

SW846 – “Test Methods for Evaluating Solid Waste – Physical/Chemical Methods”, 3rd Edition.

SW846 – “Test Methods for Evaluating Solid Waste – Physical/Chemical Methods”, Final and Promulgated Update II, IIA, III.

SM – “Standard Methods for the Examination of Water and Wastewater”, American Public Health Association, 17th Edition.

If NO, please indicate the reasons for not providing the information.

(C) Is the proposed rule or rule amendment being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal environmental law or to participate in a federal environmental program?

Yes No

If YES, is the proposed rule or rule amendment more stringent than its federal counterpart?

Yes No

If YES, what is the rationale for not incorporating the federal counterpart?

- (D) If this is a rule amendment that is being adopted under a state statute that establishes standards with which the amendment is to comply, is the proposed rule amendment more stringent than the rule that it is proposing to amend?

Yes No

If YES, please explain why?

For releases where the use of ground water is classified as “non-drinking water”, the owner or operator is required to assess the contaminant plume to “delineation standards”, which are more restrictive than current standards but less restrictive than drinking water standards (by approximately 2 orders of magnitude). This change was determined to be necessary because the current rules in effect did not allow a sufficient determination of the extent and direction of petroleum contamination in or on the surface of ground water.

First Name	Last Name	Company	Address	City	State
John	Smith	Adjutant General	2825 W. Granville Road	Columbus Cuyahoga	OH
Michael	Darr	BP Oil	4850 E 49th St. MBC1-L	Hts	OH
Harry	Barles	County Commissioners Assoc. Dept of Rehabilitation & Corrections	37 W. Broad St., Suite 650	Columbus	OH
Reginald	Wilkinson	Englefield Oil Co.	1050 Freeway Drive North	Columbus	OH
John	Gordon		447 James Parkway	Newark	OH
Amy	Yersavich	Environmental Protection Agy.	122 S. Front St., Lazarus Gov. Ctr.	Columbus Yellow	OH
Bruce	Cornett	Green Environmental Coalition	P.O. Box 266	Springs	OH
Kevin	Miller	Hartley Co., The	P.O. Box 160	Cambridge	OH
Tom	Conti	Holland Oil Co.	E. Talmadge	Akron	OH
William	Thompson	Industrial Commission of Ohio	30 W. Spring Street	Columbus	OH
Thomas P.	Charles	Inspector General, Office of	30 East Broad St., 18th Floor	Columbus	OH
Laura	Lyden	Lyden Co. (Tru North LLC)	3711 LeHarps Road	Youngstown	OH
Ron	Lykins	Lykins Oil Co.	5300 DuPont Circle Suite C	Milford	OH
Angela	Brown	Marathon/Ashland, LLC	539 S. Main Street	Findlay	OH
Samuel	Speck	Ohio Dept of Natural Resources	Fountain Square	Columbus	OH
David L.	Scheffler	Ohio Chamber of Commerce	230 E Towne Street, Box 15159	Columbus	OH
J. Nick	Baird	Ohio Department of Health	246 N.High St. P.O. Box 118	Columbus	OH
Michael	Hogan	Ohio Department of Mental Health	30 East Broad St., 8th Floor	Columbus	OH
Kenneth L.	Morckel	Ohio Dept of Public Safety	77 S. High Street, 30th Floor	Columbus	OH
Geno	Natalucci-Persichetti	Ohio Dept of Youth Services	51 N. High Street	Columbus	OH
Kenneth W.	Richey	Ohio Dept. of MR/DD	30 East Broad St., 12th Floor	Columbus	OH
Vicki	Deisner	Ohio Environmental Council	1207 Grandview Ave Suite 201	Columbus	OH
Stan	Crosley	Ohio Fire Chiefs	131 Dillmont Drive	Columbus	OH
Robert	Weitzel	Ohio Fire Chiefs Code Committee	131 Dillmont Drive	Columbus	OH
Susan J.	Cave	Ohio Municipal League	175 S. Third Street Suite 510	Columbus	OH
Daryl	Grau	Ohio Petroleum Contractors Assn.	112 North Street	Wilder	KY
Terry	Fleming	Ohio Petroleum Council	88 East Broad St. Suite 1460	Columbus	OH

Jennifer	Rhoades	Ohio Petroleum Marketers Association, Inc.	4242 Tuller Road, PO Box 490	Dublin	OH
Maurice	Helou	Ohio Petroleum Retailers & Repair Assn.	5615 Mayfield Road	Lyndhurst	OH
Jeff	Skelding	Ohio Sierra Club	145 N.High St. Suite 409	Columbus	OH
Roger	Sanson	Ohio State Firefighters	42 E Gay St. Suite 1212	Columbus	OH
Michael	Cochran	Ohio Township Association	5969 E. Livingston Ave Suite110	Columbus	OH
Richard	Morgan	Petroleum Equip.Inst.	3124 W. 142nd Street	Cleveland	OH
James J.	Leo	PUSTRCB	P.O.Box 163188	Columbus	OH
Ed	Henke	Shell Oil Products US	Wylmoor Drive	Norcross	GA
		Speedway/SuperAmerica LLC	500 Speedway Drive, PO Box 1500	Enon	OH
Scott	Heiser	Speedway/SuperAmerica LLC	500 Speedway Drive, PO Box 1500	Enon	OH
Michael	Byrne	Sun Company	`	Columbus	OH
Don	Smith	Swiftly Oil	P.O. Box 1002	Seymour	IN
Denis	Fitch	United Dairy Farmers	3955 Montgomery	Cincinnati	OH
Robert	Hopkins, Sr.	Unocal	2531 Tiller Lane	Columbus	OH
Dolores	Sieja	US EPA Region 5	77 W.Jackson Blvd DRU 7J	Chicago	IL
Andy	Tschampa	US EPA Region 5	77 W.Jackson Blvd DRU 7J	Chicago	IL

Petroleum Release Compensation Board
 DATE: 01/14/2005 3:15 PM
 Reasonable Cost Summary Report
 For Category All
 From 1989 to 2004

Sub Category	Number	Average	Mean	Std Dev	60	65	70	75	90
Abandonment /Foot	96	28.94	27.53	14.50	31.07	32.53	33.56	35.77	47.99
Abandonment /Well	152	586.54	573.68	265.82	621.11	651.25	683.25	711.54	875.00
Backfill (Overall) / Ton	89	11.53	11.26	3.25	11.80	12.00	12.21	12.79	15.00
Backfill (Overall) / Yard	1	11.15	11.15	0.00	11.15	11.15	11.15	11.15	11.15
Backfill Materials / Ton	51	7.85	8.41	2.49	8.99	9.20	9.31	9.50	10.48
Backfill Placement / Ton	37	6.15	4.65	4.39	6.00	6.50	6.77	8.81	14.25
Backhoe	4	53.75	50.00	11.09	50.00	60.00	60.00	60.00	70.00
Backhoe w/Operator	3	88.33	65.00	49.33	105.00	105.00	105.00	145.00	145.00
BTEX 602	923	41.15	36.00	18.70	40.00	41.10	48.50	55.00	65.00
BTEX 602 w/MTBE	345	38.52	35.00	17.01	35.00	35.00	35.15	42.00	65.00
BTEX 8020	247	46.21	40.00	22.05	50.00	54.00	55.00	55.25	69.00
BTEX 8020 w/MTBE	217	45.92	45.00	18.42	53.40	60.00	60.00	60.00	64.50
BTEX 8021	82	38.81	35.50	16.64	39.00	41.25	44.00	55.00	62.50
BTEX 8021 w/MTBE	297	51.08	55.00	16.58	55.00	55.00	60.00	60.00	75.00
BTEX 8260 w/MTBE	132	60.86	60.00	32.97	70.00	70.00	75.00	85.00	105.80
CADD/Drafting	981	42.89	43.00	5.85	45.00	45.00	45.00	45.00	49.00
Clerical	21	33.50	32.00	4.74	35.00	35.50	36.50	37.00	40.00
Drilling: Drilling /Foot	385	11.69	10.00	6.11	11.66	12.00	14.00	14.00	15.00
Drilling: Decontamination	315	118.35	120.00	36.88	120.00	120.00	120.00	120.00	145.00
Drilling: Drilling /Hour	23	125.42	130.00	18.41	135.00	135.00	135.00	140.00	146.50
Drilling: Geoprobe Mobilization	27	250.89	200.00	170.67	225.00	250.00	250.00	270.00	562.00
Drilling: Geoprobe/Day	123	1,164.79	1,250.00	314.19	1,250.00	1,294.00	1,432.00	1,500.00	1,500.00
Drilling: Monitoring well /Foot	117	26.19	24.00	10.95	31.00	33.00	35.00	35.00	35.00
Drilling: Monitoring well /Hour	206	113.96	110.00	11.46	110.00	120.00	120.00	120.00	125.00
Drilling: Rig Mobilization	452	276.68	250.00	128.72	300.00	300.00	300.00	350.00	437.50
Drilling: Split Spoons	296	13.05	12.50	2.67	14.00	14.00	15.00	15.00	15.00
Dump Truck w/Operator	6	53.50	53.00	11.55	60.00	60.00	60.00	65.00	70.00
Entry error	83	4,052.44	74.00	14,683.23	233.75	311.00	815.63	1,173.00	9,298.00
Excavate/Load / Ton	38	9.56	7.94	7.62	8.52	9.63	9.94	11.03	16.10
Excavate/Load / Yard	1	10.14	10.14	0.00	10.14	10.14	10.14	10.14	10.14

Sub Category	Number	Average	Mean	Std Dev	60	65	70	75	90
Excavate/Load/Haul / Ton	9	33.61	25.00	22.58	47.44	49.15	50.86	55.22	67.33
Excavate/Stockpile / Ton	15	9.64	8.00	8.17	8.50	8.70	8.95	9.00	28.58
Excavate/Stockpile / Yard	2	7.90	7.90	5.81	7.90	7.90	12.00	12.00	12.00
Excavation / Ton	18	5.49	5.00	3.66	5.00	5.50	6.00	6.35	14.02
Excavation / Yard	3	9.01	11.55	4.64	11.69	11.69	11.69	11.83	11.83
FID Daily	4	85.00	92.50	38.51	110.00	115.00	115.00	115.00	120.00
Haul / Ton	118	9.65	9.00	4.33	9.55	10.00	10.56	11.25	15.00
Haul / Yard	4	12.28	9.25	8.41	11.50	17.95	17.95	17.95	24.40
Haul/Dispose / Ton	22	27.10	27.00	3.93	27.41	28.00	29.61	30.00	31.40
Laborer	15	39.63	39.00	7.33	43.00	45.00	45.00	45.00	51.00
Landfill / Ton	176	19.52	19.52	3.69	20.00	20.00	20.03	21.00	25.26
Landfill / Yard	4	32.82	33.00	8.44	36.00	39.26	39.26	39.26	42.52
Load / Ton	51	3.77	3.18	2.28	3.78	4.00	4.00	4.50	5.79
Load / Yard	3	4.49	2.84	3.04	5.42	5.42	5.42	8.00	8.00
Load/Haul / Ton	31	15.25	13.50	6.17	14.75	15.48	17.77	19.50	25.81
Load/Haul / Yard	2	13.36	13.36	14.91	13.36	13.36	23.90	23.90	23.90
Load/Haul/Dispose / Ton	3	34.83	36.00	7.32	38.75	38.75	38.75	41.50	41.50
Loader w/Operator	5	75.00	80.00	16.58	80.00	80.00	87.50	87.50	95.00
Mobile Lab	25	1,175.70	1,200.00	304.56	1,225.00	1,275.00	1,300.00	1,325.00	1,561.25
Mobile Lab Mobilization	8	516.25	475.00	331.40	515.00	515.00	640.00	640.00	1,200.00
MTU Daily	4	312.50	250.00	125.00	250.00	375.00	375.00	375.00	500.00
MW Sampling	254	332.55	308.42	177.19	341.00	353.94	369.50	400.50	523.37
O&M: Air Sparging	6	2,311.58	2,649.98	919.90	2,901.10	2,901.10	2,901.10	3,115.83	3,145.71
O&M: AS/SVE	19	2,338.15	1,963.39	1,496.71	2,041.38	2,132.64	2,482.23	2,616.00	4,240.00
O&M: Bio Ex-Situ	1	1,620.00	1,620.00	0.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00
O&M: Bio In-Situ	12	1,532.72	1,568.04	790.13	1,697.53	1,836.95	1,935.45	1,935.45	2,723.00
O&M: Bioventing	4	2,440.85	1,200.38	3,071.50	1,585.75	4,286.20	4,286.20	4,286.20	6,986.64
O&M: DPE	123	3,057.91	3,043.04	1,375.10	3,496.46	3,606.00	3,835.01	4,082.00	4,879.81
O&M: DPE Mobile	6	3,515.61	3,319.00	1,888.55	4,030.01	4,030.01	4,030.01	5,557.22	6,381.42
O&M: GW Pump & Treat	54	2,491.11	2,341.90	1,399.10	2,810.00	2,866.75	2,990.82	3,112.87	4,551.83
O&M: GW Pump & Treat Mobile	2	1,347.07	1,347.07	660.54	1,347.07	1,347.07	1,814.14	1,814.14	1,814.14
O&M: MO-RAP	36	1,040.44	763.10	897.35	960.66	1,050.19	1,099.44	1,156.37	2,523.50
O&M: Other	18	2,996.65	2,952.66	2,202.49	3,602.00	3,811.53	4,004.53	4,403.50	7,137.46
O&M: Risk Assessment	1	678.00	678.00	0.00	678.00	678.00	678.00	678.00	678.00

Sub Category	Number	Average	Mean	Std Dev	60	65	70	75	90
O&M: SVE	17	2,822.32	2,805.00	1,329.45	3,116.26	3,289.26	3,406.00	3,569.95	5,233.84
Oversight / Ton	62	10.05	6.47	10.58	7.79	8.75	9.65	13.18	25.24
Oversight / Yard	4	49.41	26.88	61.85	41.56	90.32	90.32	90.32	139.08
PAH 610	188	97.29	85.00	35.38	110.00	120.00	120.00	120.00	158.50
PAH 8100	82	99.27	89.64	33.13	102.00	110.00	120.00	120.00	165.00
PAH 8270	232	127.02	120.00	45.66	134.23	140.00	140.00	140.00	165.00
PAH 8310	107	110.54	120.00	28.27	120.00	120.00	120.00	125.00	157.50
PID Daily	92	94.34	90.00	48.58	100.00	110.00	110.00	110.00	120.00
PID Weekly	1	350.00	350.00	0.00	350.00	350.00	350.00	350.00	350.00
Pilot Test: AS/SVE	7	5,329.26	45.00	9,056.26	47.00	8,678.08	8,678.08	17,307.15	19,782.70
Pilot Test: Bio Ex-Situ	1	8,098.95	8,098.95	0.00	8,098.95	8,098.95	8,098.95	8,098.95	8,098.95
Pilot Test: Bio In-Situ	3	3,127.40	3,804.79	1,434.17	3,951.10	3,951.10	3,951.10	4,097.40	4,097.40
Pilot Test: DPE	6	13,980.66	16,291.60	7,565.78	19,872.06	19,872.06	19,872.06	20,743.27	21,122.60
Pilot Test: DPE Mobile	1	34,142.50	34,142.50	0.00	34,142.50	34,142.50	34,142.50	34,142.50	34,142.50
Pilot Test: GW Pump & Treat	2	4,494.23	4,494.23	1,458.38	4,494.23	4,494.23	5,525.46	5,525.46	5,525.46
Pilot Test: GW Pump & Treat Mobile	2	5,785.95	5,785.95	3,944.33	5,785.95	5,785.95	8,575.01	8,575.01	8,575.01
Pilot Test: Other	22	13,113.12	12,476.65	10,190.39	14,237.52	14,793.88	15,135.82	15,391.99	21,591.58
Pilot Test: SVE	9	5,394.51	3,063.00	5,717.59	4,331.48	5,663.55	6,995.61	8,825.88	17,972.93
Pilot Test: SVE Mobile	2	19,200.70	19,200.70	21,594.76	19,200.70	19,200.70	34,470.50	34,470.50	34,470.50
Principal	677	100.53	99.00	15.72	108.00	110.00	110.00	110.00	125.00
Project Geologist	1,339	62.80	63.00	8.90	65.00	65.00	65.00	67.00	75.00
Project Manager	1,529	83.93	85.00	50.82	85.00	87.00	90.00	90.00	97.00
RAP Prep: Air Sparging	1	3,705.00	3,705.00	0.00	3,705.00	3,705.00	3,705.00	3,705.00	3,705.00
RAP Prep: AS/SVE	5	6,971.84	4,995.74	5,856.85	6,199.56	6,199.56	12,054.82	12,054.82	16,706.25
RAP Prep: Bio In-Situ	14	5,934.45	5,616.05	3,379.79	6,046.76	6,681.65	7,439.40	8,354.88	11,668.05
RAP Prep: DPE	16	6,425.75	3,730.35	5,613.16	7,478.36	9,952.00	9,952.00	10,963.30	16,504.24
RAP Prep: DPE Mobile	3	7,453.76	7,171.64	892.74	7,812.56	7,812.56	7,812.56	8,453.47	8,453.47
RAP Prep: Excavate & Dispose	19	5,658.18	4,094.50	3,987.30	5,581.48	5,613.75	6,387.95	8,229.94	12,348.67
RAP Prep: GW Pump & Treat	5	11,020.84	7,980.00	7,586.81	11,312.73	11,312.73	18,619.56	18,619.56	22,593.66
RAP Prep: GW Pump & Treat Mobile	2	2,464.21	2,464.21	527.79	2,464.21	2,464.21	2,837.41	2,837.41	2,837.41
RAP Prep: MO-RAP	17	4,175.30	3,707.75	2,601.18	4,237.48	4,858.52	5,247.39	5,575.43	9,157.34
RAP Prep: Other	8	6,412.10	5,764.20	3,201.25	7,561.30	7,561.30	9,458.78	9,458.78	10,900.31
RAP Prep: Risk Assessment	3	7,304.45	8,968.52	3,985.58	9,578.42	9,578.42	9,578.42	10,188.32	10,188.32
RAP Prep: SVE	1	9,049.87	9,049.87	0.00	9,049.87	9,049.87	9,049.87	9,049.87	9,049.87

Sub Category	Number	Average	Mean	Std Dev	60	65	70	75	80
					11,624.40	11,624.40	11,624.40	11,624.40	11,624.40
RAP Prep: SVE Mobile	1	11,624.40	11,624.40	0.00	11,624.40	11,624.40	11,624.40	11,624.40	11,624.40
Risk Assessment: Tier 1 Report	1	6,940.50	6,940.50	0.00	6,940.50	6,940.50	6,940.50	6,940.50	6,940.50
Risk Assessment: Tier 1 Total	3	9,999.70	10,526.90	7,305.63	13,777.18	13,777.18	13,777.18	17,027.45	17,027.45
Risk Assessment: Tier 2 Report	6	7,104.48	6,382.60	4,797.78	10,237.24	10,237.24	10,237.24	12,434.34	13,339.20
Risk Assessment: Tier 2 Total	5	10,240.15	4,184.50	13,898.65	5,744.44	5,744.44	21,075.40	21,075.40	34,846.42
Risk Assessment: Tier 3 Report	9	8,788.91	6,885.96	7,125.43	10,207.50	10,563.23	10,918.95	11,639.18	24,953.30
Risk Assessment: Tier 3 Total	12	14,058.83	13,140.13	7,385.02	14,166.38	15,353.30	16,572.99	16,572.99	25,809.32
Risk Assessor	112	74.42	75.00	8.11	75.00	75.00	75.00	75.00	85.00
S/A: Phase 1 Direct Push	74	2,121.26	2,070.15	1,047.94	2,222.49	2,292.00	2,385.43	2,509.23	3,102.86
S/A: Phase 1 Air Rotary	3	2,800.25	3,138.93	1,057.41	3,392.88	3,392.88	3,392.88	3,646.83	3,646.83
S/A: Phase 1 HSA	288	2,930.77	2,929.08	1,058.21	3,120.50	3,191.63	3,279.66	3,487.15	4,301.90
S/A: Phase 2 Air Rotary	2	47.00	47.00	9.90	47.00	47.00	54.00	54.00	54.00
S/A: Phase 2 Direct Push	26	2,751.46	2,303.48	1,780.54	2,649.39	2,703.00	2,853.00	3,096.30	6,061.50
S/A: Phase 2 HSA	242	3,252.91	3,030.85	1,404.52	3,221.00	3,376.42	3,586.76	3,826.09	4,986.00
S/A: Phase 3 Direct Push	23	2,238.73	2,262.00	985.08	2,621.90	2,750.00	2,882.46	2,954.28	3,476.02
S/A: Phase 3 Air Rotary	2	2,993.52	2,993.52	317.46	2,993.52	2,993.52	3,218.00	3,218.00	3,218.00
S/A: Phase 3 HSA	170	3,340.99	3,067.50	1,326.23	3,440.02	3,624.74	3,728.18	3,984.39	5,040.13
S/A: Phase 4 Direct Push	14	3,850.56	2,988.50	2,389.78	3,664.00	4,214.00	4,772.60	5,108.54	8,445.71
S/A: Phase 4 Air Rotary	2	5,317.00	5,317.00	2,682.76	5,317.00	5,317.00	7,214.00	7,214.00	7,214.00
S/A: Phase 4 HSA	77	3,435.60	3,373.84	1,271.01	3,699.69	3,813.03	3,903.96	4,128.09	5,113.86
S/A: Phase 5 Direct Push	12	2,174.45	2,091.50	1,071.91	2,360.65	2,562.30	2,587.15	2,587.15	4,014.57
S/A: Phase 5 Air Rotary	1	4,439.00	4,439.00	0.00	4,439.00	4,439.00	4,439.00	4,439.00	4,439.00
S/A: Phase 5 HSA	49	3,417.84	3,043.00	1,437.15	3,513.80	3,694.01	3,979.86	4,257.00	5,613.00
S/A: Tier 1 Direct Push	20	3,055.48	3,095.63	1,153.68	3,182.08	3,461.50	3,749.90	3,855.90	4,597.28
S/A: Tier 1 Air Rotary	2	4,143.39	4,143.39	225.73	4,143.39	4,143.39	4,303.00	4,303.00	4,303.00
S/A: Tier 1 HSA	69	3,488.31	3,330.39	1,299.84	3,544.00	3,664.50	3,952.00	4,110.31	4,452.00
S/A: Tier 2 Direct Push	9	2,755.37	2,779.00	790.03	2,896.00	2,926.02	2,956.03	2,964.68	4,454.00
S/A: Tier 2 Air Rotary	1	2,498.75	2,498.75	0.00	2,498.75	2,498.75	2,498.75	2,498.75	2,498.75
S/A: Tier 2 HSA	10	3,511.79	3,678.50	710.85	3,967.50	4,089.78	4,089.78	4,179.28	4,284.50
Senior Geologist	1,076	73.88	75.00	11.83	75.00	76.00	76.50	80.00	86.00
Senior Technician	627	46.63	45.00	6.48	46.00	47.00	48.00	50.00	55.00
Sr. Risk Assessor	5	81.10	90.00	25.88	90.00	90.00	100.00	100.00	110.00
Staff Geologist	1,663	53.43	55.00	6.90	55.00	55.00	55.00	55.25	60.00
Stockpiling / Ton	7	2.40	1.79	1.59	2.22	3.37	3.37	4.08	5.00

Sub Category	Number	Average	Mean	Std Dev	60	65	70	75	80
Stockpiling / Yard	1	4.36	4.36	0.00	4.36	4.36	4.36	4.36	4.36
T1 Evaluation Notification	20	4,017.93	2,791.25	3,810.81	3,036.88	3,764.73	4,413.48	4,670.63	8,259.00
T1 Evaluation Report	30	3,234.98	2,841.88	2,172.22	3,413.50	3,694.63	3,779.13	4,022.25	6,519.13
T1/T2	5	15,153.18	14,856.50	8,284.26	17,719.45	17,719.45	22,874.70	22,874.70	25,167.00
T2 Evaluation Report	46	6,946.68	5,961.25	5,206.97	6,752.83	7,287.50	7,679.69	8,204.07	13,603.75
Technician	833	40.94	42.50	7.49	45.00	45.00	45.00	45.00	48.00
Tier Evaluation Report	6	4,000.38	3,550.00	2,558.51	3,746.88	3,746.88	3,746.88	6,396.88	8,968.75
Toxicologist	14	73.71	75.00	11.79	75.00	75.00	77.00	82.00	85.00
TPH 418.0	207	46.32	45.00	15.31	49.23	55.00	55.00	55.25	65.00
TPH 8015	411	53.65	50.00	21.90	55.00	60.00	64.50	65.00	82.50
TPH/BTEX	302	70.57	51.00	34.70	72.00	85.00	92.00	100.00	130.00
Trackhoe	2	97.50	97.50	31.82	97.50	97.50	120.00	120.00	120.00
Trackhoe w/Operator	7	113.14	132.00	30.86	133.50	137.50	137.50	140.00	140.00
VOC 624	74	121.96	120.00	32.97	127.00	127.50	127.50	127.50	170.00
VOC 8240	44	134.14	125.00	36.47	127.50	138.75	150.00	150.00	188.13
VOC 8260	94	100.15	100.00	44.18	112.50	120.00	125.00	125.00	165.00
Water Handling: Frac tank rental /Daily	1	70.00	70.00	0.00	70.00	70.00	70.00	70.00	70.00
Water Handling: Frac tank rental /Weekl	1	375.00	375.00	0.00	375.00	375.00	375.00	375.00	375.00
Water Handling: Mob/demob	2	0.36	0.36	0.00	0.36	0.36	0.36	0.36	0.36
Water Handling: System rental /Daily	1	0.05	0.05	0.00	0.05	0.05	0.05	0.05	0.05
Water Handling: Total Off-site	31	0.63	0.56	0.33	0.63	0.66	0.73	0.76	1.16
Water Handling: Total On-site	15	0.53	0.30	0.41	0.52	0.67	0.80	0.80	1.30
Water Handling: Transportation/treatme	18	0.48	0.49	0.24	0.50	0.50	0.52	0.57	0.94
Water Handling: Treatment facility	41	0.28	0.25	0.13	0.26	0.27	0.30	0.31	0.45
Water Handling: Vac truck	10	81.15	85.00	8.63	85.00	85.00	85.00	85.00	91.25
Water Handling: Transportation	13	0.27	0.16	0.25	0.28	0.38	0.38	0.45	0.74